## Scenarios

### 1. Schedule blend haul to a bin attached to a rig for a job (Has call sheet)

* Existing Rig Board function

### 2. Schedule blend haul to a job go with crew (Has call sheet)

* Existing Rig Board function

### 3. Schedule a blend for a job and load to a bin attached to bulk plant awaiting blend test (Has call sheet)

* Need to number silos/bins in Bulk Plant
* Treat Bulk Plant as Rig, the silos and bins can be attached to Bulk Plant
* Need blend database to store the blend information

Right-click on a job’s blend, click “Schedule Product Haul”. If the “Need Field Testing” is flagged in call sheet, the flag will carry over, otherwise toggle the “Blend Test” checkbox.

Graphical user interface

Description automatically generated

### 4. Schedule a haul to transfer pre-blended blend to a bin attached to a rig for a job (Has call sheet) – Haul Blend

* Need blend database to store the blend information associated to the call sheet.
* Select bulker (Sanjel or 3rd Party)
* Scenario 1 is one step of Scenario 3 and 4

Right-click on the bin attached to Bulk Plant, click “Haul Blend”.

\*\*\* Click “Load to An Existing Haul” twice to refresh the page properly in prototype.

Graphical user interface

Description automatically generated

### 5. Schedule a haul to transfer pre-blended blend to go with crew (Has call sheet)

-- Haul Blend

* Need blend database to store the blend information associated to the call sheet.
* Select bulker (Sanjel or 3rd Party)
* Scenario 2 is one step of Scenario 3 and 5

Right-click on the bin attached to Bulk Plant, click “Haul Blend”. Then toggle “Go With Crew”.

\*\*\* Click “Load to An Existing Haul” twice to refresh the page properly in prototype.

Graphical user interface, application

Description automatically generated

### 6. Schedule a blend haul for a project to a storage attached to a rig (No call sheet)

* Need program to provide recipe
* Or blend database is needed for storing recipe

Right-click on the bin attached to a rig, click “Schedule Blend”.

\*\*\* Click “Load to An Existing Haul” twice to refresh the page properly in prototype.

Graphical user interface, application

Description automatically generated

### 7. Schedule a blend and transfer to a bin attached to bulk plant (No call sheet)

* Need to number silos/bins in Bulk Plant
* Treat Bulk Plant as Rig, the silos and bins can be attached to Bulk Plant
* Need program

Right-click on the bin attached to a bulk plant, click “Schedule Blend”.

Graphical user interface

Description automatically generated

### 8. Schedule a blend for product sale with customer's recipe and haul to customer's location (Has call sheet) – Can be same as 10

* Need customer's recipe is entered in program and call sheet is created from the program.
* Select bulker (Sanjel or 3rd Party)
* Free-text loading destination (Location)
* Call Sheet doesn't have a rig
* May need break down to blend and haul two steps

### 9. Schedule a blend for product sale with customer's recipe and load to customer's bulker (Has call sheet) – Can be same as 11

* Need customer's recipe is entered in program and call sheet is created from the program.
* Free-text destination (Bulker)
* Call Sheet doesn't have a rig

### 10. Schedule a blend for product sale with Sanjel blend recipe and haul to customer's location (Has call sheet)

* Need program and call sheet is created from the program
* Select bulker (Sanjel or 3rd Party)
* Call Sheet doesn't have a rig
* May need break down to blend and haul two steps

### 11. Schedule a blend for product sale with Sanjel blend recipe and load to customer's bulker (Has call sheet)

* Need program and call sheet is created from the program
* Free-text loading destination (Bulker)
* Call Sheet doesn't have a rig
* May need break down to blend and haul two steps upon customer request sample testing

### 12. Schedule a neat blend for product sale and haul to customer's location (Has call sheet)

* Need program and call sheet is created from the program
* Call Sheet doesn't have a rig
* This may be treated as same as 10, no blending process will be handled by BPAVS

### 13. Schedule a neat blend for product sale and load to customer's bulker (Has call sheet)

* Need program and call sheet is created from the program
* Call Sheet doesn't have a rig
* This may be treated as same as 10, no blending process will be handled by BPAVS

### 14. Schedule a blend by using a previous blend to modify into a new blend. (Has call sheet, may apply to 1, 2,3,10,11) -Reblend

* Need blend database to storing the historical blend records also for the returned blend.
* Need blend calculator upgrade

### 15. Schedule a haul for blended product from one location to another (Bulk Plant storage or Project storage or Rig storage) (No call sheet) – Haul Blend

* Need to number silos/bins in Bulk Plant
* Need blend database to storing the historical blend records also for the returned blend.
* Need blend information for the content stored in a bin/silo.

Right-click on the bin attached to a rig or a bulk plant, click “Haul Blend”.

### 16. Transfer a blended product from one storage to another at same (Bulk Plant storage or Project storage or Rig storage) (No call sheet) – Transfer Blend

* Need to number silos/bins in Bulk Plant
* Need blend database to storing the historical blend records also for the returned blend.
* Need blend information for the content stored in a bin/silo.

Right-click on the bin attached to a rig or a bulk plant, click “Transfer Blend”.

Graphical user interface

Description automatically generated

### 17. Schedule a product transfer from one Bulk Plant to another (No call sheet)

* Similar to scenario 15, but for inventory product only.

### 18. Return Cement from job into storage attached to bulk plant (Refer to Call Sheet) – Haul Back

* Need to number silos/bins in Bulk Plant
* Current process use original MTS to ship it back, BPO determine the storage and track it on whiteboard or spreadsheet tracker.

### 19. Pre-hydrated/Add-On-Fly additives load

* May be multiple load sheets, these additives are loaded once.

## Definitions

* Bulk Plant Storage – any storage resides in the Bulk Plant. We need to number them and enter in the system, both eServiceOnline and BPAVS will reference same list of storage.
* Project Storage - remote storage for blended product that is NOT assigned to a rig. I assume most of these storages have bin number. We need to number the rest.
* Rig Storage – storage assigned to a rig. All of these storages have bin number.

## Project Goal

* Implement blend schedule process to utilize blend calculator in most of scenarios
* Implement blend haul process for product transfer, product sale and blend quarantine needs

## Technical Goal

* Eliminate Call Sheet Export/Import
* Decouple header and service line specific section to achieve more flexible solutions.
* Decouple blend request and shipping request in product haul to achieve more flexible solutions.
* Implement blend database for all blend using in jobs and also interim blends.
* Enhance blend calculator to handle preblended blend modification.
* Managing bulk plant storage in bin information systems.
* Implement storage master database with pod structure

## Design Ideas

* Upgrade concept "Rig" to "Operation Site", use same mechanism to process storage relations.
  + Add type to the entity
    - Operation Rig (Cement Jobs, Remedial Jobs)
    - Customer Site (for Product Sale, Project Camp )
    - Bulk Plant (Sanjel Bulk Plant)
  + Show Operation site on RigBoard as single RigJob on the bottom.
  + Schedule product transfer between Bulk Plant
* Upgrade concept Bin and Bulker as storage
  + Implement pod structure
    - Give the pod unique identifier, can be referenced independently.
    - Add pod capacity information.
  + Implement bulk capacity reference
    - Bulk Density calculation
  + Add storage total capacity
  + Implement Storage Content Tracking
    - Implement pod level tracking
    - Overlap with blend database
    - Pop up operation page for storage tracking
* Program back tracing
  + Start from Bin attached to rig
    - Schedule same blend for same program
    - Find future program for same client if the bin is empty.
    - Business Gap: Program expected start date and expected rig not updated in system, has sent Jeff and Brett Henry to ask.
* Separate blend and load process
  + Per blend product haul two steps operation, blend and load.
  + Two step can be combined as one
  + Blend and load to bulk plant storage.
* Haul preblended product from bulk plant storage to job site.

## New Requirement Inspiration

Jason Schneider: Is there a way to see the tonnage and what is in a Sanjel bin?

Design Proposal: Mouse over Bin, blend name, current tonnage, scheduled/blending tonnage are displayed. If blend is undertesting, the testing progress is displayed.

## Business Case implementation progress

Available in Production

1. Schedule a Blend Request to Bulk Plant Silo
   1. With Call Sheet (3)
   2. With Program (7)
2. Schedule a Blend Request and Product Haul to Rig Bin
   1. With Call Sheet (1)
   2. With Program (6)
3. Schedule a Blend Request and Product Haul go with Crew (2)
4. Schedule a Blend Request and Product Haul go to Third Party location (8, 9, 10, 11)
5. Schedule a Product Haul of preblended cement from Bulk Plant Silo to a Destination
   1. Rig Bin for a job (4)
   2. Go with crew for a job (5)
   3. Rig Bin for a project (15)
   4. Project Bulk Plant (15)
   5. Bulk Plant (17)
   6. Third Party (12, 13)
6. Transfer blend between two storages within same location. (16)
7. Bulker crew status integration with DRB. (New)
   1. Bulker Loaded
   2. Product Haul On Location

Under Development

1. Haul Back (18) – From rig bin to bulk plant storage, can be combined with returning product haul.
2. Update Blend in Bin (New) – This is a temporary solution for Neat Blend/Returned Blend/Recycled Blend load up. Base blend name is supported only.
3. Bulker as Bulk Plant storage (New) – Show bulker status in Bulk Plant board for blend & haul, case 2,3 above.

TODO with Complexity Matrix project

1. Reblend (14)
2. Print MTS Online
3. BPAVS update MTS/Post Back

Not Planned Yet

1. Vendor’s haul to Sanjel. This can be tracked from product order and load to Sanjel storage.
2. Pre-hydrated/Add-On-Fly additives load. Need a separate MTS?