## 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

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

* 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

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

* 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

### 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

### 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

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

* 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)

* 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)

* 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)

* 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.

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

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

### 17. Return Cement from job into storage attached to bulk plant (Refer to Call Sheet)

* 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.

### 18. 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.