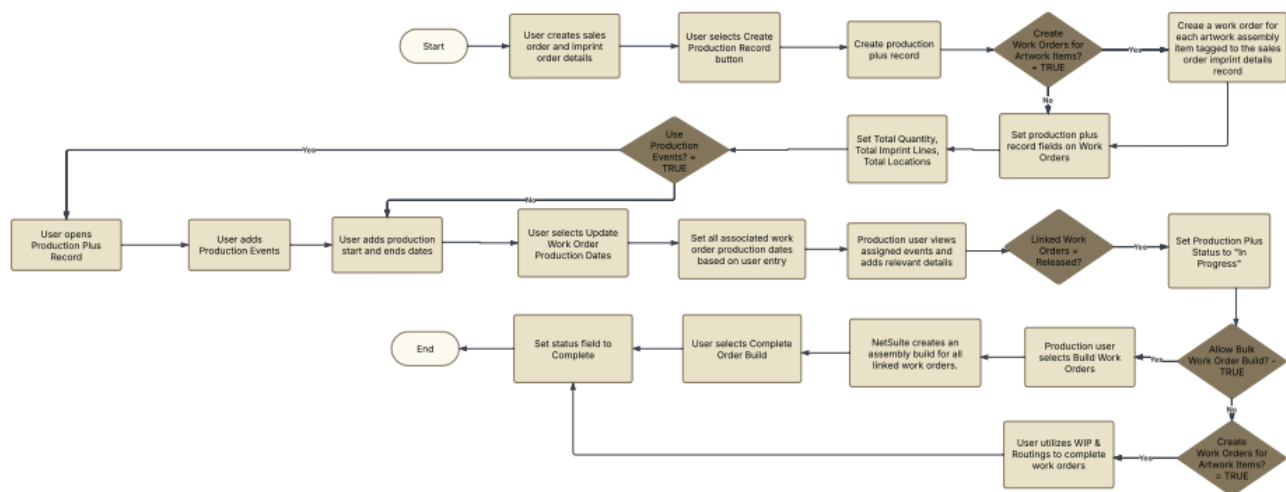ORACLE NetSuite

Production Plus

Overview

Production Plus is a comprehensive solution designed to centralize and streamline production management for orders, particularly in the promotional products industry. It offers a user-friendly interface to track various aspects of an order, including artwork, items, imprint methods, and production timelines. The solution aims to enhance visibility, efficiency, and control over the production process.

Contents

Process Flow

Functional Requirements

- Centralized view of order production details, including artwork, items, and imprint methods.

- Ability to track production completion and time spent on tasks.

- Calculate and display machine and production run times.

- Optional - bulk creation of work orders linked to the production record.

Required Records

1. Production Plus Settings

    a. ID: customrecord_prod_plus_settings

    b. Fields:

    i. Create Work Orders for Artwork Items?
      1. ID: custbody_ns_ppai_wo_artwork_itm
    ii. Allow Work Order Bulk Build?
      1. ID: custbody_allow_wo_build
    iii. Use Production Events?
      1. ID: custbody_use_prod_event

2. Sales Order

 a. Fields:
   i. Linked Production Record
     1. ID: custbody_ns_ppai_linked_prod_record
 b. Buttons:
   i. Create Production Record

3. Item
 a. Fields:
   i. Default Imprint Details

ID: custbody_ns_ppai_imprt_order_details

4. Imprint Order Details

 a. ID: customrecord_ns_ppai_imprnt_orderdetails
 b. Fields:
   i. Production Run Record
   ii. ID: custbody_ns_ppai_prod_plus

5. Imprint Details Record

 a. ID: customrecord_ns_ppai_imprintdetails
 b. Fields:
   i. Stored Artwork Item
   ii. ID: custrecord_ns_ppai_id_artwork_item
   iii. Artwork File
   iv. ID: custrecord_ns_ppai_id_artwork_file

6. Production Plus Record

 a. ID: customrecord_ns_ppai_production_plus
 b. Fields:
   i. Sales Order
   ii. Sales Order Notes
   iii. In Hands Date
   iv. Ship Date
   v. Production Start Date
   vi. Production End Date
   vii. Total Quantity
   viii. Total Production Time
   ix. Status
   x. Total Imprints
   xi. Total Designs
   xii. Total Locations

xiii. Subtabs
xiv. Production Event
xv. Work Orders
xvi. Line Imprint Details

c. Buttons
   i. Build Work Orders
   ii. Update Work Order Production Dates
   iii. Complete Order Build

d. Lists
   i. Production Plus Status
      1. ID: customlist_ _ns_ppai_prod_plus_status

7. Production Event Record

a. ID: customrecord_nsps_production_event
b. Fields:
   i. Production Record
   ii. Date
   iii. Machine
   iv. Production Event Item
   v. Production Event Imprint Method
   vi. Assigned To
   vii. Total Run Rate
   viii. Total Setup Time
   ix. Total To Build

Technical Design

Production Process Overview

1. Sales Order: The process begins with a sales order, capturing customer requirements.
2. Imprint Order Details:
   a. Users record imprint specifics, including artwork (item and file).
   b. Imprint Details: A sub-record to capture imprint methods, colors, etc.
3. Work Order (Optional): Users can create work orders if needed.
4. Production Plus Record:
   a. Central record to manage production.
   b. Houses imprint details , work orders, and production events.
   c. Users can bulk build work orders and update work order production events.
5. Production Event Record:
   a. User manually enters Production Events as required.
6. Time Tracking:
   a. Utilizes native time tracking for production events.

Users will do the following:

- Create sales order
- Follow imprint management process flow to add imprint details
- Save sales order

- Select Create Production Record button
- User will maintain production plus record
    - User will select "Update Work Order Production Dates"
    - User will select "Build Work Orders" button to bulk build
    - User will select "Complete Order Build" to close out production plus record
- User will follow native WIP & Routings Process if "Create Work Orders for Artwork Items?" box is checked on the preferences page.

NetSuite will do the following:

- **Sales Order (Native Record)**
    - Create Production Plus Record after user selects "Create Production Record" button.
- **Imprint Details (Custom Record)**
    - When the Artwork Item is selected, source the default Imprint Details record if field has a value.
- **Work Order (Native Record)**
    - Upon Production Plus record creation do the following:
        - Create Artwork Item Work Orders
            - If the following fields are set to TRUE in the Production Plus Settings page, create a work order automatically for each artwork assembly item tagged to an Imprint Detail line on the linked sales order.
                - Create Work Orders for Artwork Items?
                - Allow Work Order Bulk Build?
        - Link Production Plus Record to Work Orders
            - Assembly Items & Work Orders created from line items on the sales order
            - Artwork assembly items tagged to an Imprint Detail line with a generated work order
- **Production Plus Record (Custom Record)**
    - Customer Order
        - Set to sales order the production plus record was created from
    - Total Imprints
        - Count of imprint configuration templates
    - Total Designs
        - Count of artwork items on imprint details lines
        - If the same item is used twice, only count it once
    - Total Locations
        - Count of imprint lines linked to production plus record
    - Set Total Quantity field
        - Source as a sum of items with tagged Imprint Order Details records.
- **Production Plus Record - "Update Work Order Production Dates" Button**
    - NetSuite updates all linked work orders with specific production start and end dates when the button is selected.
    - Only update work orders that have not been built when this button is selected.
- **Production Plus Record - "Build Work Orders" Button**
    - NetSuite will create an assembly build record for all linked work orders.

- o The "Build Work Orders" button is only visible if all linked work orders have fully committed quantities and if the production plus settings page shows "Allow Work Order Bulk Build?" = TRUE
- **Production Plus Record – Production Event Subtab**
  - o Hide this subtab if "Use Production Events?" box is not checked on the Production Plus Settings page.
- **Production Event Record**
  - o Take users to the native Time Tracking record when Add Time button is selected.
  - o Tag the Production Event on the Time Tracking record.
- **Production Plus Status**
  - o In Progress
    - ▪ Set the field value when any of the linked work orders have a status of Released.
  - o Complete
    - ▪ If the Production Plus Settings page shows:
      - • "Create Work Orders for Artwork Items?" = TRUE
      - • "Allow Work Order Bulk Build?" = FALSE
    - ▪ Then, set the status when all linked work orders have a status of Built.
    - ▪ If the Production Plus Settings page shows:
      - • "Create Work Orders for Artwork Items?" = FALSE
      - • "Allow Work Order Bulk Build?" = TRUE
    - ▪ Then, set the status when the user selects "Complete Order Build" button.

Saved Searches and Reporting

1. **"Overdue Production Orders"**
   a. Purpose: Allow users to view production records with end dates in the past.
   b. Type: Production Plus Record Search
   c. Criteria: Production Plus Record with due dates in the past.
   d. Key Results: Name, Sales Order, Production Start Date, Production End Date

2. **"Production Orders Due Today"**
   a. Purpose: Production Plus Record with today's due date.
   b. Type: Production Plus Record Search
   c. Criteria: Production Plus Record with due date of today.
   d. Key Results: Name, Sales Order, Production Start Date, Production End Date

3. **"Production Metrics per Imprint Method"**
   a. Purpose: Allow users to review average run rate, setup time & quantity per imprint method.
   b. Type: Production Plus Record Search
   c. Criteria: N/A
   d. Key Results: Name, Avg Run Rate, Avg Setup Time, Avg Quantity, Imprint Configuration Template

Assumptions

1. Production Plus Record cannot be created until the sales order has been approved.
2. Assembly items are not compatible with extendtech supplier versions.
3. Production Plus does not impact item cost; native WIP & Routings process should be used for detailed manufacturing tracking and item cost impact.

4. If customer requires, different components on each item build based on end user selection, then production plus requires additional customization.

Test Cases

Production Record Creation

- Create sales order with imprint details and save record, click the "Create Production Record" button.
- Verify that a Production Plus Record is generated and linked to the sales order.
- Check if the Production Plus Record includes the correct sales order information and imprint details.
- Expected Result: The Production Plus Record is created accurately, and all relevant data is populated from the sales order.

Imprint Details

- Add Imprint Order Details to a sales order line.
- Select an artwork item with a default imprint detail record set.
- Make sure the fields source properly onto the imprint details lines.

Work Order Generation

- Create a scenario with multiple work orders required for a production job.
- Click the "Build Work Orders" button on the Production Plus Record.
- Verify that all linked work orders are built.
- Expected Result: Multiple work orders are associated with the production job they contain the necessary details and are build when the "Build Work Orders" button is selected.

Production Event Tracking

- View a Production Plus Record with a Pending Build status.
- Add a Production Event sub record.
- Edit the Production Event with Name, Machine, Item, Imprint Method and Assigned To.
- Expected Result: Production Event is created and updated with required details.

Production Event Assignment & Time Tracking

- Use reminders portlet to find "Production Events to be Completed".
- Open Production Event assigned to you.
- Edit the Production Event with production metrics.
- Click the Add Time button to utilize the native time-tracking feature for adding time entries.
- Expected Result: Time tracking works as expected, and the production metrics are manually added to Production Event.

Update Work Order Production Dates

- Open Production Plus Record with status of Not Started
- Edit the record and update the Production State Date and Production End Date fields.
- Save record.
- Select "Update Work Order Production Dates"
- Check each linked work order with a status of Open and ensure the dates match the Production Plus Record.

Complete Order Build

- Open Production Plus Record with status of In Progress

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- Verify that Production Events are completed with time entries and production metrics.
- Verify that associated Work Orders have been built.
- Select "Complete Order Build" button when all items have been decorated.
- Expected Result: Production Plus Record status changes to "Completed".

User Stories

Efficient Production Tracking for Managers

As a production manager, I want a centralized system to track the progress of various production orders so that I can quickly review the status of ongoing projects and make informed decisions.

Scenario:

- Sarah, the production manager, oversees multiple promotional product orders, each with different imprint methods and artwork.
- She needs an efficient way to monitor the production process, ensuring that orders are completed on time and within specifications.

User Story:

- When Sarah logs into Production Plus, she should see a dashboard with a list of all active production orders.
- Each order displays key details like artwork previews, item descriptions, and production timelines.
- From the Production Plus record, Sarah can view all decoration details including the imprint methods, production events, and completed quantities.
- She can filter and sort orders by due dates, allowing her to prioritize and manage her team's workload effectively.

Production Event Tracking for Workers

As a production line worker, I want to mark production events as completed and track the time spent on each task to ensure my work is recorded accurately and I can manage my time effectively.

Scenario:

- David works on the production floor, operating machines and performing various imprint methods on promotional items.
- He needs a simple way to track his progress and record the time taken for each production event

User Story:

- David should have access to a list of production events assigned to him, showing the item, imprint method, and machine details.
- He can mark events as completed and enter the quantities produced using a simple interface.
- When marking an event as completed, David can add time entries, specifying the time spent on setup and production.
- The system should provide real-time feedback on his progress, showing completed quantities and time tracking.

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Reporting and Analytics for Business Owners

As a business owner, I want access to reports and analytics on production metrics to make data-driven decisions and identify areas for improvement.

Scenario:

- Alex, the owner of a promotional products company, wants to analyze production efficiency and identify trends in imprint methods.
- He needs reports to help optimize operations and improve customer satisfaction.

User Story:

- Alex should be able to access a reporting dashboard with various saved searches and custom reports.
- The dashboard includes key metrics like overdue production orders, orders due today, and production metrics per imprint method.
- Alex can view average run rates, setup times, and quantities for different imprint methods, helping him identify bottlenecks and areas for optimization.
- The system should allow him to drill down into specific production records for further analysis.