Plan

Work Packaging

User Guide

INEIGHT

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Lesson 1

Work Packaging Overview

InEight Project Suite Overview / Plan Work Packaging Overview

Lesson Duration: 45 minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Summarize the purpose of Project Suite
- Describe the two modules of Plan
- Explain the high-level work flow of Plan – Work Packaging

1.1 InEight Project Suite Overview

Project Management and Lifecycle

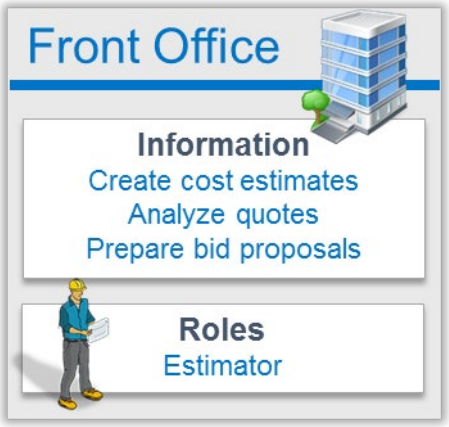
Most projects that you will work on will follow a typical lifecycle; those involved will be assigned to different roles. Those roles can be broken down into four categories:

- Front office
- Field office
- Jobsite
- Back office

Front Office

What are the essential functions of the front office? Which roles are involved?

The front office focuses on winning work and is comprised of estimators who, during the *bidding phase* of the project, estimating a project's value. This is done by calculating cost estimates, analyzing quotes, and capturing all the data necessary to submit a bid to the client.



Once the *bidding* phase is complete, the bid proposal is prepared and submitted to the client. The front office waits to hear they have the winning bid. If they win the work, they can start the *planning phase* and prepare to build the project.

Field Office

Which work roles are typically performed in the field office? What are their primary tasks?

Budgeting and Forecasting
During the *execution phase* of a project, the field office manages the budget and forecasting for the project. They relay this information to the other field personnel so that understand how their work is budgeted, how they should build the work, who supplies the materials, who, if any, are the subcontractors, etc.

Contract Procurement
Project engineers and managers procure contracts for materials and with subcontractors.

Work Planning and Quantity Tracking
Field engineers and superintendents prepare work plans for the foremen and their crews by breaking down the work into manageable pieces. They also create quantity-tracking plans, perform inspections, and create daily plans to distribute to the foremen on the jobsite.

Change Management
As issues arise, project engineers are responsible for their recording and submission to the client for approval. Once an issue is approved, a change order is executed.

Inspections Management
Inspections, as well as actual man-hours and quantities, are reported to the field office where they are reviewed and approved before being sent to the back office.

Jobsite

Who works at the jobsite? What type of information do they record as they build the work? Where does that information need to go and why?

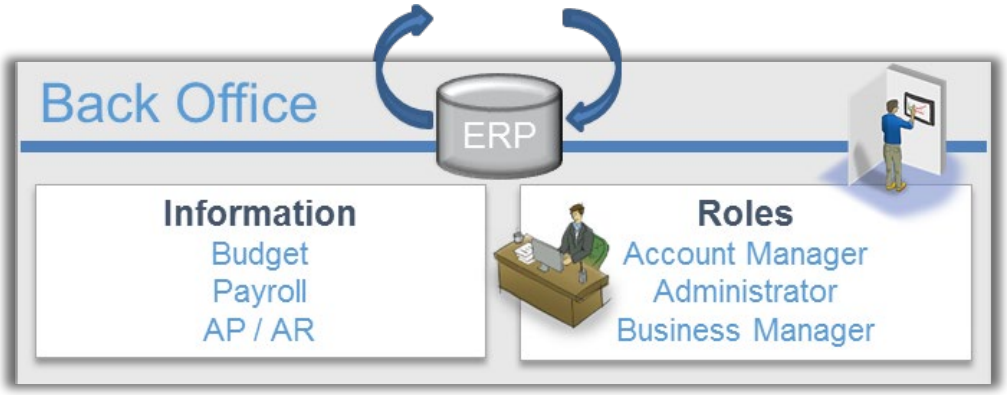
The jobsite is where you find quality controllers, field engineers, superintendents, safety managers and foremen. It is where the work is completed. The safety managers, superintendents and foremen are involved in safety inspections, while the quality controller and field engineers perform quality inspections before and after the work is complete. The foremen also record the man-hours of each craft worker, as well as the quantity of work completed each day based on the plan provided by the superintendent and field engineer.

This information is relayed to the field office where it is verified and approved.

Back Office

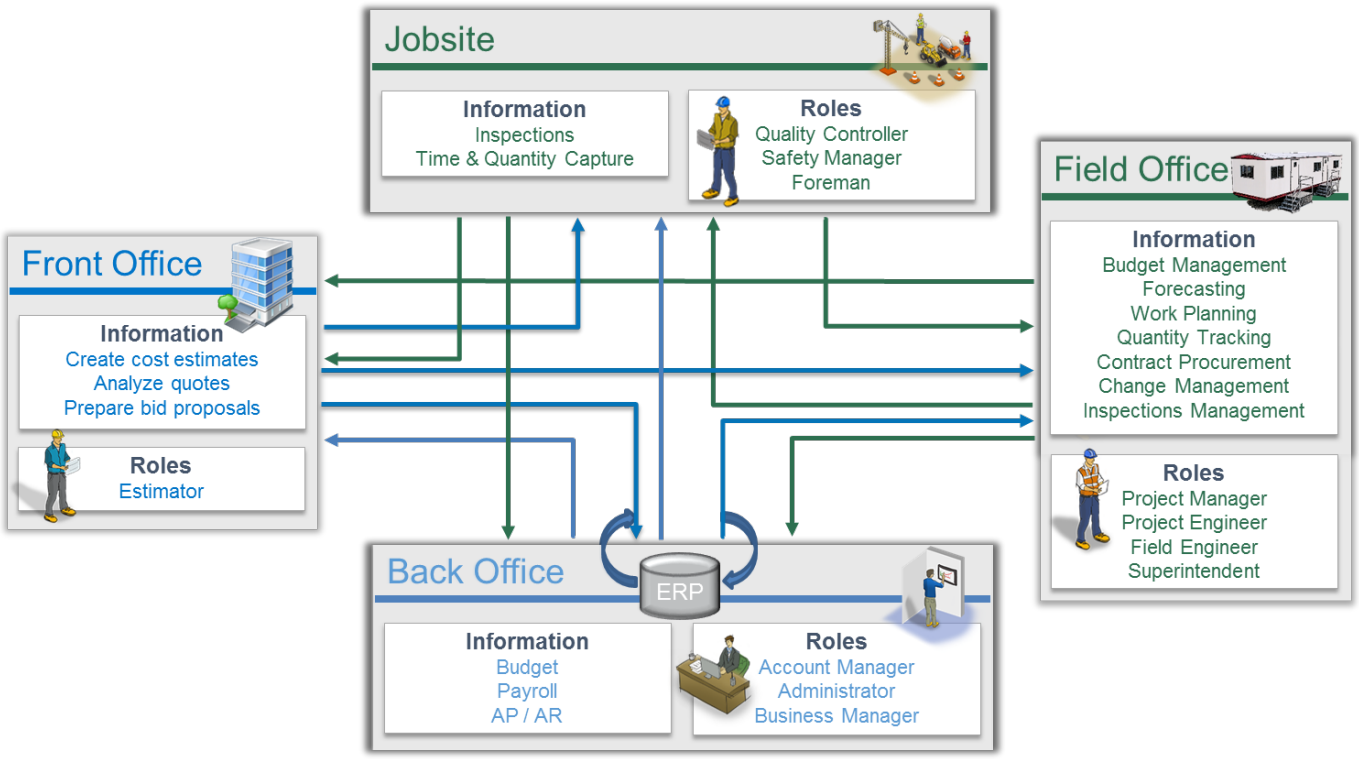
Which project-relation functions does the back office serve? Why is the back office critical in managing the project?

The back office is where account managers and administrative staff track budgets and ensure that payroll is correct and completed in a timely manner. Additionally, the back-office tracks accounts payable and receivable and records revenue. After a contract is created, the business manager verifies that purchase orders are generated. All of the “actual” data - time or dollars - is communicated back to all of the other areas of the job.



Problems with Existing Systems

Communication on a project is often an issue. Accurate information must flow quickly between the different areas and disciplines. Reality has confirmed that critical information is often lost, miscommunicated, or received in an untimely manner. In some cases, information is re-entered in a new or separate system and therefore duplicated.



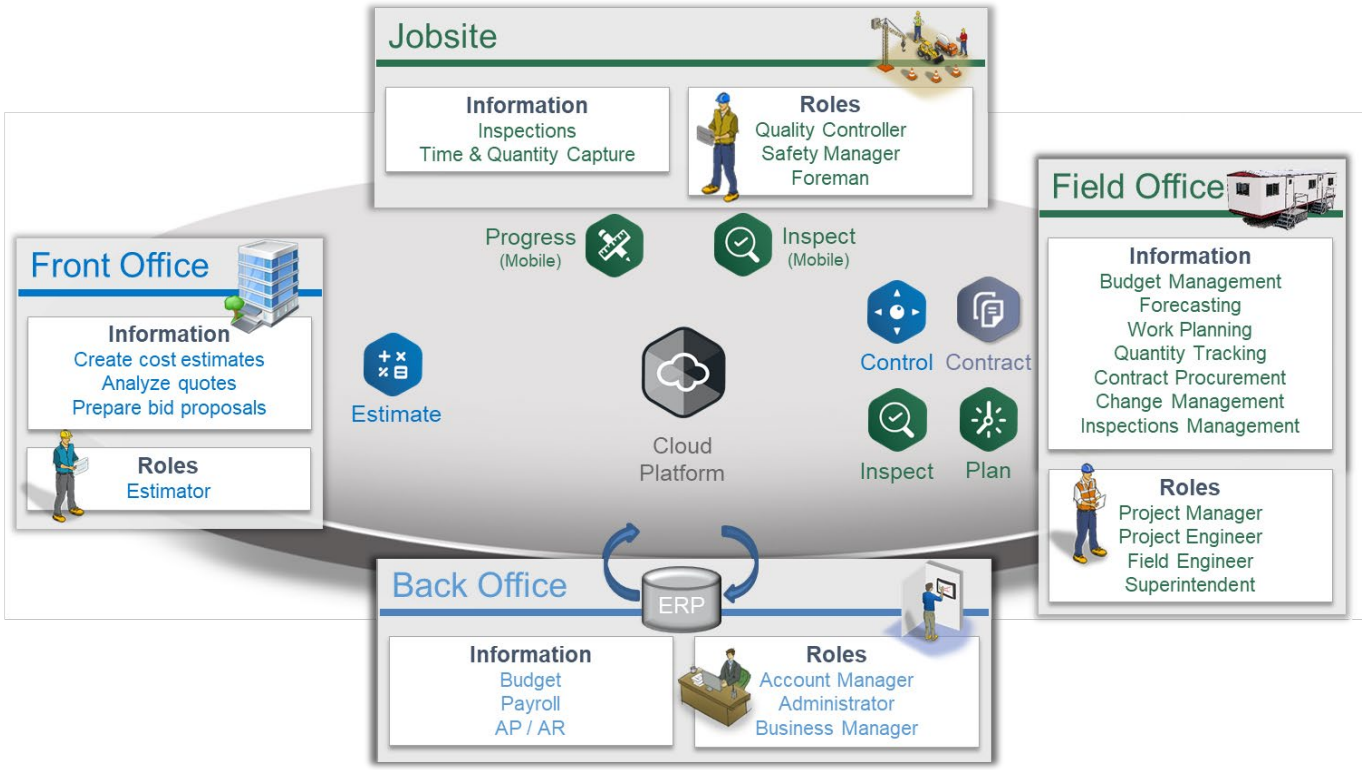
Employing too many systems to transmit information on a project can result in duplication, which is not efficient. Here are a few examples of such inefficiencies:

- Inspections that are completed on paper must be manually input or scanned into a computer system.
- Hand-written time cards that are misplaced or get wet must to be reproduced and then entered into a computer system so that the crew can be paid.
- Quantities established in the daily plan do not coincide with the quantity claiming system.

What issues can you think of that you have experienced on your projects?

What is Project Suite?

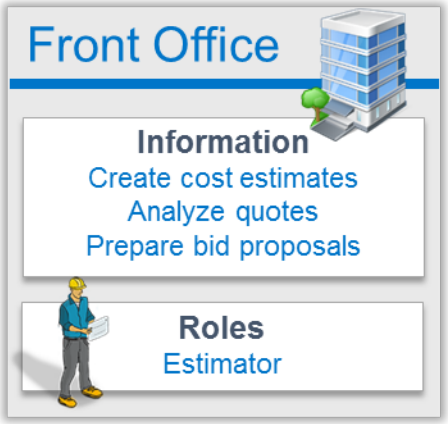
Project Suite was designed and is continually updated to resolve the aforementioned issues. Project Suite is a portfolio of software applications designed to help companies visualize, estimate, manage, control, and connect all aspects of capital and maintenance projects. Project Suite is built on a cloud platform, so all the different applications can communicate with each other. It is also designed to communicate with multiple different ERP systems such as SAP or Oracle to share key information with the back office.



How Does Project Suite Integrate into a Project?

Scenario: Step 1
Skyline Construction Company decides to bid on a project to build a concrete foundation. *Upon submittal, the client informs Skyline that they are the preferred contractor for the work. They now need to take the project from the estimate to the project execution phase.*

Using the **InEight Estimate** application, the estimating team in the front office builds the cost estimate and submits the bid proposal, including awarded quotes and all bid documents.



Once awarded the contract, the project team transfers all the information from the estimate to **InEight Control**, where the project can be managed. Included are the cost item estimates, awarded quotes, bid and proposal documents, and the estimate budget structure. During this transferal, the project management team can modify the estimate easily to conform to how the work will be built and tracked.

Scenario: Step 2
The field engineers and superintendents in the field office are ready to begin planning the work. They break the work plans down into work packages that contain the specific quantities, materials, labor, equipment, and budgets associated with each portion of work. *The project manager and engineers procure contracts for material and subcontracted work.* *Then, quality inspections are created to ensure that the built work meets the specifications as well as safety requirements.*

The field engineers in the field office can now go into **InEight Plan** to break the work down into work areas, work plans within those areas, and work packages where the work is broken down into components. Each component is assigned to a WBS code from **InEight Control** as well as other important information, including claiming schemes.

Project Engineers use **InEight Contract** to create bid packages and submit them to vendors and subcontractors. They also solicit contracts.

Engineers utilize **InEight Inspect** to create the forms necessary for both the quality and safety inspections. They can send these forms to the **InEight Inspect Mobile** app so that the responsible party can complete them in the field.

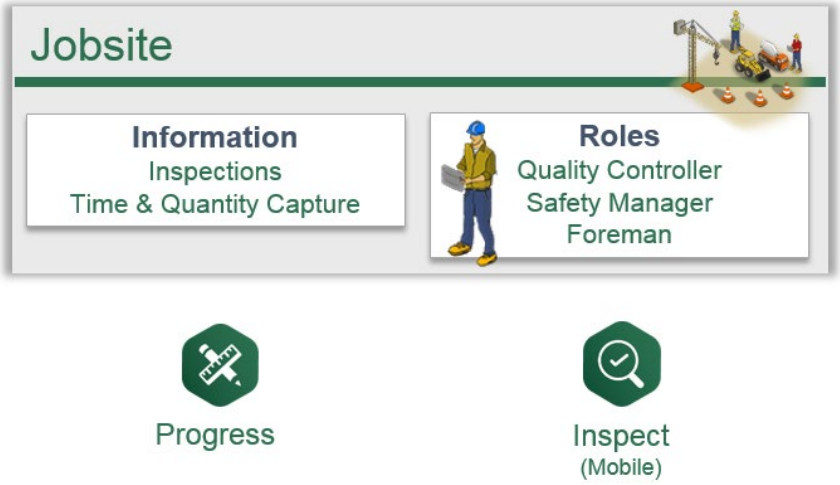
Scenario: Step 3
Joe, the concrete superintendent, now has all the work planned for the concrete foundation and is ready to communicate all the details to his foreman, Jill, so that construction can begin tomorrow.

The superintendent, Joe, can create a daily plan in the web-based **InEight Progress** module for the foreman, Jill, to use with her crew to erect the formwork for the foundation. Joe uses the quantities, budgets and claiming schemes from the work package his field engineer created and communicates exactly what Jill's crew needs to complete tomorrow. Joe adds production goals for the day and safety notes related to the installation of the formwork. He communicates this information to Jill by 'syncing it' to the system. Once the plan is synced, Jill can access it using the **InEight Progress** app on her iPad.

Scenario: Step 4
In the morning, Jill reviews the plan for the day and determines if any changes are necessary due to one of the crewmembers calling in sick. *John, the quality controller on the project reviews the quality inspections that he needs to perform that day. He creates a plan with Jill to schedule a convenient time to meet.*

The foreman reviews the plan in the **InEight Progress** app on her iPad and makes adjustments as necessary to the plan (e.g., sick crewmember, unforeseen issues).

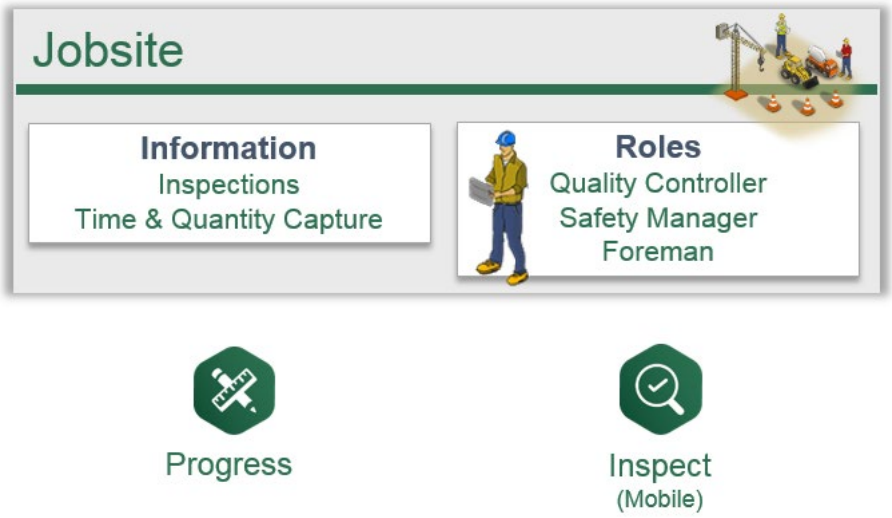
The quality controller speaks with the foreman and determines when they can complete the inspection. He uses the **InEight Inspect** app on his iPad to perform the inspection.



Scenario: Step 5
Throughout the day, Jill has kept track of the quantities completed on the formwork but had to adjust the plan to send her crew to build a quick access ramp for an earthworks crew. This was not in the plan, and she needs to account for it before signing out the crew.

In the **InEight Progress** app, the foreman can keep a log of notes on the day's progress and document any unforeseen construction needs that come up. She can quickly add extra tasks to accommodate adjustments to the plan, review each crewmembers' hours, and sign them out at the end of the shift. She enters the quantities completed that day, which allows her to see her crew's productivity. She will be able to communicate this to the crew in the morning.

Once the above steps are complete, she approves the daily plan and synchronizes it so that it can be reviewed by the superintendent in the field office.



Scenario: Step 6

Joe and his field engineer have received the quantities, hours, and inspections completed during the day and now want to review and approve them.

Upon review, they discover there was an issue with the foundation specifications that may result in a change order. They log this issue to communicate with the client.

The superintendent can open **InEight Progress** and review the hours for each crewmember, any new tasks created, and the quantities completed for each of the tasks. He is also able to review the daily costs and see how the crew performed in both man-hours and cost. He can approve the plan and make any necessary changes to tomorrow's plan based on the productivity information he received.

The field engineer can also verify that the quality controller's inspections were completed in the **InEight Inspect** application.

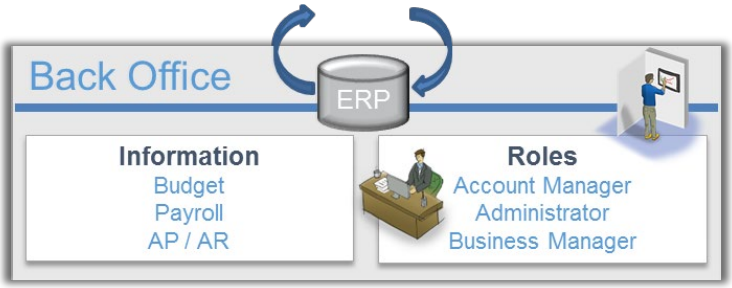
One of the project engineers will record the concrete foundation issue in **InEight Contract** and track it, converting it into a change order if necessary.

Scenario: Step 7

The account manager in the back office will now verify all the time for each crewmember and ensure they are paid correctly according to the union guidelines.

This information is then communicated to the front office, so the project manager can analyze the job costs and update forecasts.

Within the **ERP system**, the account manager and administrators review all the time that has been approved in the field office, make adjustments if necessary, and submit the payroll to ensure everyone is paid accurately and on time. The information is synchronized into the **ERP system**, where it can be sent to **InEight Control** so project management in the front office can review the information.



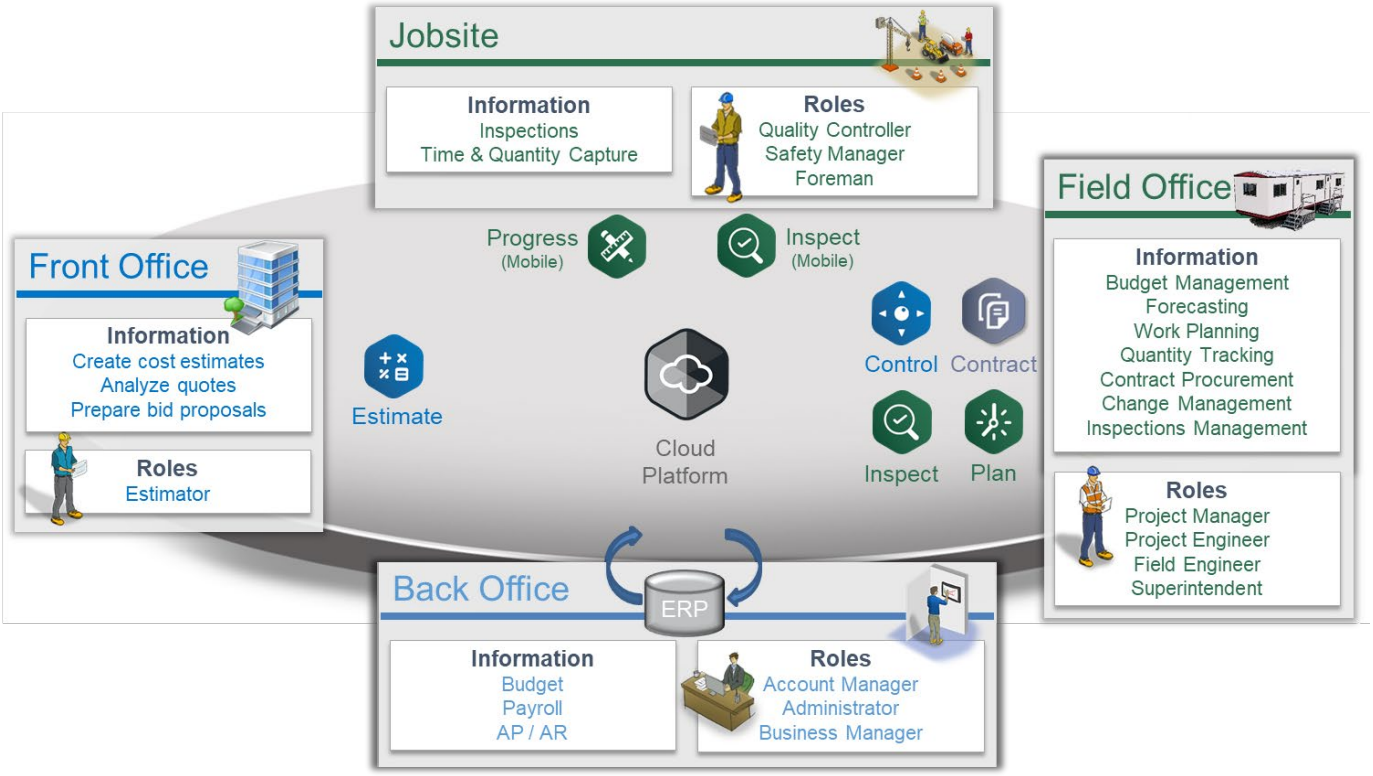
Scenario: Step 8
At the end of the month, the project managers in the front office view all of the actual quantity and cost information, compare it to the budget, and project the final cost of each operation. Forecasts are then updated for the project.

In **InEight Control**, project engineers and managers can view all of the actual quantities and costs from the jobsite and analyze the information to determine if they are going to meet the budget. After review, if they see that a few operations are spending more time and money due to weather delays, they can decide to update the forecasts for those specific operations accordingly.

They also look at the total quantities for the month to determine how much of the project scope can be billed to the client.

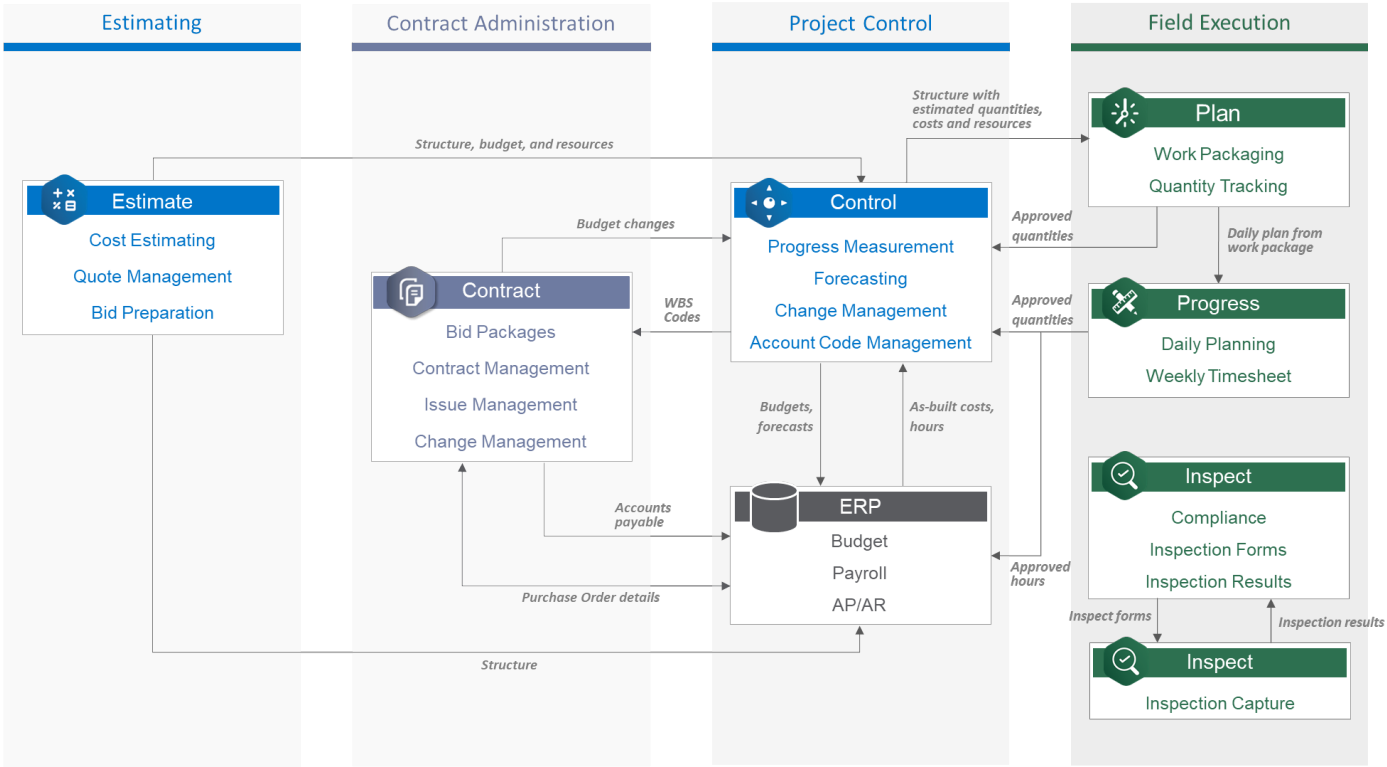
Summary

The information created for your project is communicated to all Project Suite applications and shared through the Cloud Platform. Project Suite is also able connect and communicate to the project's ERP system and other 3rd party applications so that they can utilize the information, eliminating the need to re-enter data. Finally, all of this information can be archived for future reference, and selected information can easily be presented to the client.



Project Suite Workflow

The following workflow diagram illustrates in greater detail what information travels between the Project Suite applications and the ERP system and direction in which it flows.



1.2 Plan Work Packaging Overview

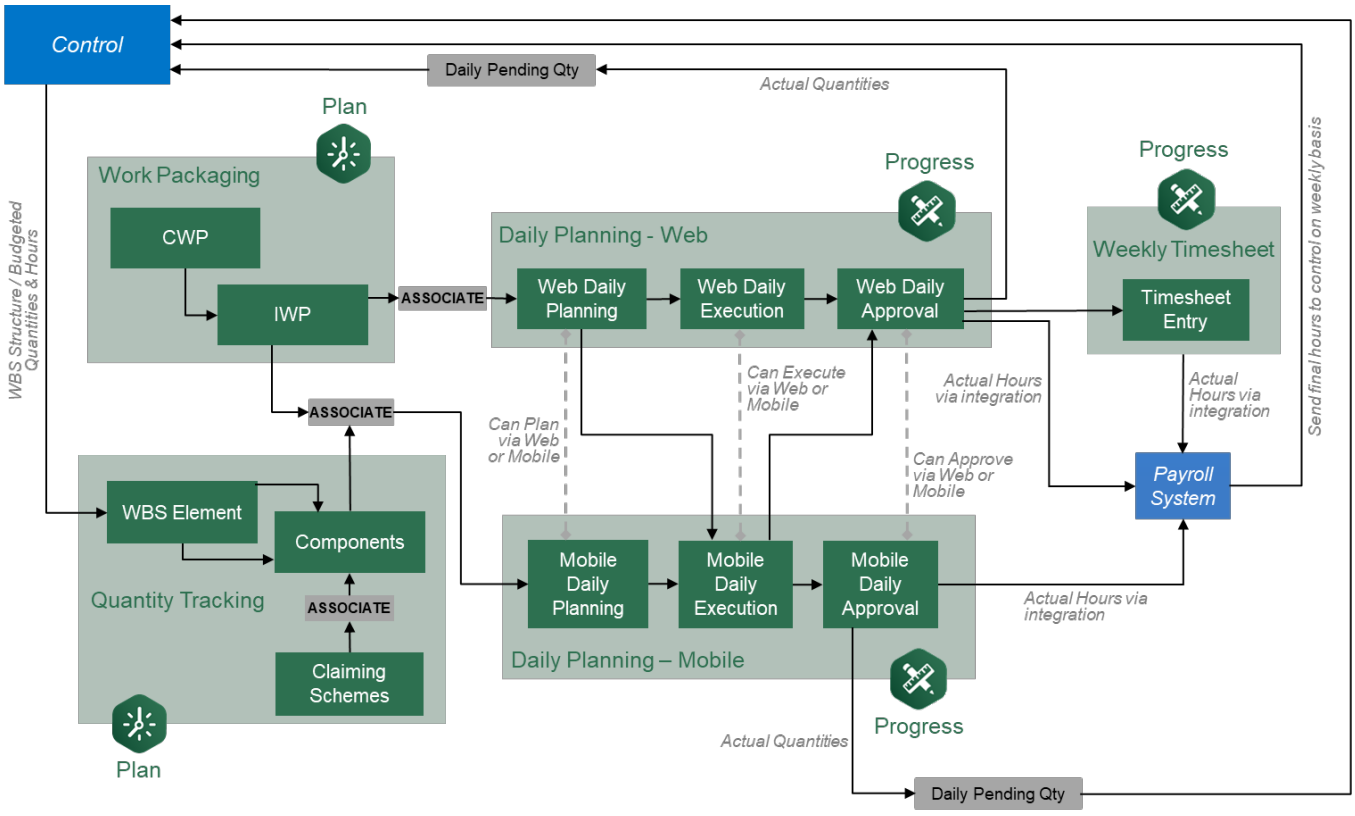
InEight Plan is an application within the InEight portfolio of products. It is a tool for engineers and superintendents to plan their work and track quantities during the construction of the project.

InEight Plan is organized into two modules:

Plan Modules	
Work Packaging	Creating and managing work packages.
Quantity Tracking	Creating and managing components and claiming schemes. Claiming completed quantities.

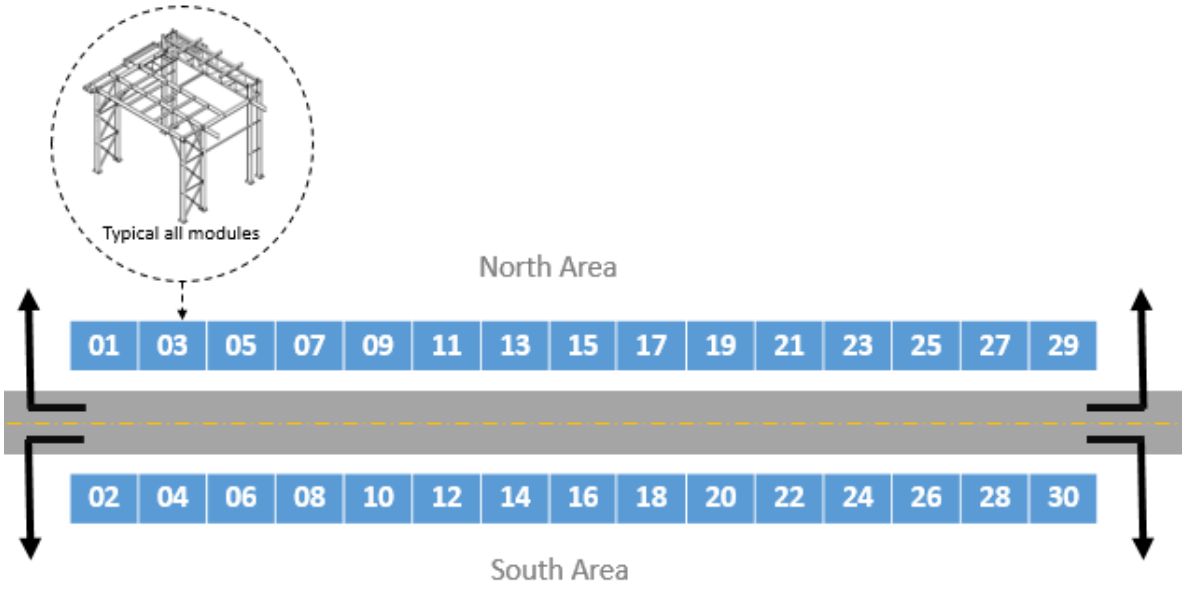
InEight Plan Work Flow

The below workflow illustrates the functions of both InEight Plan and InEight Progress, and how data flows between the two applications.

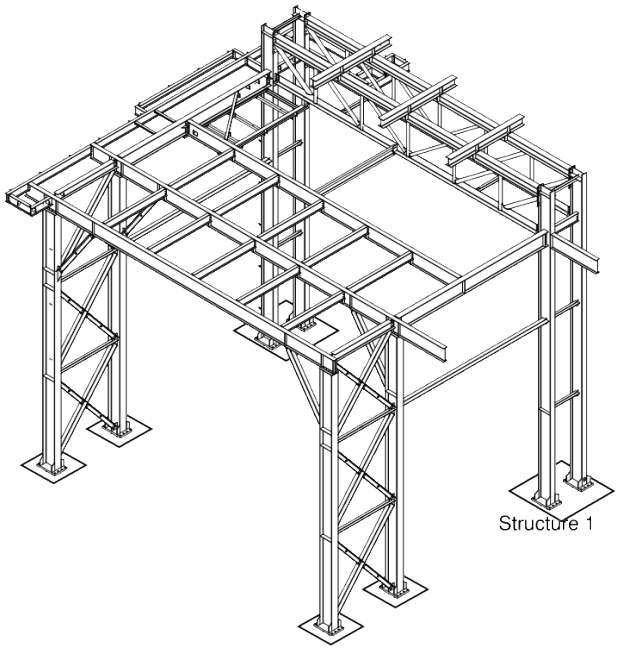


Scenario

You are a Project Manager about to start construction of a Steel Structure project. Your first step before starting construction is to break the project down into pieces that are more manageable.

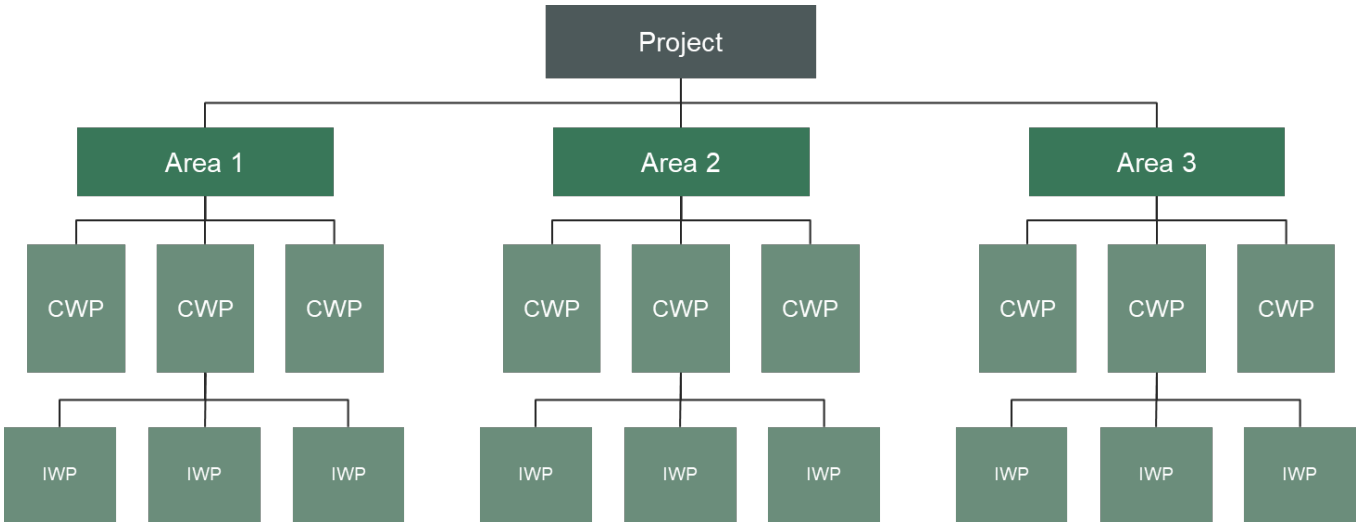


The image below depicts a layout for a steel structure project. The project consists of erecting 30 separate steel structures on opposite sides of a road. Each structure or module has been assigned a number 1-30.

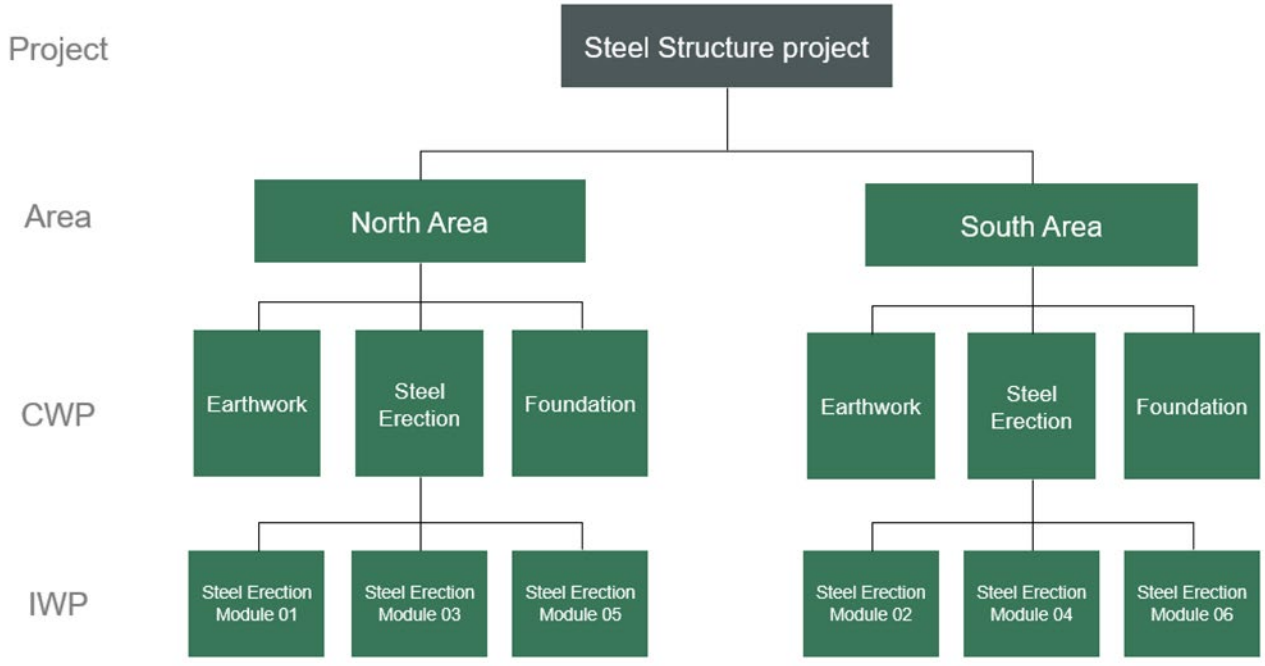


Work Packaging

Work Packaging helps break down the project into small, manageable pieces so that the work can be built and tracked effectively. In InEight Plan, you can break the work of your project into construction work packages (CWPs) and installation work packages (IWPs).



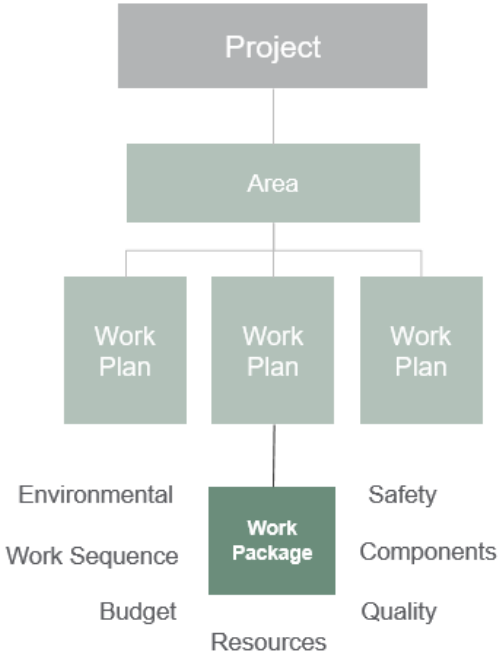
As mentioned in the scenario above, the scope of Steel Structure project was too big to manage without segmenting it down to work packages representing one to four weeks' worth of work. In Plan, this breakdown of the project could look like this:



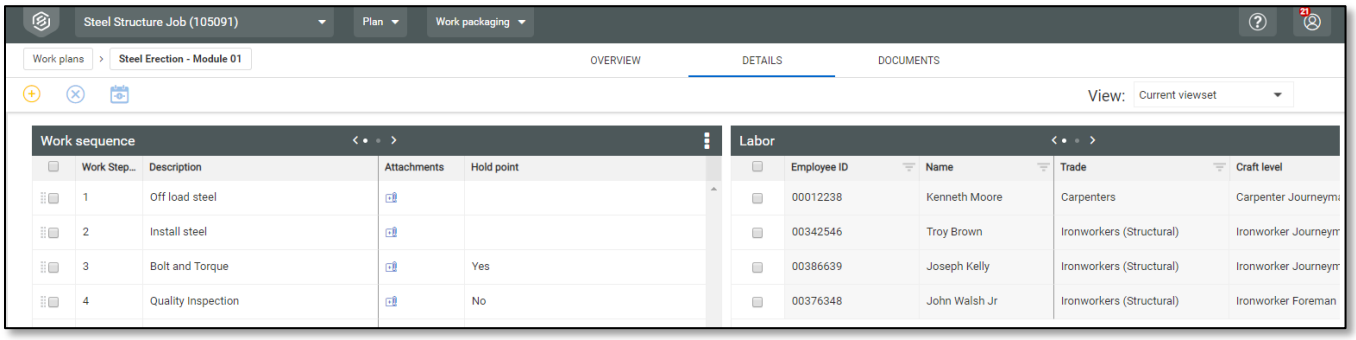
Work Package Details

Work package details include the following information:

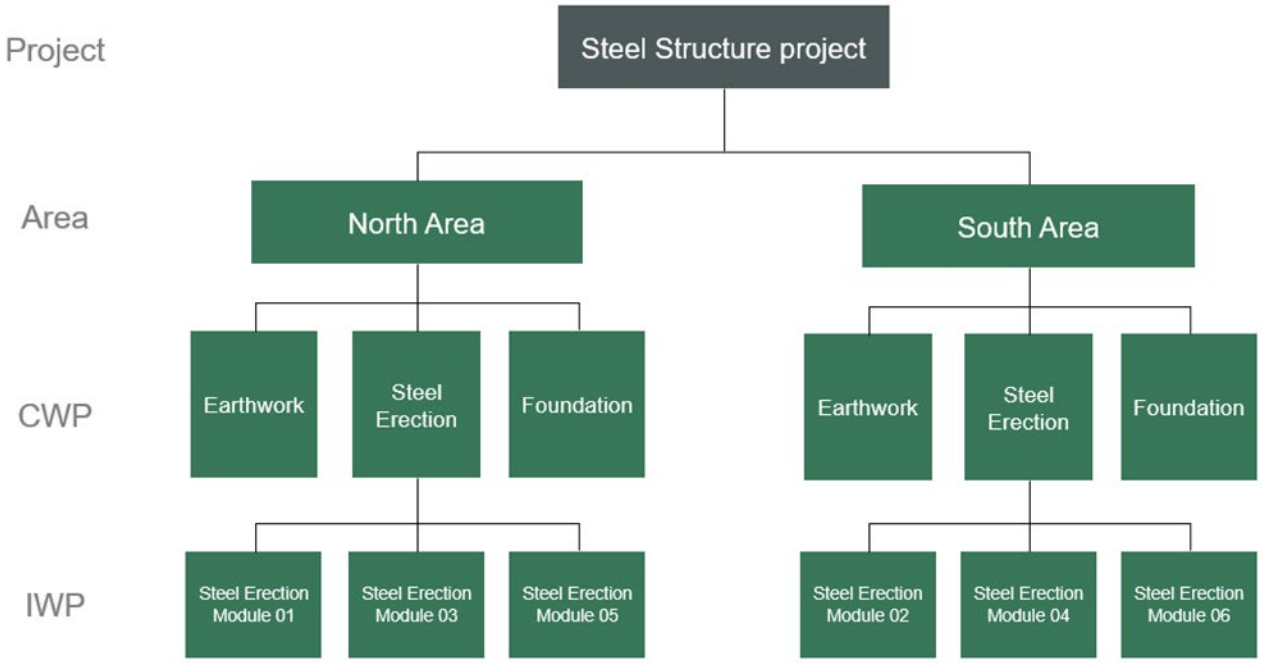
- Work sequence
- Budget
- Resources required
- Components and quantities
- Safety, quality, and environmental concerns



The image below shows what some of the details of a work package look like in Plan:



For your Steel Erection work plan, you can create a work package for each module.



IMPORTANT

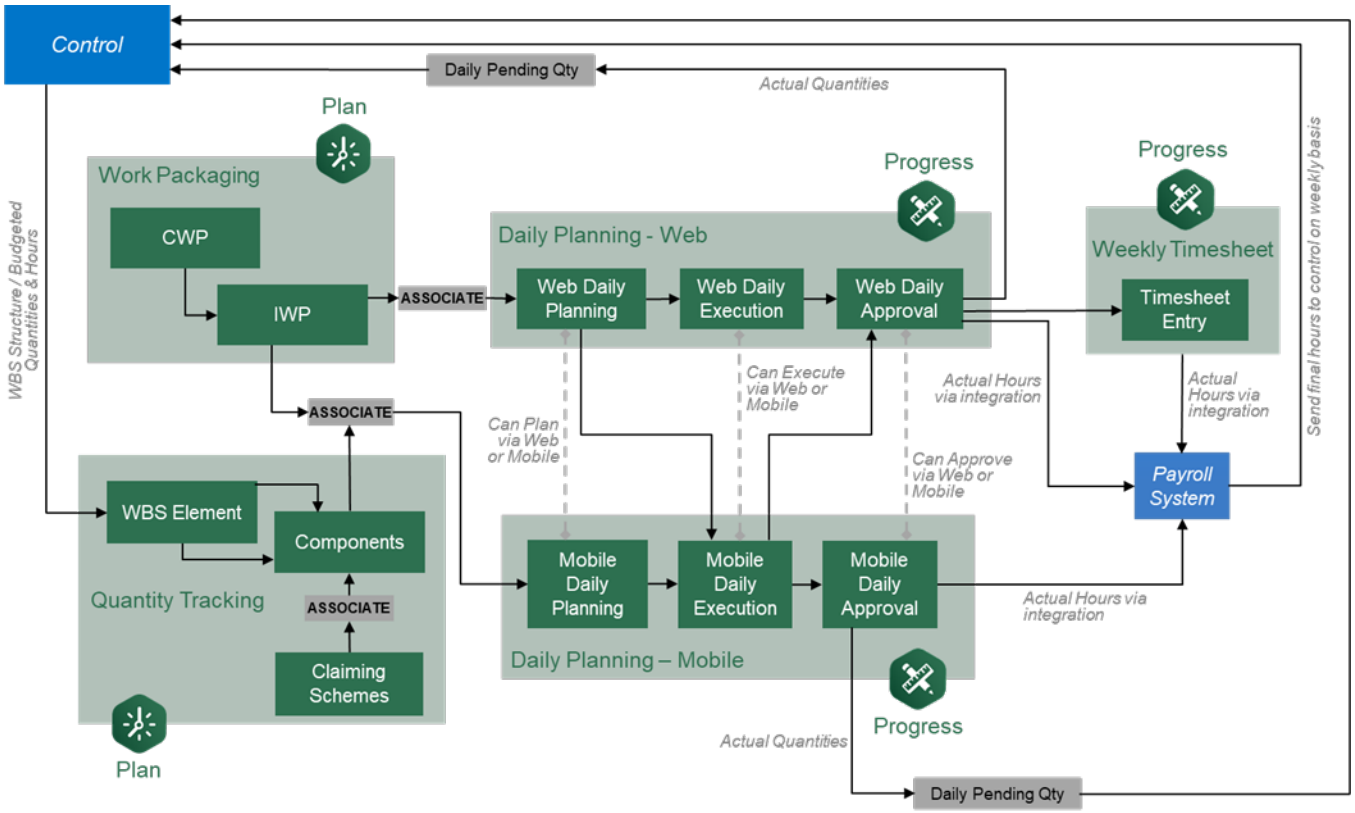
In Lesson 4 – Work Package Management*, you will learn about work plans and work packages in detail, including how to create them and define plan details.*

Comprehensive Workflow

The diagram below displays both sections of Plan and how they interrelate with Progress, Control and the Payroll system.

You will notice the areas where you create associations between work packages and daily plans, work packages and components, and components and claiming schemes.

The details of this workflow and the step by step functions within it will be covered in the remaining lessons of this and the Plan Quantity Tracking module and the Progress module.



Lesson 1 Review

1. Which two of the following are modules in Plan?
   a. Quantity tracking
   b. Benchmarking
   c. Work packaging
   d. Control
   e. Reporting
   f. Daily planning

2. Which one of the following represents the order for breaking down your project scope from larger to smaller pieces within InEight Plan?
   a. Project > CWP > IWP
   b. IWP > Project > CWP
   c. Project > Work plan > CWP
   d. Project > IWP > CWP

3. According to the InEight Plan workflow diagram, installation work packages (IWPs) associate with which of the following? (Select all that apply)
   a. Inspections
   b. Components
   c. Web daily planning
   d. Estimating
   e. Mobile daily planning
   f. Payroll

Lesson 1 Summary

As a result of this lesson, you can:

- Summarize the purpose of Project Suite
- Describe the two modules of Plan
- Explain the high-level work flow of Plan – Work Packaging

Lesson 2

General Navigation

Page Navigation / Columns / Data Blocks / Viewsets

Lesson Duration: 30 minutes

Lesson Objectives

After completing this lesson, you will be able to:

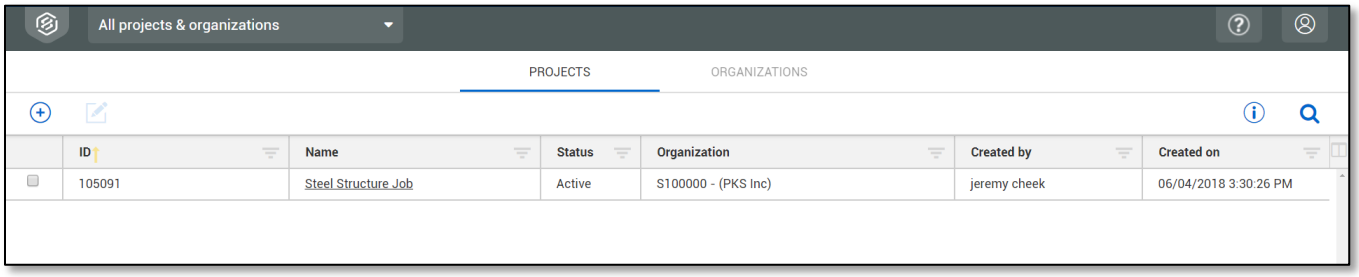
- Navigate the InEight Plan Work plans page
- Manage columns
- Manage data blocks
- Create viewsets

2.1 Page Navigation

In this lesson, you will explore the layout and start to navigate around the application.

Scenario
You are an engineer who has recently been assigned to a Steel Structure Project, taking over the role from another field engineer who recently left the project. You are responsible for creating and managing all work packages on the project. You are informed that you will use the InEight Plan application to accomplish this, however, you have never used InEight Plan. You would like to take some time to familiarize yourself with the application and see what work packages have already been created.

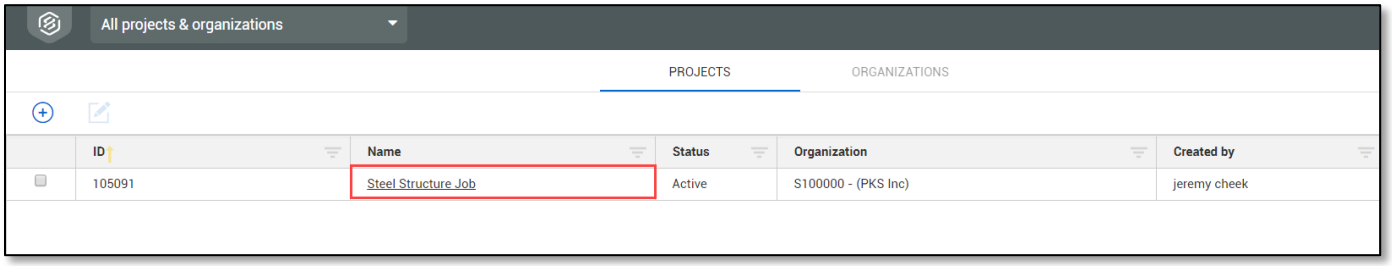
You access InEight Plan through your web browser. When you first log in, you will be taken to the **All projects & organizations** page within the InEight project platform. Here you can select any project you are associated with.



Selecting a project takes you to the Project home landing page for that project. From the home page, there are two different ways to access the Plan Work packaging module. The following Step by Step shows you both ways.

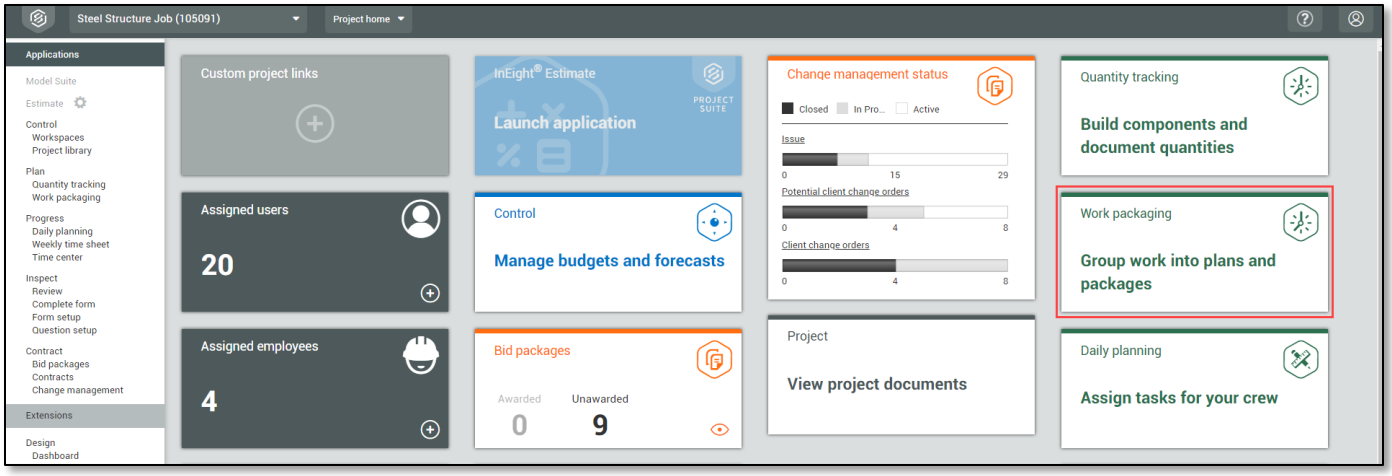
Step by Step 2.1.1 – Navigate to the Work Plans Page via the Project Dashboard

1. From the All projects & organizations page, select the project name **Steel Structure Job**.

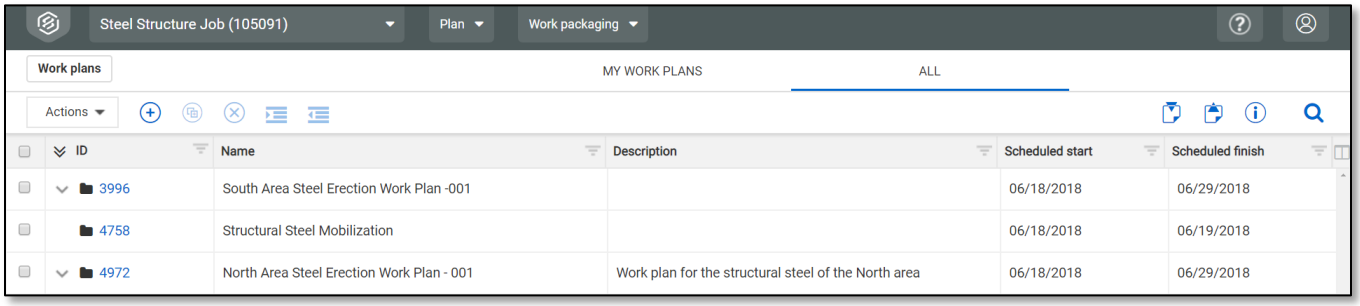


- This opens the project's home page

2. Select the Work Packaging module by clicking on the **Work packaging** tile on the right or selecting **Work packaging** from the side bar menu on the left.

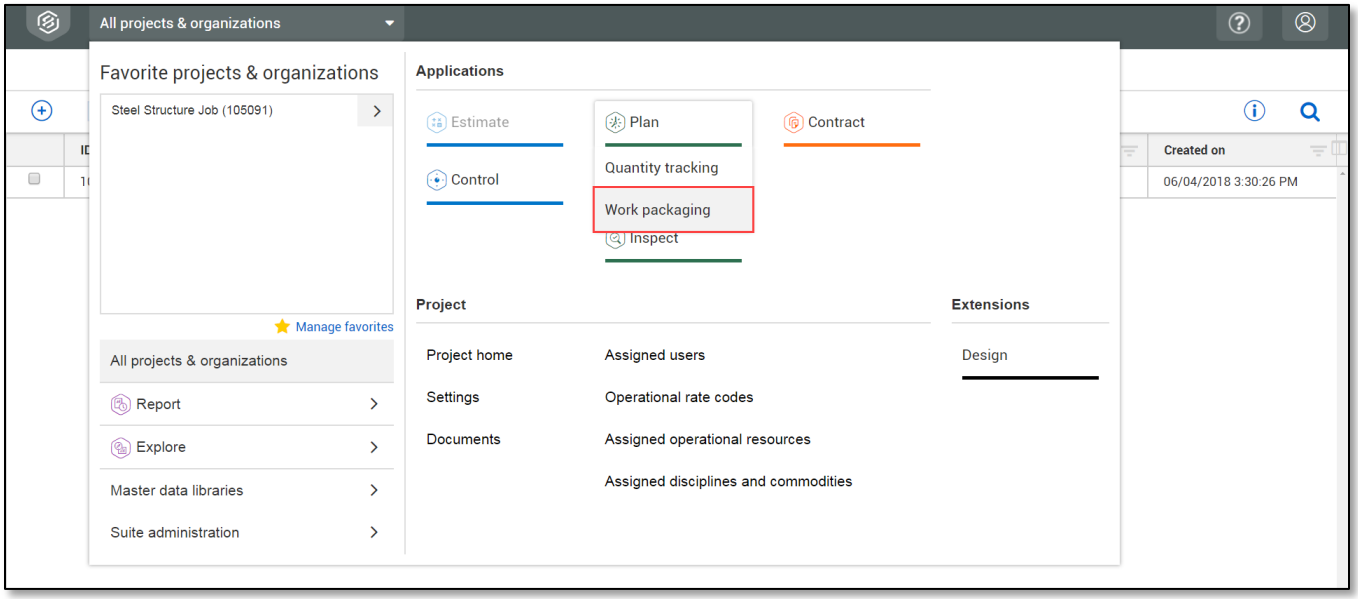


3. This opens the Work plans page.

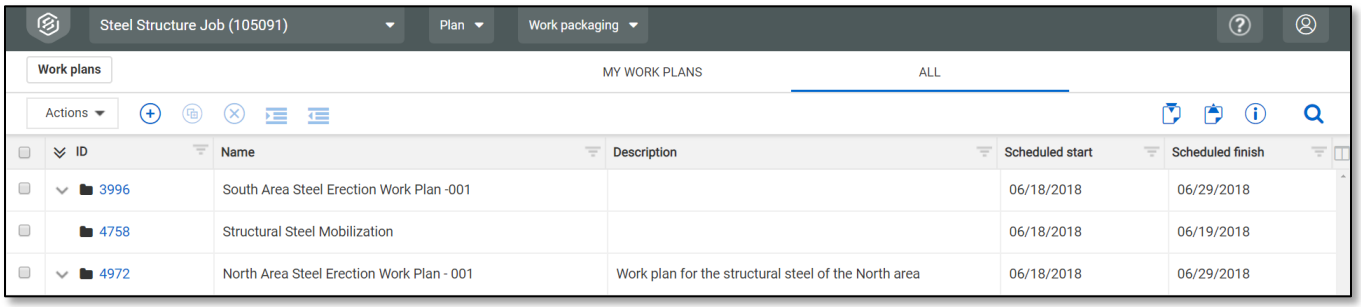


Step by Step 2.1.2 – Navigate to the Work Plans Page via the Menu Button

1. From the Projects page, select the **1st level drop-down menu**, hover over **Plan** and select **Work packaging**.



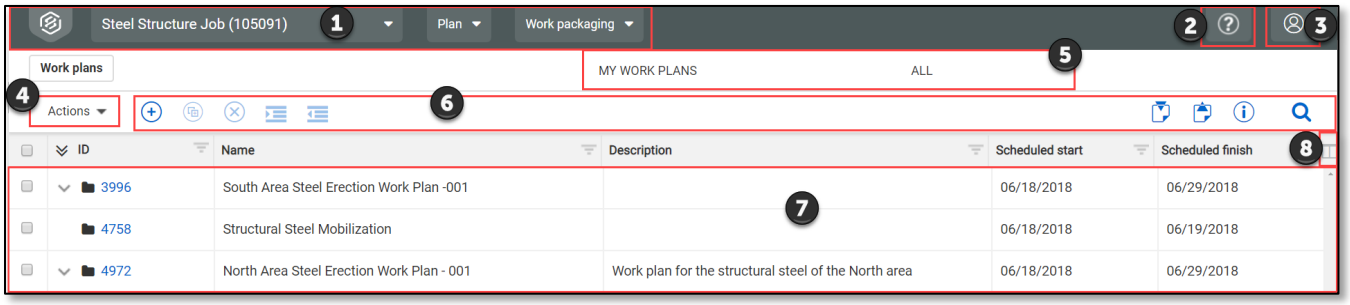
2. This opens the Work plans page.



> **TIP**
>
> *This is how you will navigate to the Quantity Tracking module as well. You will go over quantity tracking in the* InEight Plan – Quantity Tracking *course.*

Overview – Work Plans Page

	Title	Description
1	Navigation Bar	Contains First, Second, and Third-Level menus to access organizational settings, project settings, and applications.
2	Help Menu	Contains Walkthrus to walk you step by step through processes within the module.
3	Notifications and User Profile	View notifications, user profile and log out.
4	Actions Menu	Select available actions for the current register tab you are viewing.
5	Tabs	Allow you to navigate between different functions on a page. The blue line indicates what tab you are currently on.
6	Toolbar	Contains functions for the page you are on: add, edit, delete, export, import, show details, and search.
7	Work Plans/Packages Register	List of all work plans and packages.
8	Column Chooser	Allows you to add or hide columns to make the plans/packages list user specific.



TIP

The **My Work Plans** tab displays all the work plans that *you* have created or are assigned to as the Superintendent, Engineer, or Foreman. You can select the **All** tab to view *all* work plans created for this job.

2.2 Columns

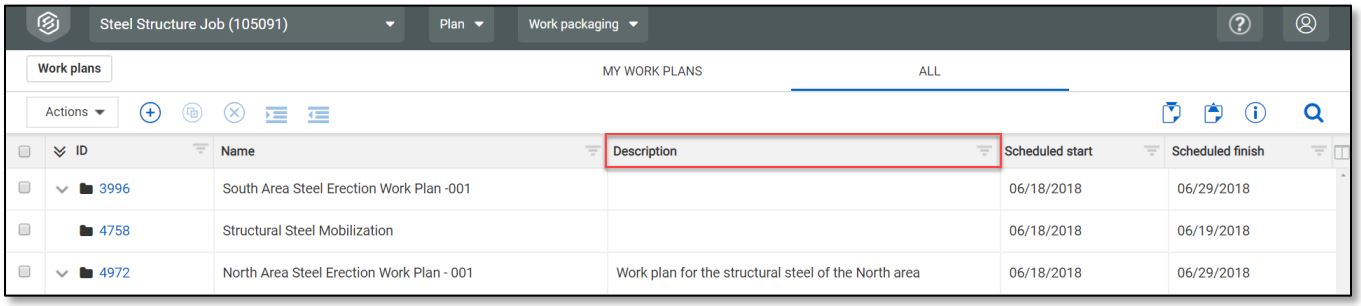
Within the InEight Plan Work plans page, you can customize columns according to your preferences. Changes made to the placement of your columns will be retained the next time you access the page.

Move Columns

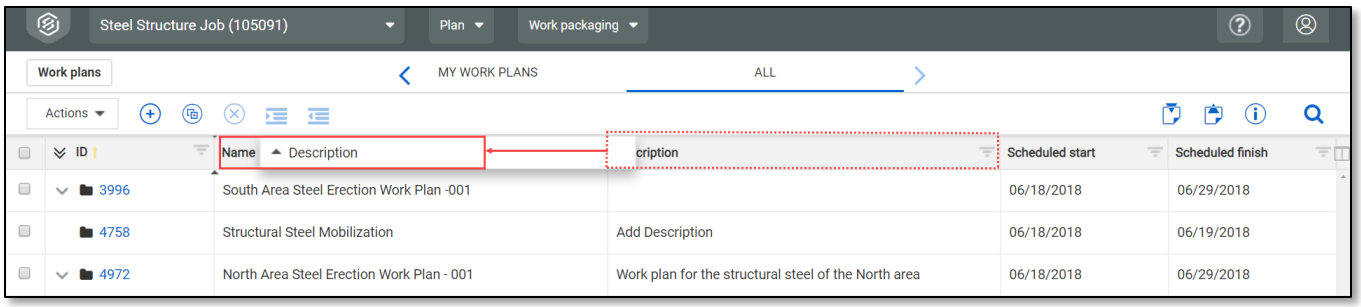
You can move a column from one place to another to customize your view using drag and drop.

Step by Step 2.2.1 – Move Columns

1. On the All tab of the Work plans page, click on the **Description** column header.



2. Drag the column to the left and drop it to the right of the ID column.
   - Two black arrows appear and guide you to the location the column will be dropped



Sort Columns

You can sort any column in ascending or descending order (both for alpha and numeric fields) by clicking once on the column header.

Step by Step 2.2.2 – Sort Columns

1. On the All tab of the Work plans page, click on the **Scheduled start** column to sort the column in ascending order.
   - Notice the yellow “up” arrow designating you are sorting in ascending order

2. Click the **Scheduled start** column again and the column will filter in descending order.
   - Notice the yellow arrow is now pointing down

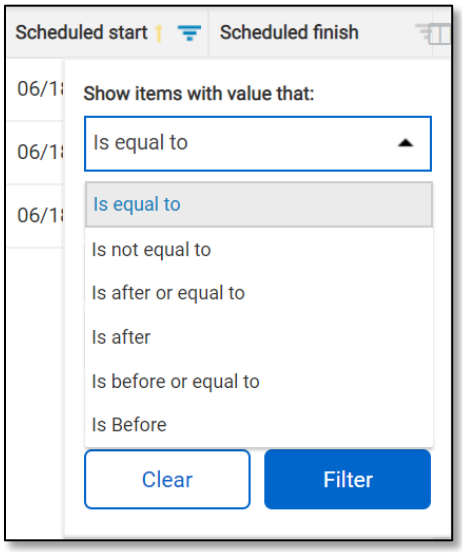
Filter Columns

You can filter columns as a way to see relevant information pertaining to your specific needs.

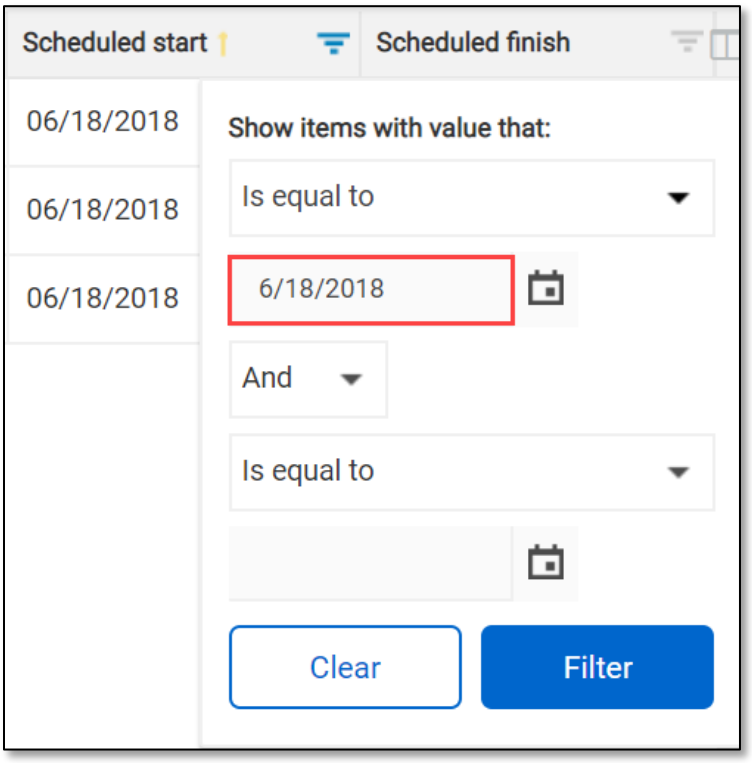
Step by Step 2.2.3 – Filter Columns

1. On the All tab of the Work plans page, click the **filter pyramid** of the Scheduled start column.

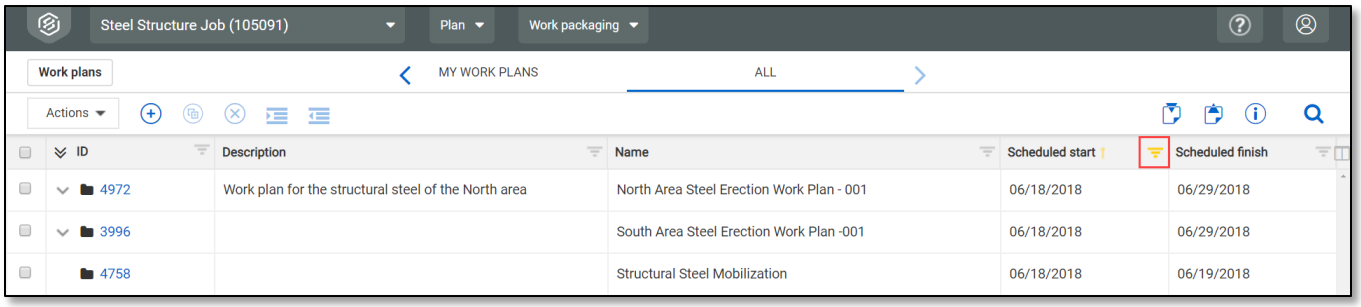
2. In the resulting drop-down list, select **Is equal to**.



3. In the first search box, type **6/18/2018**.

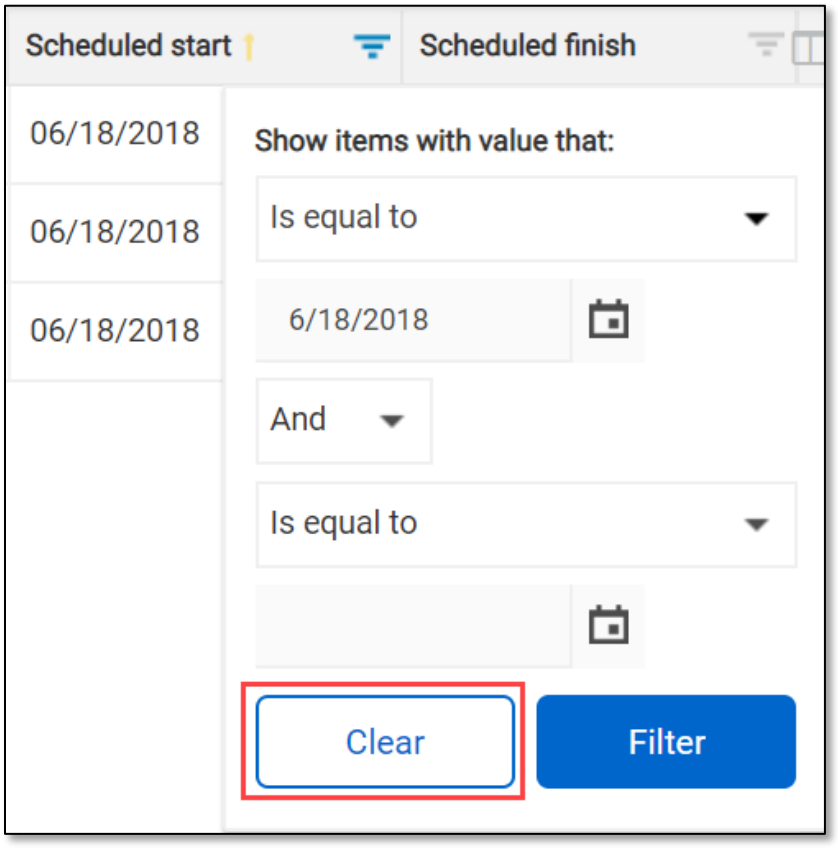


4. Click on the **Filter button**.
   - The table now only shows items that have a Scheduled start date of 6/18/2018.
   - Notice that the Filter Pyramid is now in yellow indicating that this column is filtered.



5. Select the inverted **yellow pyramid**.

6. Click **Clear** to clear your filter.



TIP

You can apply multiple rules to your filter. For example, setting a "Contains" or "is equal to" filter for your column allows you to bring in two distinct results at once.

Exercise 2.1 – Filter Columns

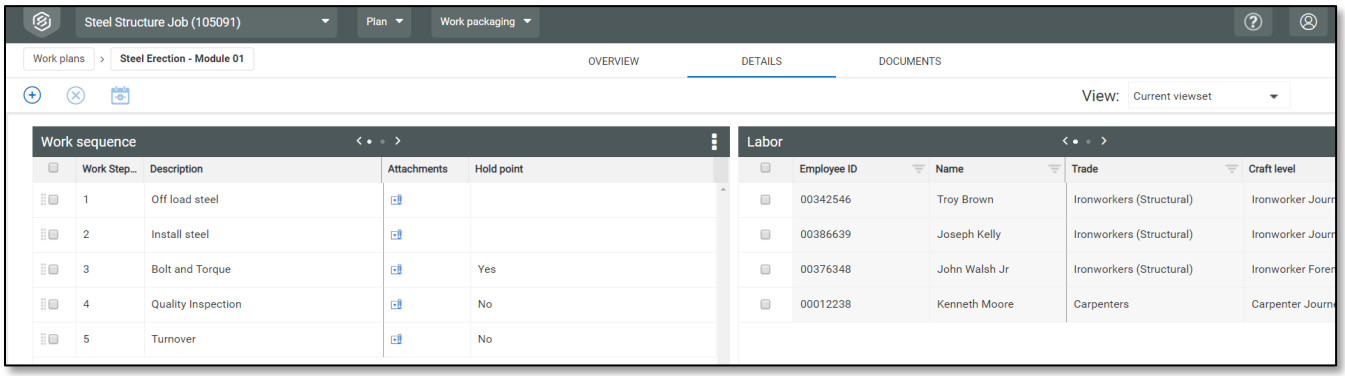
In this exercise, you will practice filtering columns from the All tab on the Work plans page.

1. Find a discipline by using the column sort function.
2. Remove the columns you do not need in your view.
3. Apply a filter you would use to make the data more relevant.

Congratulations, you have completed this exercise!

2.3 Data Blocks

On the Details tab of an opened work package, the work package details are contained within data blocks. Data blocks are sets of columns grouped together based on categories of information. Using data blocks helps you to organize and manage all of the columns on a page. Data blocks are fully customizable, and can be viewed side by side and moved around in the register. The information in each data block is displayed in a grid like format to maintain the look and feel of a spreadsheet.

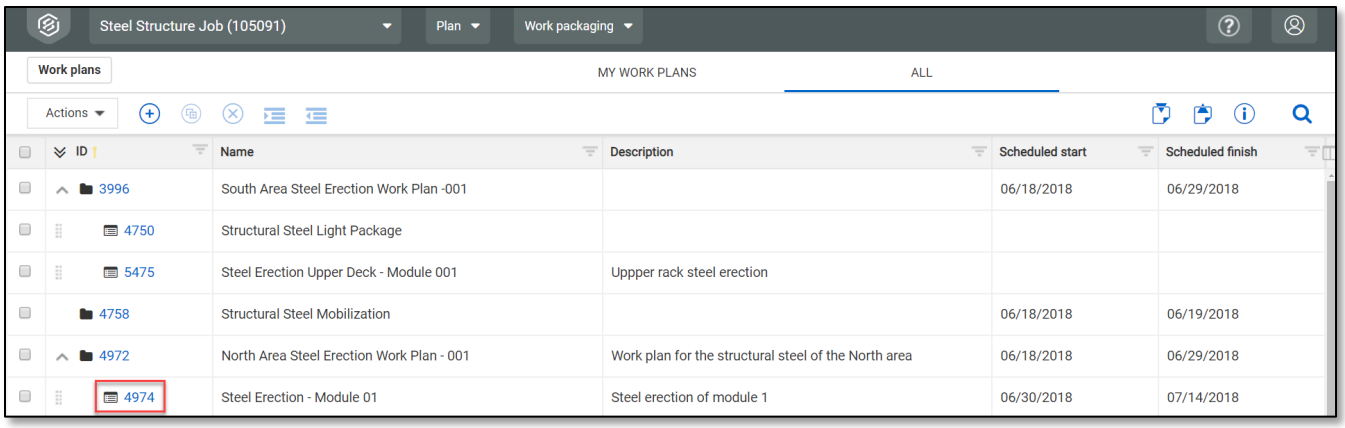


Some data block fields allow you to fill in key work package information.

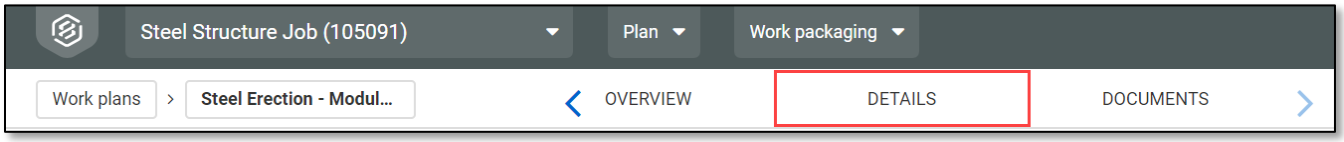
Add Data Blocks

Step by Step 2.3.1 – Add Data Blocks

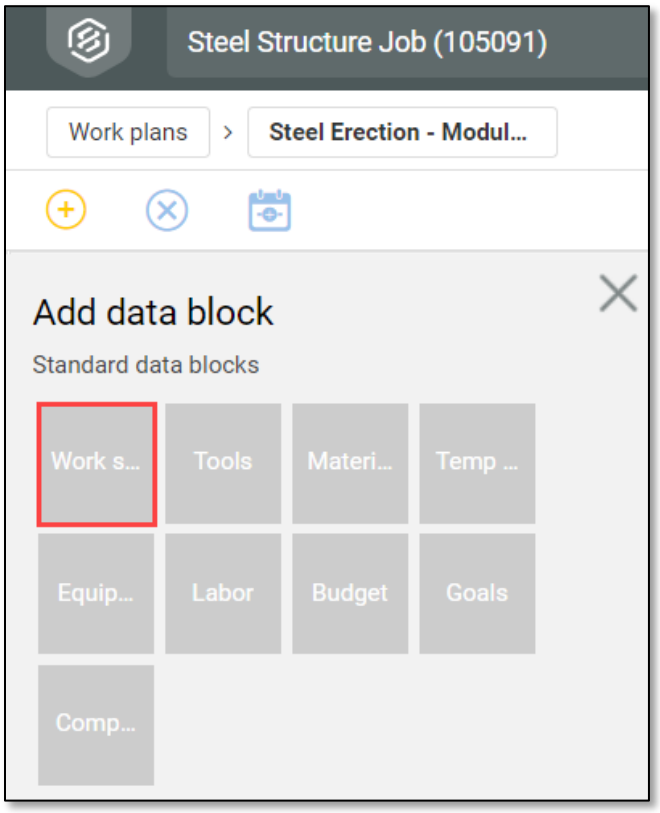
1. From the All tab on Work plans page, select a **hyperlink** under the ID Column.



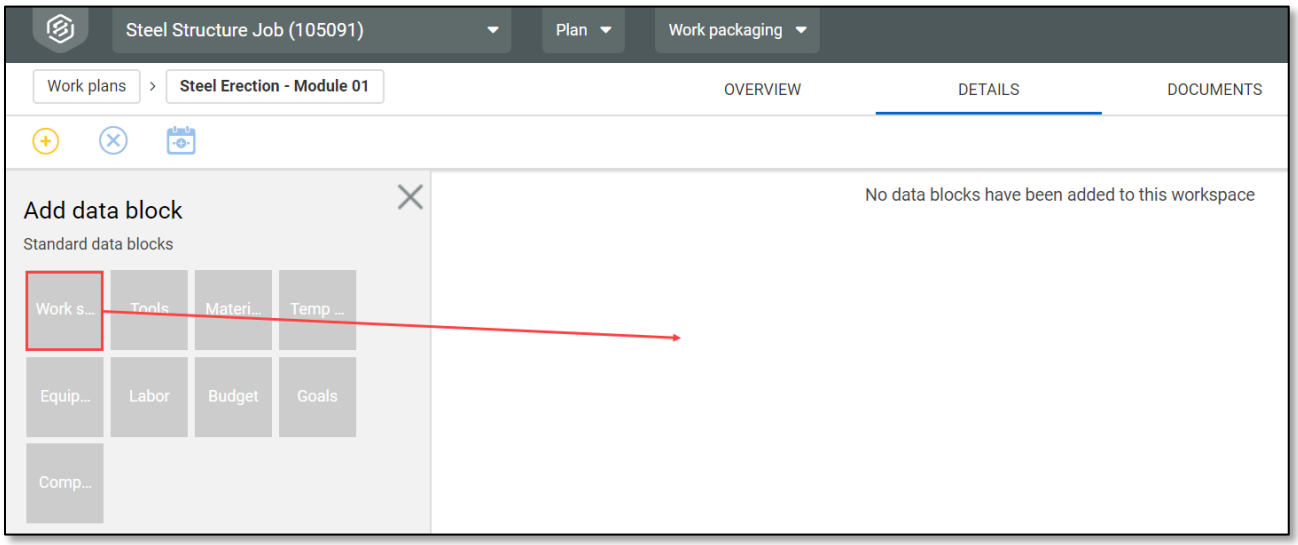
2. Once you are in an individual work plan, select the **Details** tab.



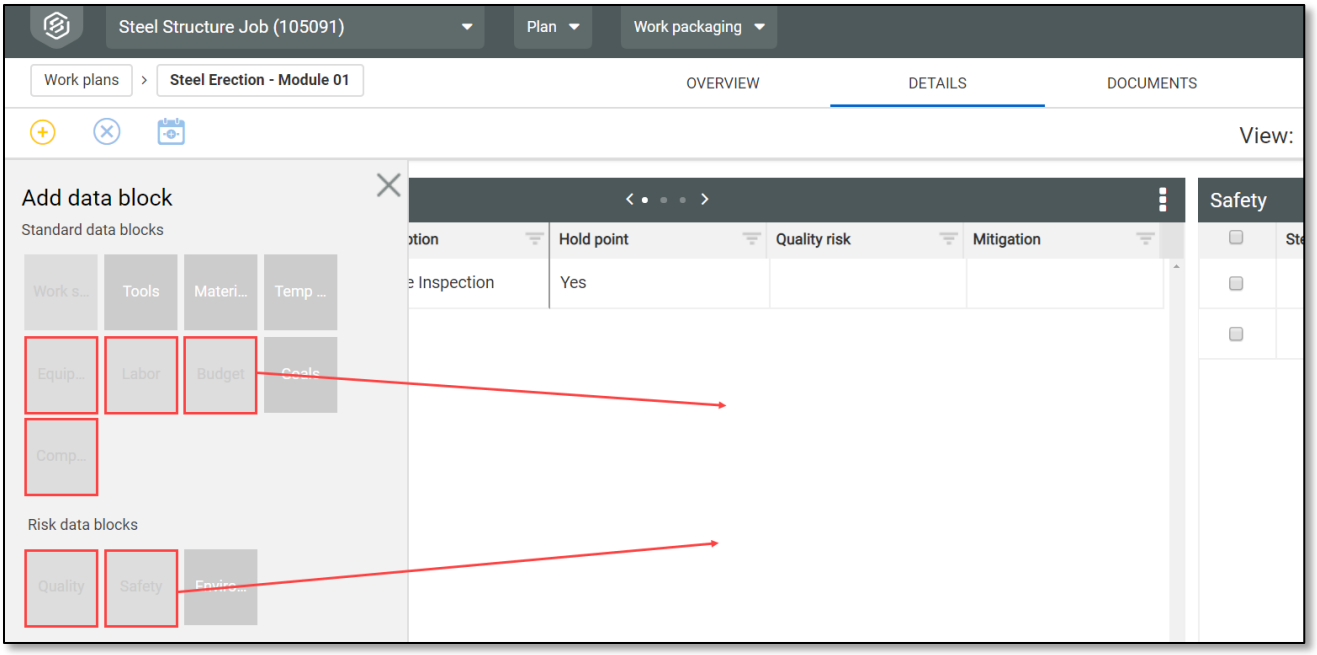
3. On the Add data block slide out panel on the left, select **Work sequence**.



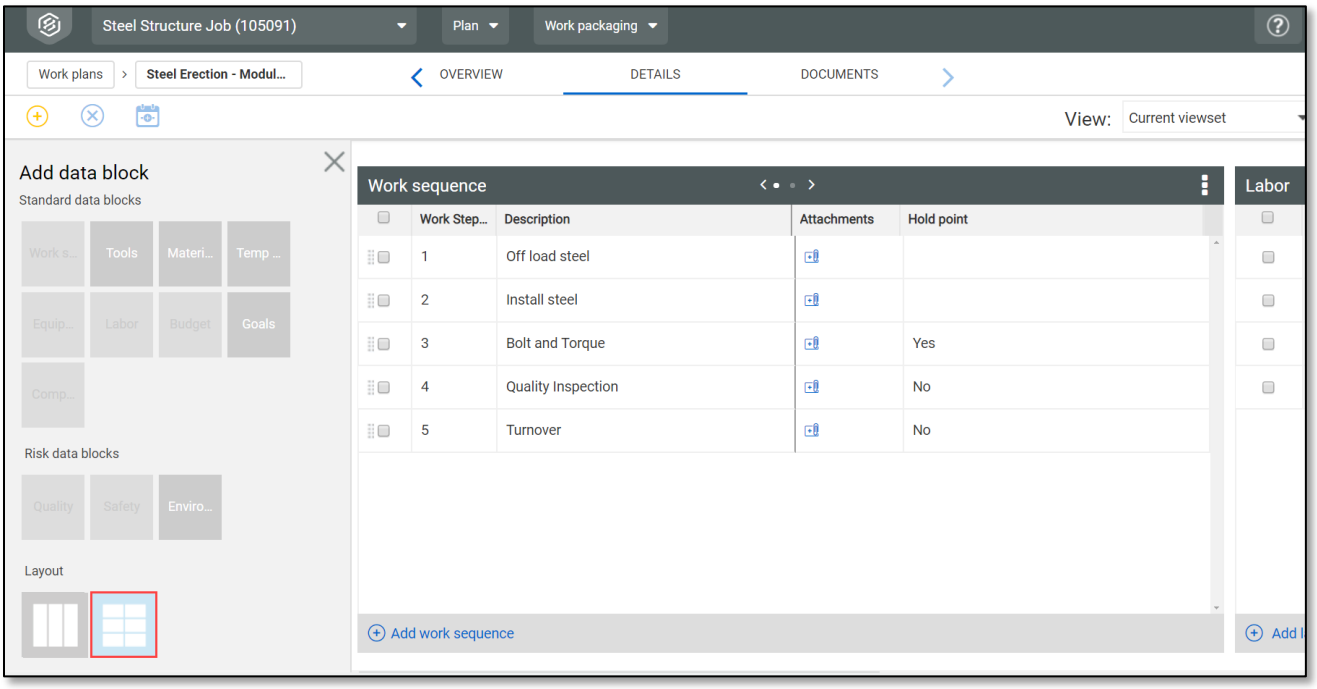
4. Drag it in to the blank white screen to your right.



5. Also drag over the **Labor, Equipment, Components, Budget, Quality,** and **Safety** data blocks.



6. Click the **Grid Layout icon** on the Add data block slide out panel.



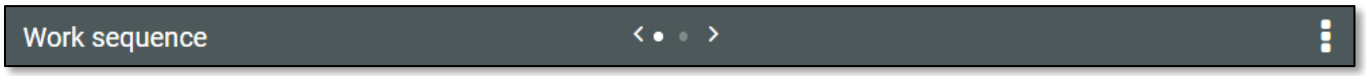
- This only applies to work packaging
- This allows you to scroll up and down instead of right to left

IMPORTANT

You can sort and filter columns whether they are in a data block or in a register page.

Navigate Data Blocks

You can utilize the arrows to view more columns associated with each data block that are not in the current pane.



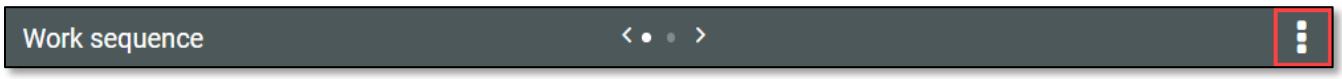
The number of dots between the arrows represent how many panes are in that data block.

Context Menu

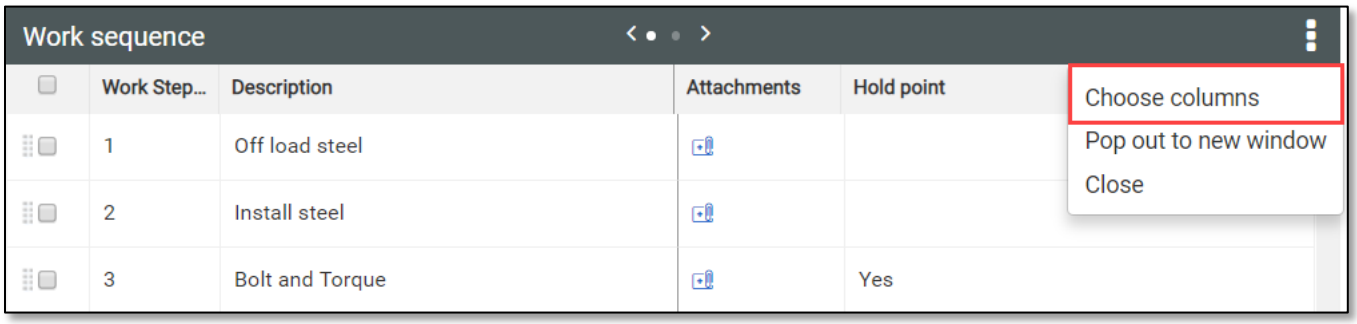
The Context Menu allows you to customize the order of columns in each data block. You can also use the Context Menu to add or remove columns from a data block.

Step by Step 2.3.2 – Utilize the Context Menu

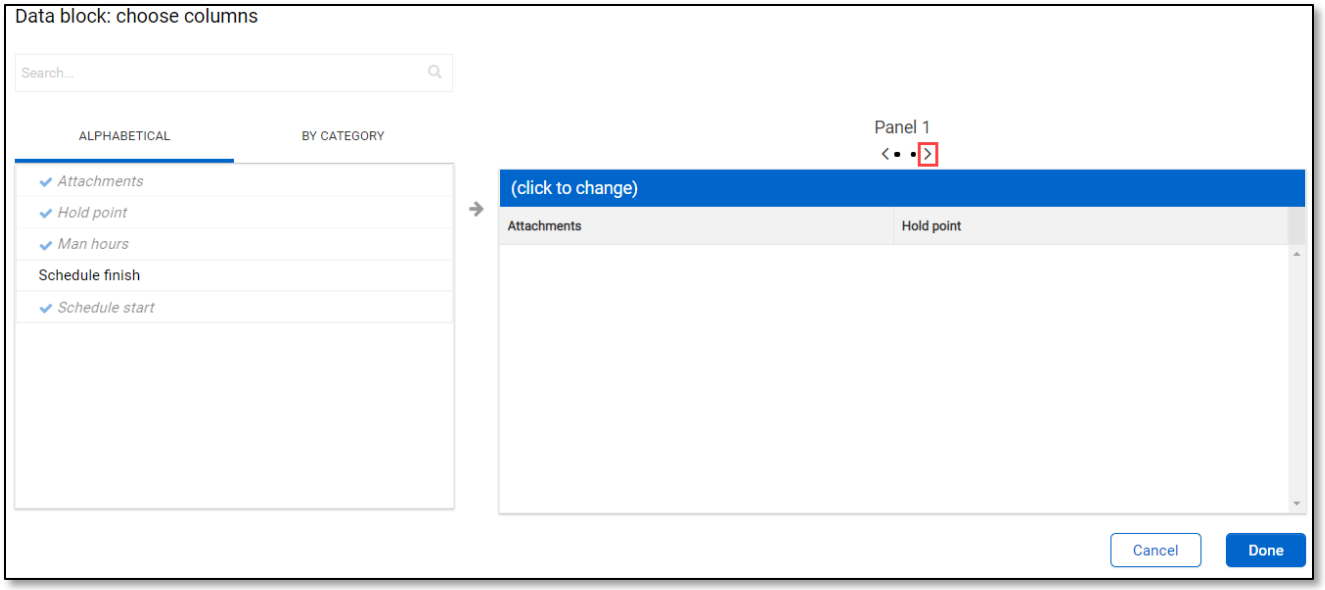
1. On the Details tab of the Work plans page, select the **Context Menu** for the Work sequence data block.



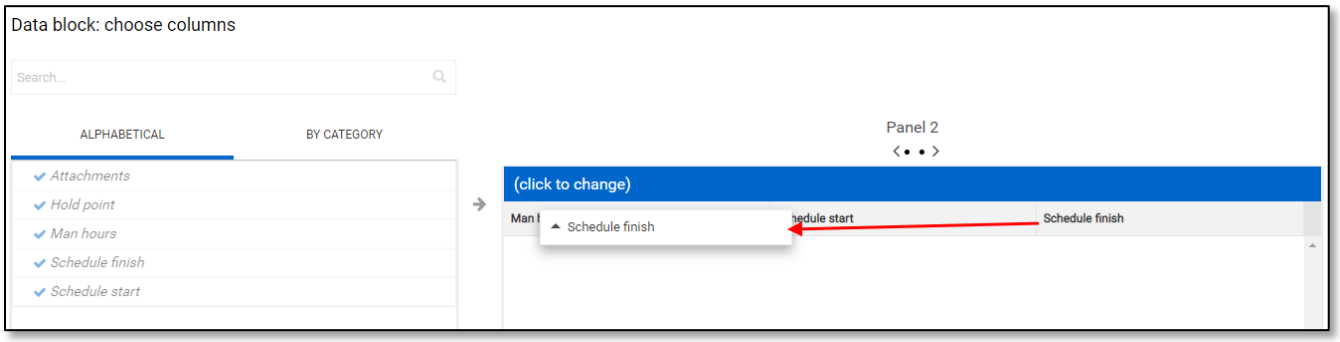
2. Select **Choose columns** from the drop-down menu.



3. On the resulting slide out panel, click the **right arrow** to navigate to Panel 2 of the data block.



4. Within the data block, click and drag the **Schedule Finish** column to move it to the far left side of the data block columns.



IMPORTANT

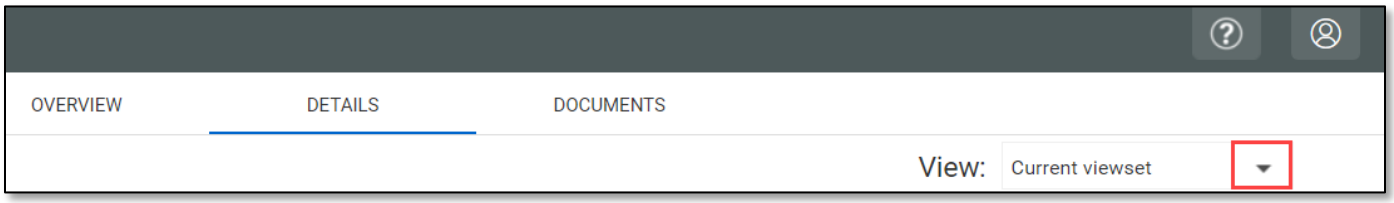
Each type of data block has its own unique default settings. Default settings include specific locked columns and total number of columns and panels.

2.4 Viewsets

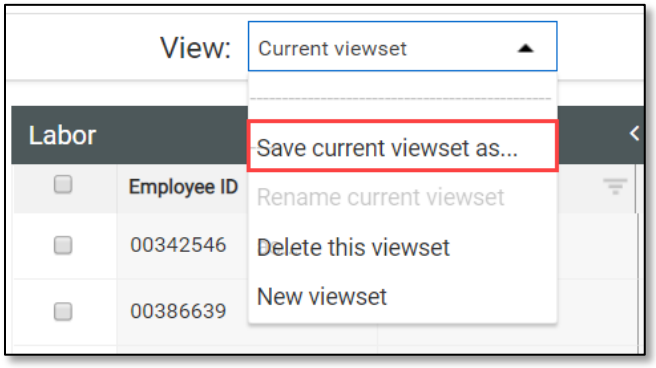
Once you have all desired data blocks organized to your liking, you can create a saved view of your page so that you can always revert back to it. This saved view is called a viewset.

Step by Step 2.4.1 – Create a Viewset

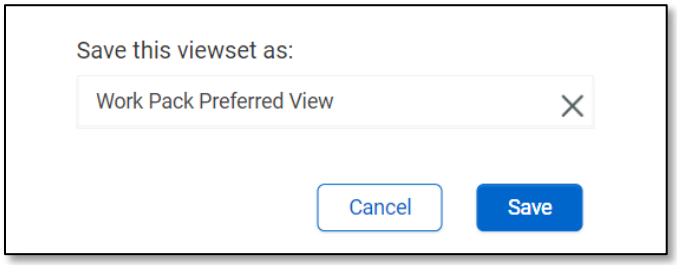
1. On the Details tab of your selected work package, Select the **View** drop-down arrow to save the data block setup you created in Step by Step 2.3.1.



2. Select **Save current viewset as** from the viewset drop-down list.



3. In the resulting window, type **Work Pack Preferred View**.



4. Select **Save**.
   - You now have a saved view.

> **IMPORTANT**
>
> *Each viewset is user-specific and can be used from plan to plan.*

Exercise 2.2 – Create a Viewset

Now that you have learned some of the basics of navigating in InEight Plan, from the Work plans page, create a work package viewset that you would use.

1. Select the data blocks you might need. (e.g., Labor Equip, and Budget).
2. Select the desired columns you want to see in each data block.
3. Save your view.

Congratulations, you have completed this exercise!

Lesson 2 Review

1. How do you know which project you are working in?
   a. Breadcrumbs
   b. Navigation bar – First level menu
   c. Notifications and User profile

2. On the Details tab of a work package, how do you scroll up and down through data rather than left and right?
   a. Create a custom data block on the Add data block slide out panel
   b. Select the Grid Layout icon on the Add data block slide out panel
   c. Use the left and right arrows to navigate between panes

3. You can NOT sort and filter columns if they are in a data block. Only on a register page.
   a. True
   b. False

4. From where can you customize the order of columns in each data block?
   a. Context menu
   b. Customization page
   c. Data block navigation
   d. Settings menu

5. On the Details tab of a work package, to save the data blocks you have selected to display on the page, you can create a:
   a. Viewset
   b. Snapshot
   c. Backup
   d. Carbon copy

Lesson 2 Summary

As a result of this lesson, you can:

- Navigate the InEight Plan Work plans page
- Manage columns
- Manage data blocks
- Create viewsets

Lesson 3

Work Package Management

Work Package Management Overview / Work Package Creation / Work Package Details / Work Package Import

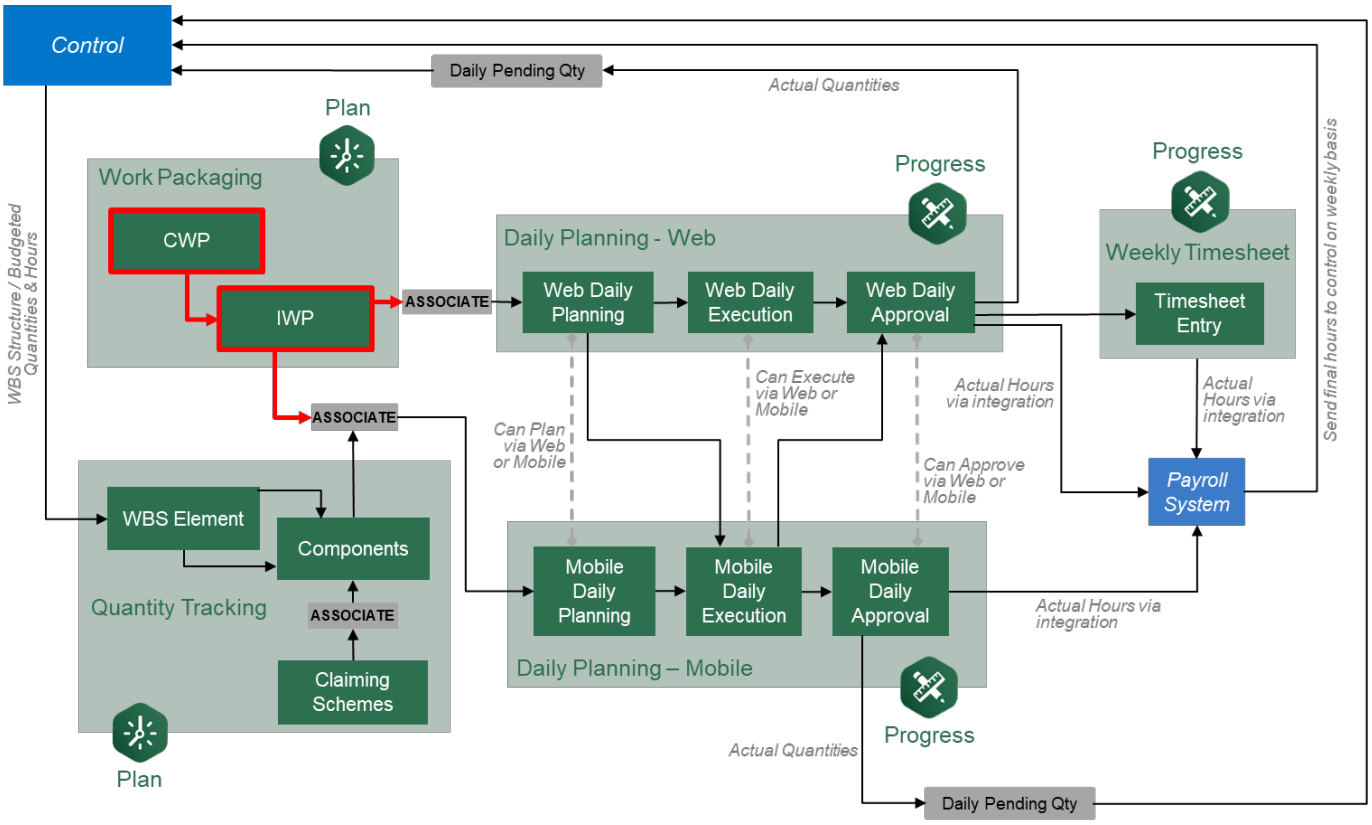
Lesson Duration: 60 minutes

Lesson Objectives

After completing this lesson, you will be able to:

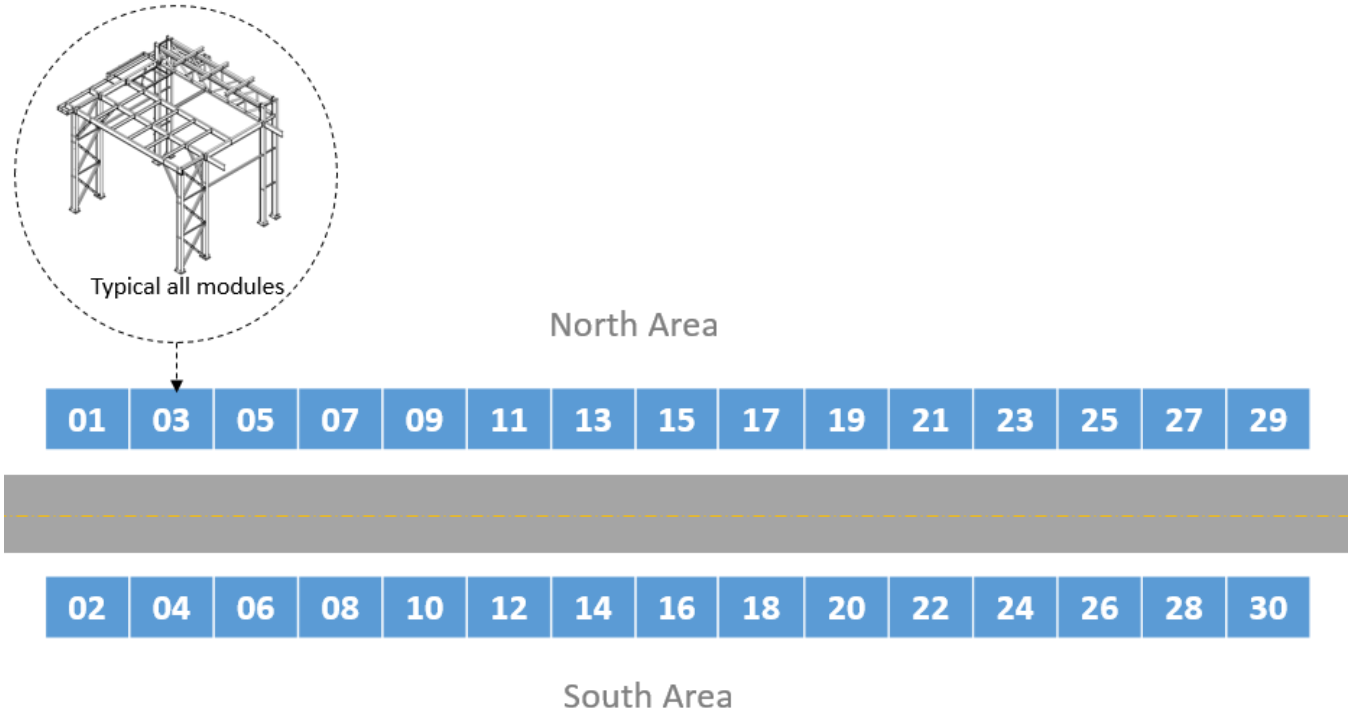
- Explain how to manage work packages
- Create a construction work package
- Create an installation work package
- Edit and review work package details
- Import work packages

InEight Plan Workflow – Work Package Management



3.1 Work Package Management Overview

Scenario
In today's world, projects become bigger and bigger. Sometimes, looking at the entire project scope can become overwhelming. Dividing the scope into smaller pieces allows you to more effectively plan and manage the project. Imagine you are working on a project with the following scope: 30 modules in which you need to complete earthwork, pour concrete pads, and finally erect the steel support structures. It is a large scope at first glance. In this lesson, you will discuss ways in which you can divide the work to make it more manageable.



What is a Work Package?

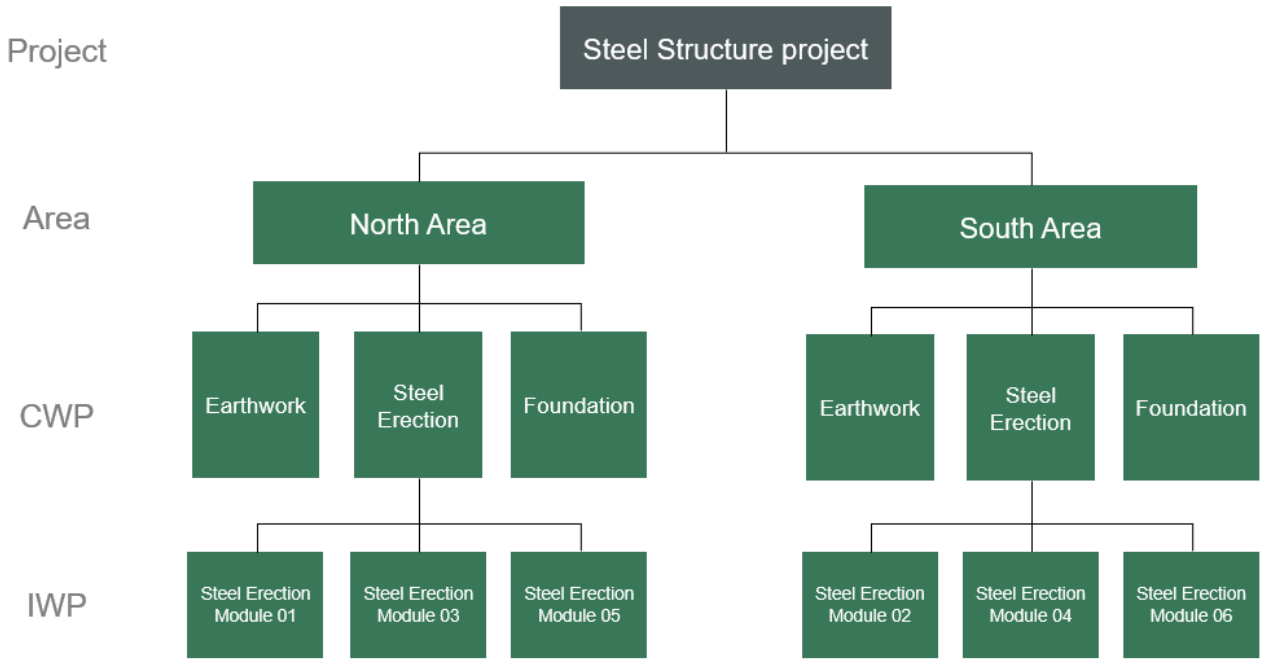
The Work Packaging module is a way for you to break down and plan your work in an effective and efficient manner. It allows you to enact a detailed and well-organized plan for your work. You accomplish this by breaking work into work packages.

Work Packages

There are three specific work packages you can use in InEight Plan:

- Construction Work Package (CWP)
- Installation Work Package (IWP)
- Engineering Work Package (EWP)

Using the scenario above as an example, assume that you initially break the project into two areas: North Area and South Area. You break each area of work into three different construction work packages: Earthwork, Foundation, and Steel Erection. From there, you can break each construction work package into multiple installation work packages to break the scope into smaller pieces, so you can plan at a more focused and detailed level.



Construction Work Package (CWP)

A construction work package (CWP) defines a logical and manageable division of work within the construction scope. CWPs are aligned with the project execution plan (which includes the construction plan) and the WBS. The division of work is defined such that CWPs do not overlap within a discipline. CWPs are to be measurable and in alignment with project controls. CWPs are the basis for the development of detailed installation work packages. Also, they can contain more than one EWP. A CWP is typically aligned with a bid package. A typical CWP includes the following:

- Safety requirements
- At least one EWP
- Schedule
- Budget (work hours/cost/productivity)
- Environmental requirements
- Quality requirements
- Special resource requirements

A CWP may be divided by area, system, or as otherwise determined by the project (construction) execution plan. In general, it is better to develop CWPs by discipline. A large project will likely contain multiple CWPs. CWPs can be the basis of contractual scopes of work. A contractual scope may contain more than one CWP. CWPs are developed over time, from contract through construction execution. Complete specifications of CWPs grow over time to include productivity factors, detailed cost reports, and other considerations.

Installation Work Package (IWP)

An installation work package (IWP) is the deliverable that enables a construction work crew to perform work in a safe, predictable, measurable, and efficient manner. An IWP is scoped to be manageable and “progressable”; it is typically of limited size such that a crew can complete the work in about a week. An IWP contains the necessary documentation supporting workface execution. IWP should be approved by the responsible stakeholders, and any constraints should be mitigated before issuance to the field. A typical IWP includes the following:

- Work package summary – inclusive of description of work, location, system or facility code, originator, contact information, sequenced work steps, reference documents, estimate of work hours and quantities, cost codes, witness or hold points, and special comments quantity work sheet
- Safety hazard analysis, specific to tasks in work package
- Material Safety Data Sheet
- Drawings (engineering and vendor design)
- Specifications (engineering and vendor design)
- Change documents (i.e., field change request, deficiency report/non-conformance report and design change notice)
- Manufacturer’s installation instructions model shots
- Bills of Materials
- Required tools

- Installation test results forms
- As-built documentation
- Inspection checklists
- Completion verification signatures

All elements necessary to complete the scope of the IWP should be organized and delivered before work is started. As the originator, you should cover the work with the responsible safety, quality, superintendent, and craft personnel in a preparatory meeting, with special focus on anticipated constraints.

Generally, the scope of work associated with the IWP should be small enough that it could be completed by a single foreman and crew within a pre-defined block of work hours. Work hour blocks should be between 500 and 1,000 hours. An IWP contains all applicable and pertinent documents in support of safe and efficient installation of a specific portion of a system by a given trade. These documents are written specifically for the crew performing the activity. In general, each IWP should require a level of effort for one crew for approximately one week (i.e., 500–1,000 work hours).

The IWP should include a scope for the work, work constraints, design documents, materials, quality records, construction equipment requirements and budget for the work. Even though IWPs are generally developed by area and do not cross CWP boundaries, they may be broken down by commissioning system later in a project. In such instances, an IWP may cross CWP boundaries.

Engineering Work Package (EWP)

An engineering work package (EWP) is an engineering and procurement deliverable that is used to create construction work packages (CWPs). The EWP should be aligned with the construction sequence and priorities. A typical EWP for a CWP includes the following:

- Scope of work with document list
- Drawings (e.g., general arrangement and equipment installation)
- Installation and materials specifications
- Vendor data (e.g., equipment O&M manuals)
- Bill of Materials
- Lists (e.g., line lists and equipment lists)
- Additional pertinent information to support (e.g., permitting studies). Construction representation during the planning of an EWP is critical
- CWPs can contain more than one EWP. EWP completion should be supportive of efficient engineering, but EWP deliverables should be subordinate to the project execution plan and to the sequence and timing of CWPs

3.2 Work Package Creation

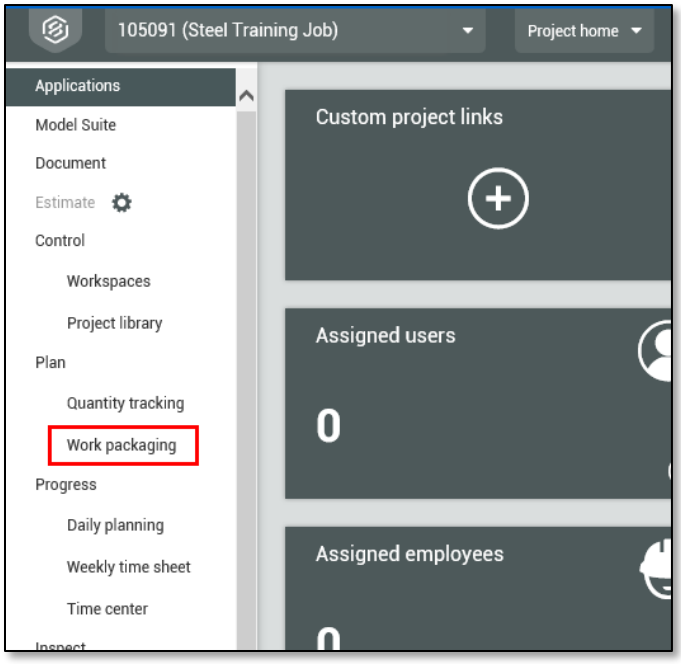
The first step in utilizing the Work Packaging module is to set up your work package structure.

Create a Construction Work Package (CWP)

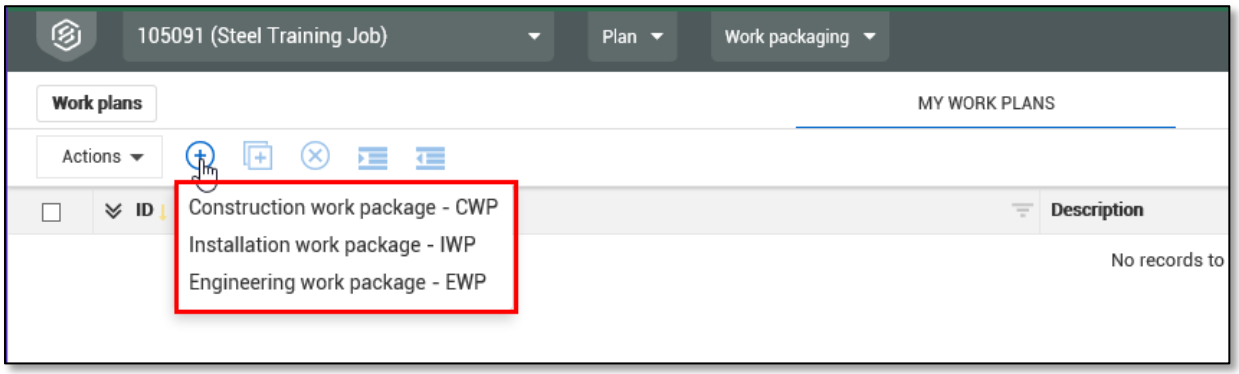
The following steps walk you through creating a construction work package.

Step by Step 3.2.1 – Create a Construction Work Package (CWP)

1. From the Steel Structure Training Job's Project home landing page, navigate to the **Work packaging** page.



2. Click the **Add** button on the left toolbar and select **Construction work package – CWP** from the drop-down list.



- This is where you can also add Installation work packages (IWPs)

3. In the new dialog box, type **North Area - Steel Erection Work plan – [Your Initials]**.
   - Note that the CWP name automatically begins with “CWP-“ by default, although you can remove it

4. Click **Add** to finish creating the work package.

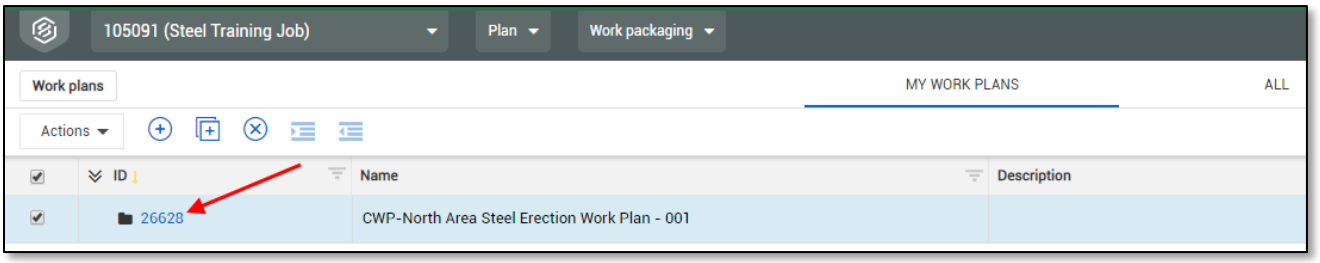
Edit Work Packages

After creating the work package, you may need to go in and edit the details. This includes:

- Schedule start and finish dates
- Discipline
- Risk
- Other fields

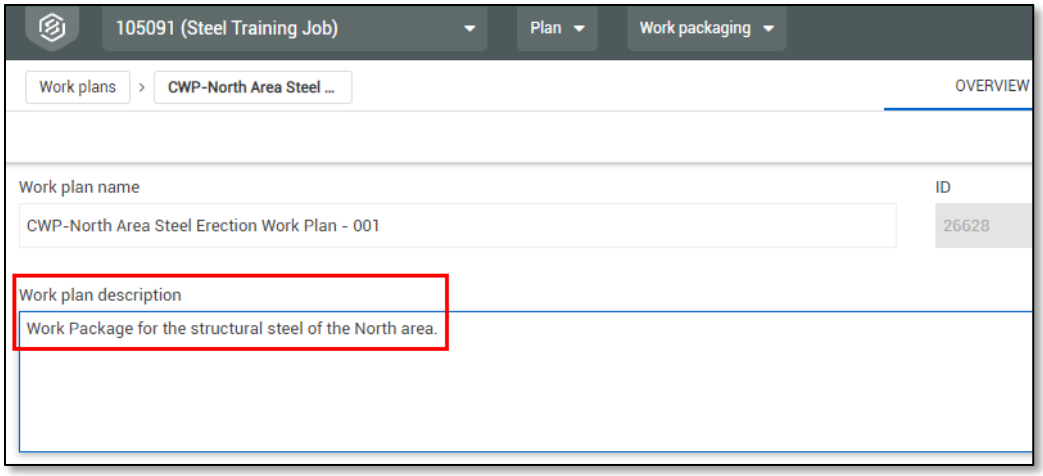
Step by Step 3.2.2 – Edit a Work Package

1. From the Work plans page, select the hyperlink **ID** on your newly created package.



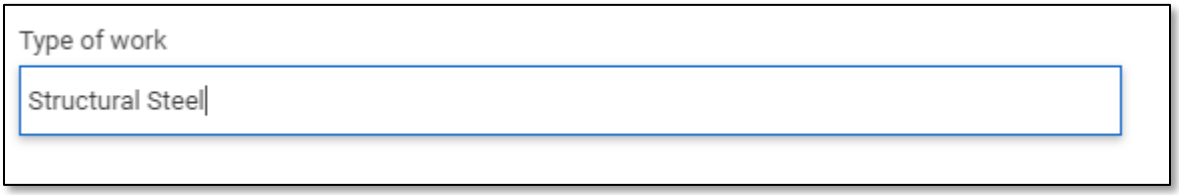
   - This takes you into the Overview tab of your work plan

2. Under Work plan description, type **Work Package for the structural steel of the North area**.



- The package ID will automatically generate

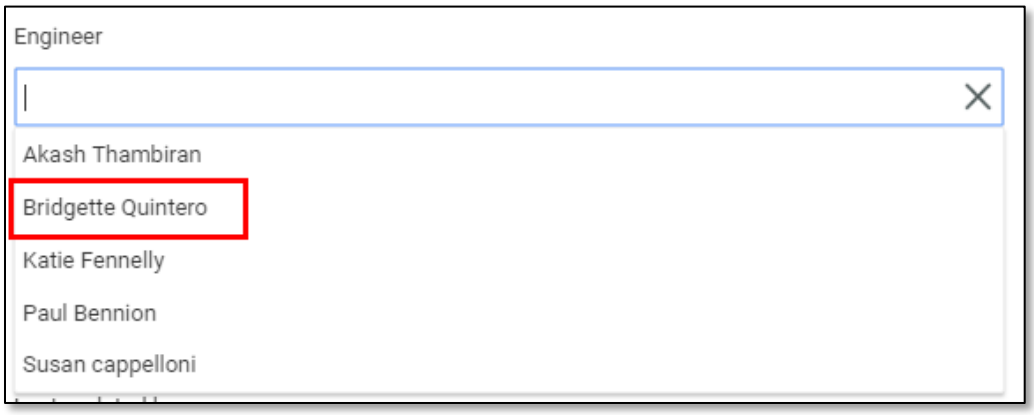
3. In Schedule start, select a date.
4. In Schedule finish, select a later date.
   - Created By will be automatically populated
5. In Type of work, type **Structural Steel**.



6. From the drop-down list in the Discipline field, select **Metals.**

7. From the drop-down list in the Risk field, select **Medium**.

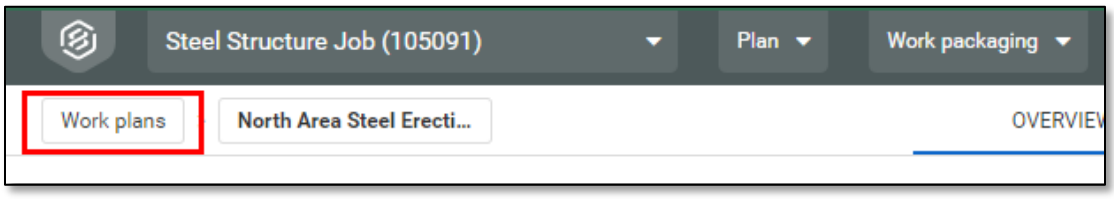
8. Select **Bridgette Quintero** as the Engineer.



TIP

The Engineer, Superintendent, and Foreman fields are validated fields and will bring up a list of people from which to select, once you enter a character.

9. In a similar manner, select **Bhavna Gupta** as the Superintendent and **Paul Bennion** as the Foreman.
10. Now that you have all the overview details, you can go back to the Work plans page by selecting **Work plans** in the Breadcrumbs.

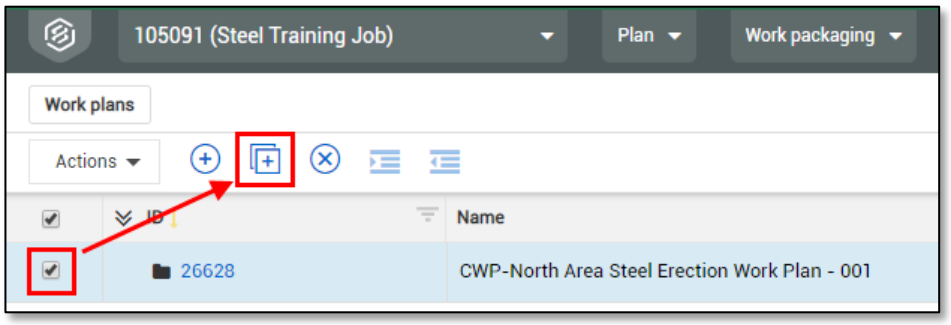


Copy Work Plans

In some cases, you may need to create the exact same work package for a new area with only a few small changes. Instead of repeating the entire process of creating a new work package, your best choice would be to create a work plan from an already existing one, making the few small changes as necessary.

Step by Step 3.2.3 – Copy a Work Package

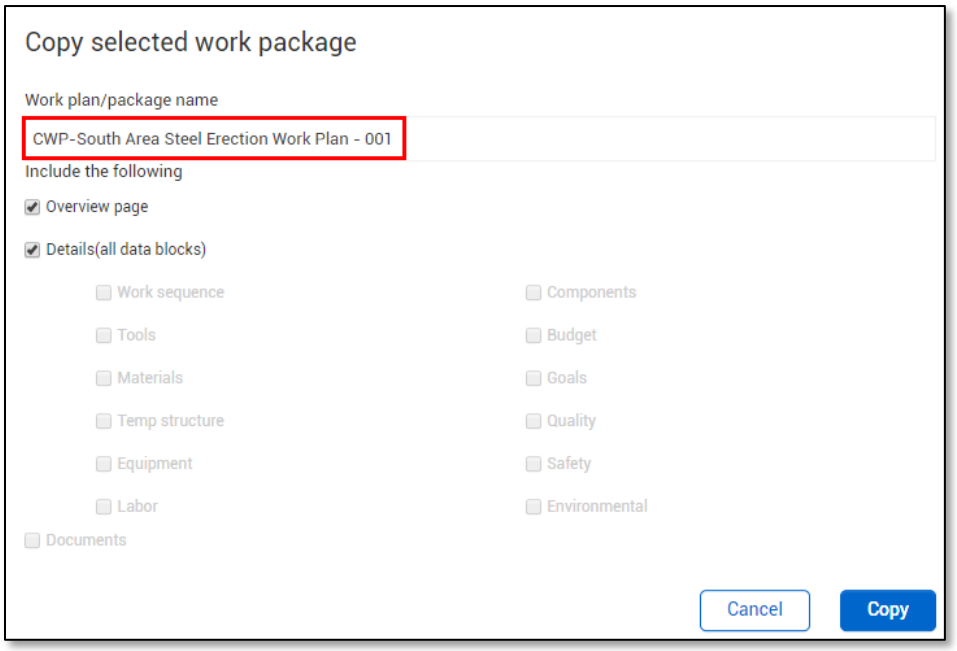
1. On the My Work Plans tab of the Work plans page, select your previously created work plan, then select the **Copy** icon.



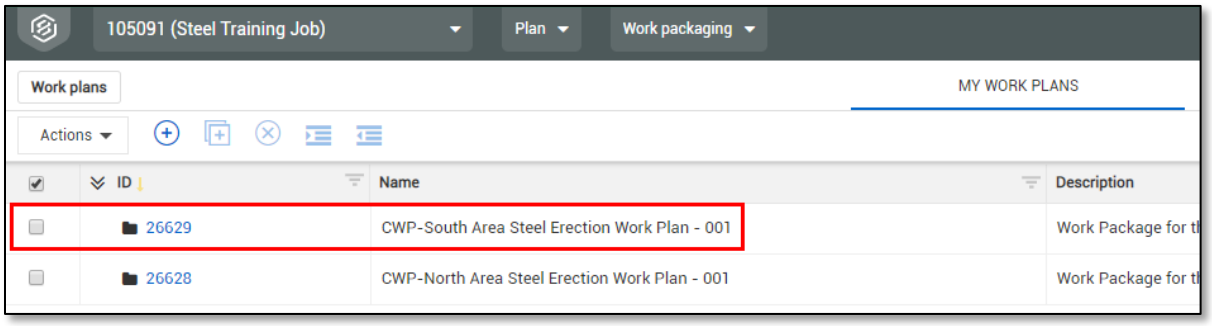
> **TIP**
>
> *You can only copy one plan/package at a time.*

- This brings up a new dialog box for you to select what information to carry over

2. Rename the work plan name to **South Area - Steel Erection Work plan – [Your Initials]**.

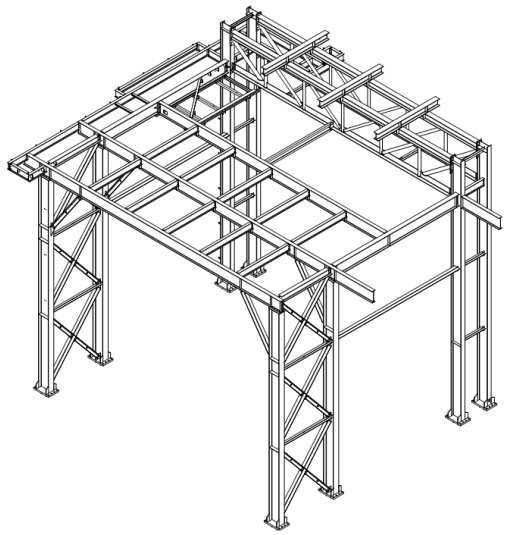


3. Uncheck **Details (all data blocks)**.
4. Select **Copy**.
   - A new work package has been created



Create an Installation Work Package (IWP)

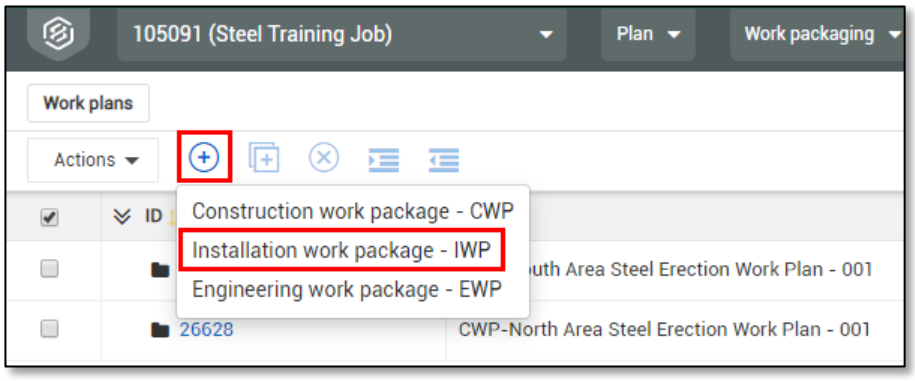
Continuing with the scenario above, you will create an installation work package for the Steel Erection of Module 01.



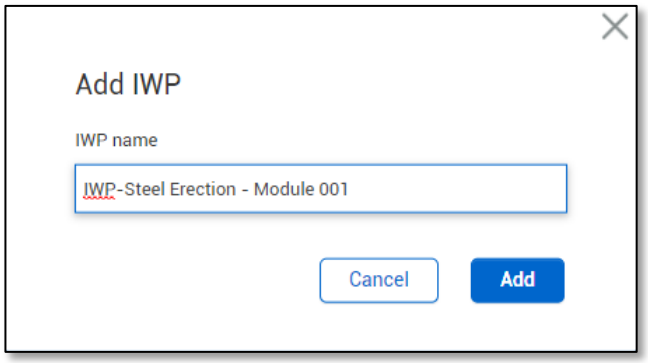
Within each installation work package, you can assign the labor, components, equipment, materials, and other aspects you need to complete the work.

Step by Step 3.2.4 – Create an Installation Work Package (IWP)

1. On the My Work Plans tab of the Work plans page, select the **Add** button.
2. Select **Installation work package - IWP**.



3. In the Add IWP dialog box, type **Steel Erection - Module [your module number]**.



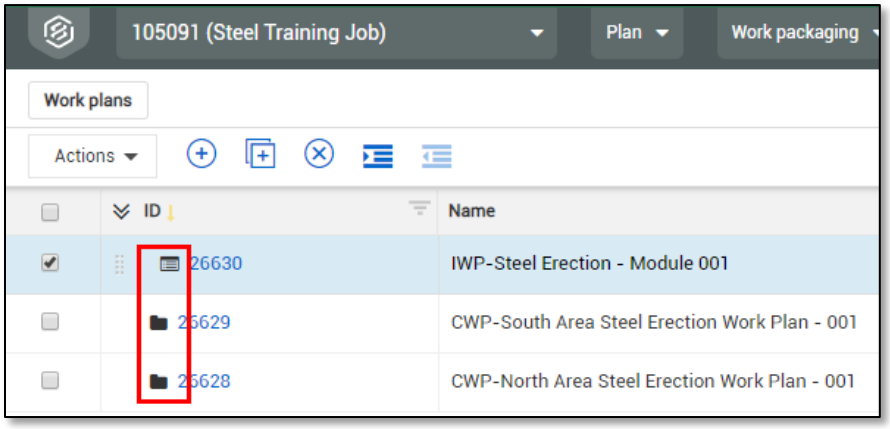
4. Click **Add**.

Group Work Packages

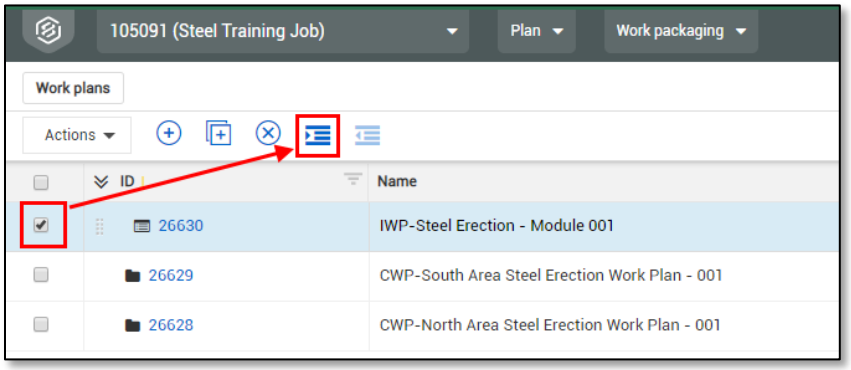
After creating work packages, you can group them underneath the plans you have created. This helps with the organization and planning of the work.

Step by Step 3.2.5 – Group a Work Package

1. On the My Work Plans tab of the Work plans page, select the installation work package you just created.
   - Notice that CWPs and IWPs have different icons



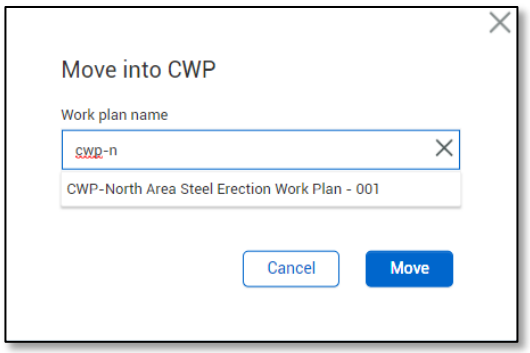
2. Click the **Move into CWP button** ( ).



TIP

You can also group installation work packages into construction work packages by clicking anywhere in the row for the installation work package and dragging it over top of the desired construction work package.

3. In the Move into CWP dialog box, start typing the name of the construction work package you had created.



   - This is a dynamic field and will bring up a drop-down to select from as you are typing
4. Select the CWP you want to move it to, then click **Move** to move the package.

3.3 Installation Work Package Details

Installation work packages include the details of a group of activities. The details in the work package include installation sequence, components, labor, equipment, safety and quality concerns, and other aspects of the work package.

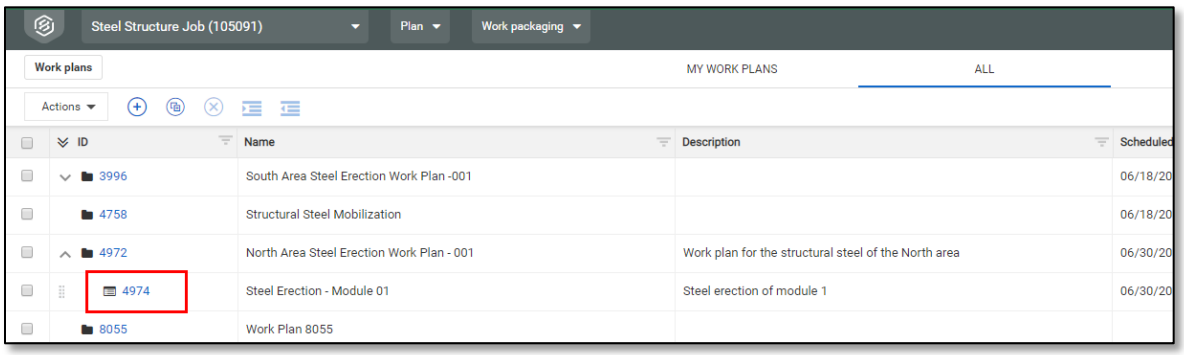
Work Package Overview Tab

When you open an installation work package from the Work plans page, the Overview tab is similar to the construction work package Overview tab, but you can now define settings specific to the installation work package. For example:

- The engineer may be different for this particular package and might report to a different engineer than assigned at the CWP level
- The IWP's scheduled start and finish dates might also be a smaller time period than the CWP's schedule start and finish dates

Step by Step 3.3.1 – Installation Work Package Overview

1. On the My Work Plans tab of the Work plans page, select the hyperlink **ID** of your recently created installation work package.



2. In the Overview tab of your installation work package, populate the Work plan description with **Steel erection of Module 001**

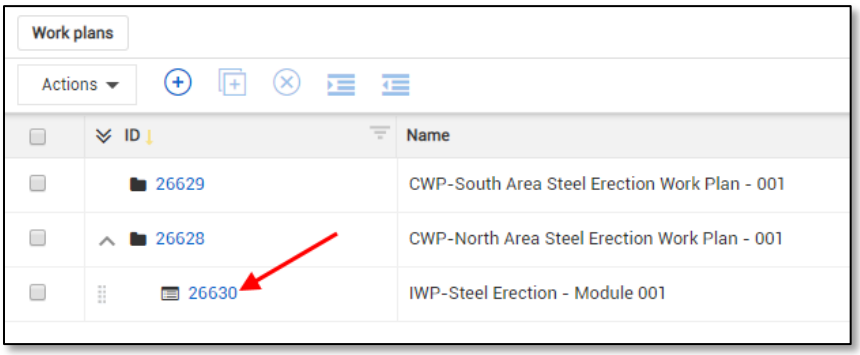
3. Select a Schedule start and Schedule finish date.
4. For Type of work, input **Steel Erection**.
5. From the drop-down list in the Discipline field, select **Metals**.
6. From the drop-down list in the Risk field, select **Medium**.
7. Select **Bridgette Quintero** as the Engineer.
8. Select **Bhavna Gupta** as the Superintendent.
9. Select **Paul Bennion** as the Foreman.

Installation Work Package Details Tab

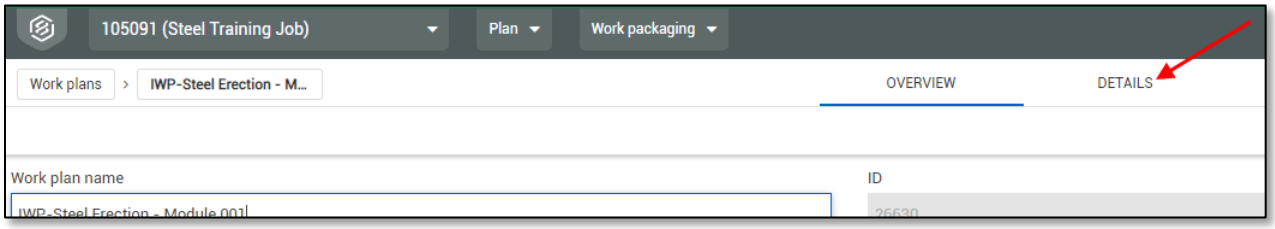
The Details tab is where the majority of your planning is accomplished. Here you can enter the planned labor, materials, equipment, components, among other aspects of the plan. You enter these details using data blocks. Some of the data blocks are open entry fields, such as safety, environmental, and work sequence. However, other data blocks use validated fields based off previously entered information. These include Labor, Budget, Component, and Equipment data blocks.

Step by Step 3.3.2 – Installation Work Package Details

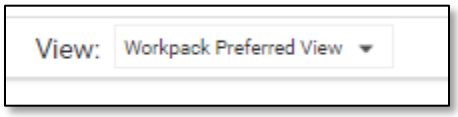
1. On the My Work Plans tab of the Work plans page, select the hyperlink **ID** of your recently created installation work package.



2. Select the **Details** tab.

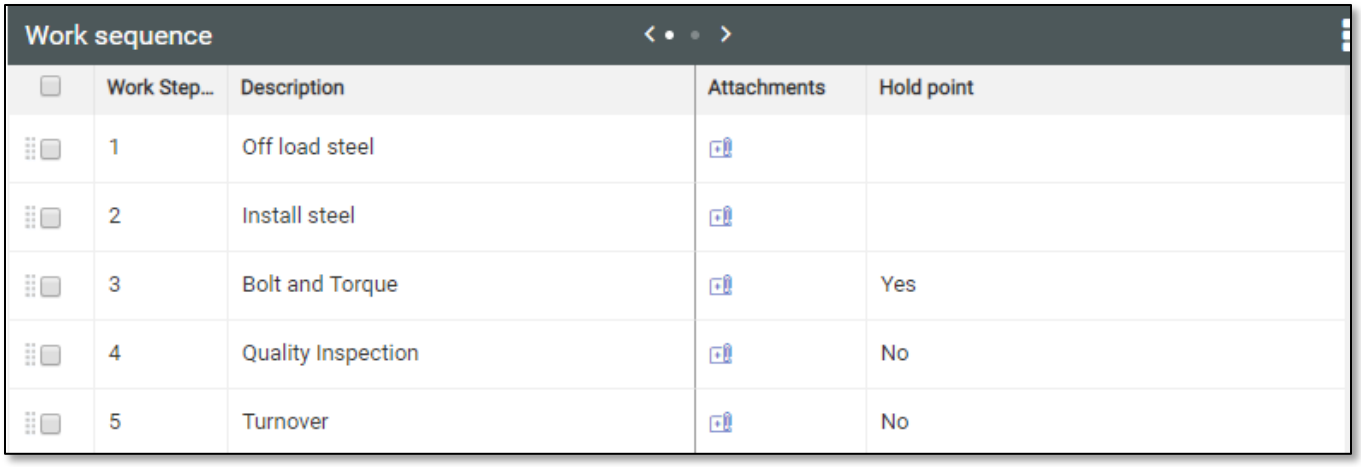


3. On the Details tab, change your view to your previously created viewset (see *Lesson 2 – General Navigation*).

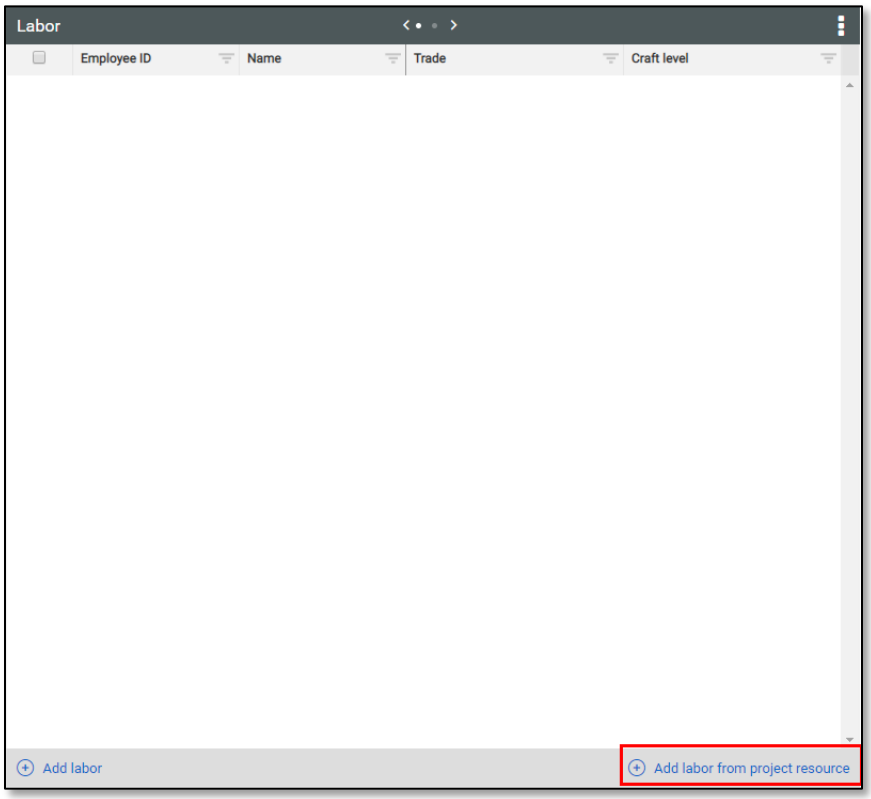


4. In the **Work sequence** data block, add the following work sequence steps:
   - Off load steel
   - Install steel
   - Bolt and torque
   - Quality inspection
   - Turnover

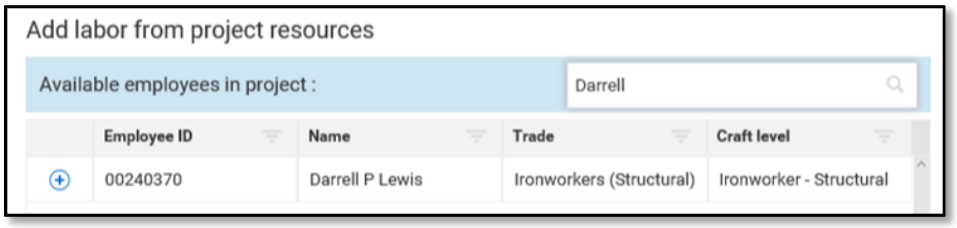
5. On the work step 3 – Bolt and Torque row, click in the Hold Point field and select **Yes** to create a hold point.



6. In the Labor data block, select **Add labor from project resource**.



7. In the new dialog window, start searching for **Darrell P Lewis**.



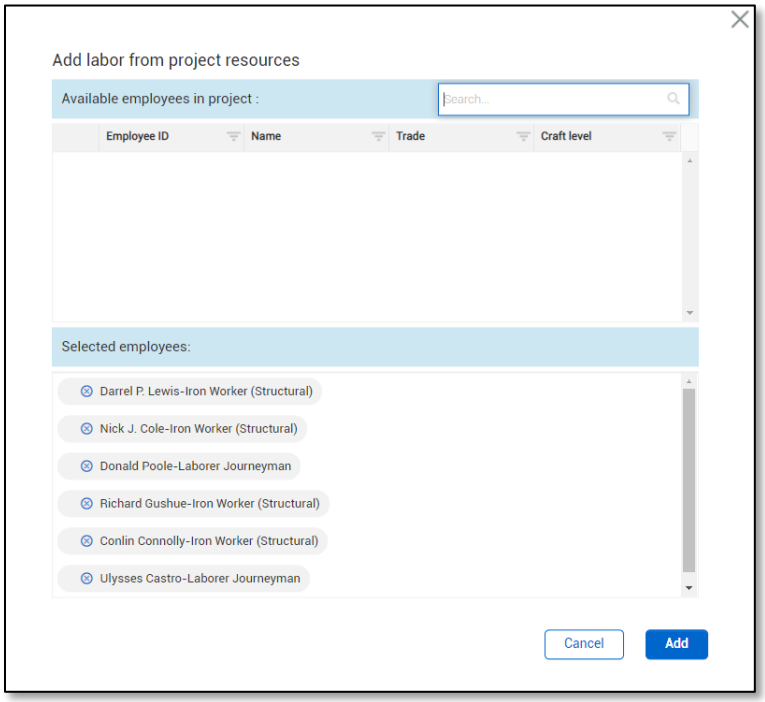
TIP

You can search based off any of the fields associated to the employee (e.g., Employee ID, Trade).

IMPORTANT

You can add Multiple employees at a time in this dialog box.

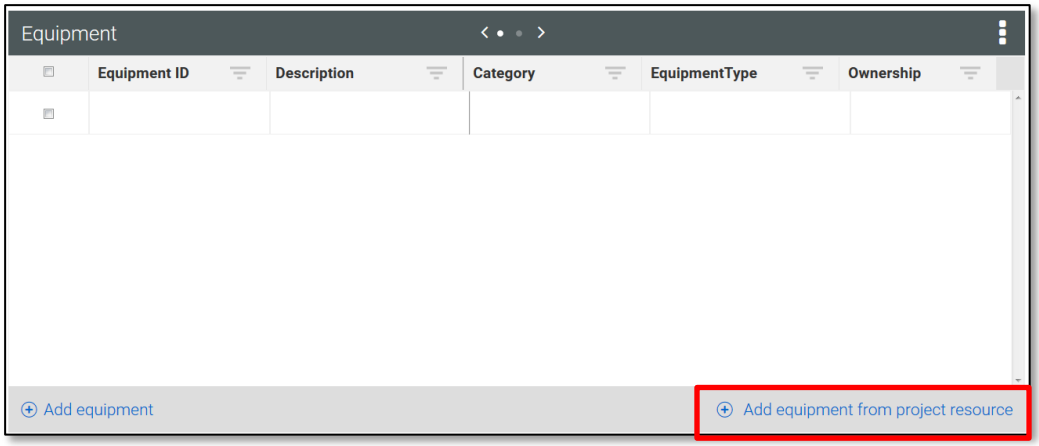
8. Continue using the Search bar to look up and add the following:
   - Nick J. Cole - Ironworker
   - Richard Gushue - Ironworker
   - Conlin Connolly – Ironworker
   - Ulysses Castro – Laborer



9. Click **Add**.

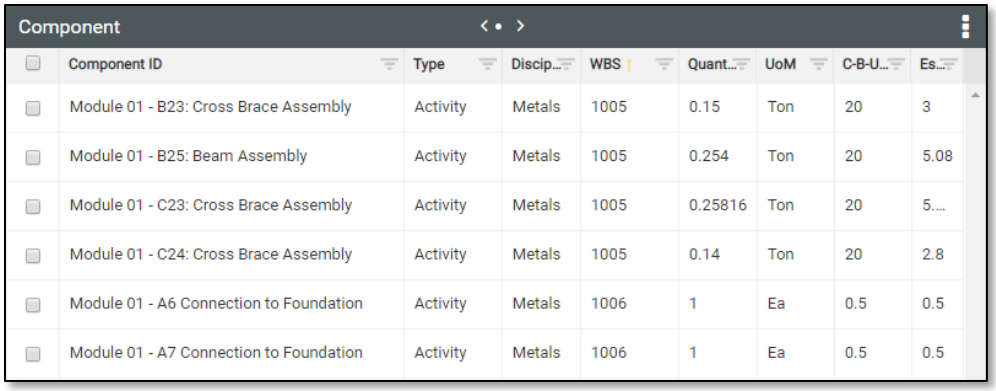
- The laborers appear in the Labor data block

10. In the Equipment data block, select **Add equipment from project resource**.



11. Look up and select the following pieces of equipment:
    - 110002 - GROVE-RT880E (Crane RT 80-89 Ton)
12. Select **Add**.
    - The equipment appears in the Equipment data block
13. In the Component data block, select **Add components from project**.

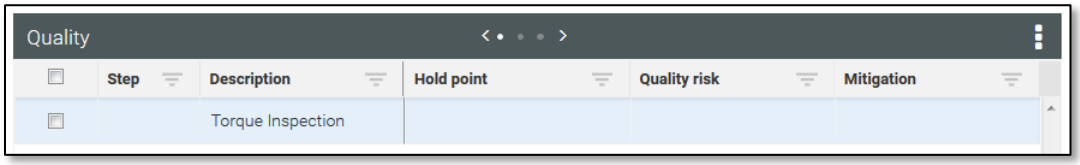
14. Find and select the following steel Components of your module number in the same manner you added employees and equipment:



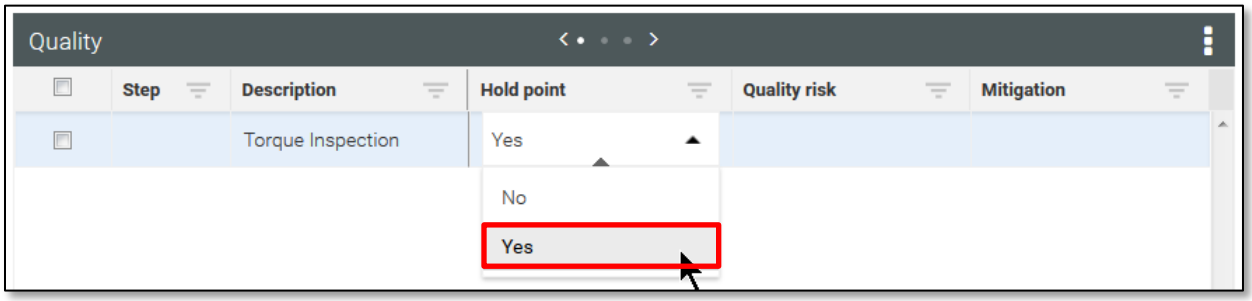
IMPORTANT

When you add a component, it will automatically update the Budget data block.

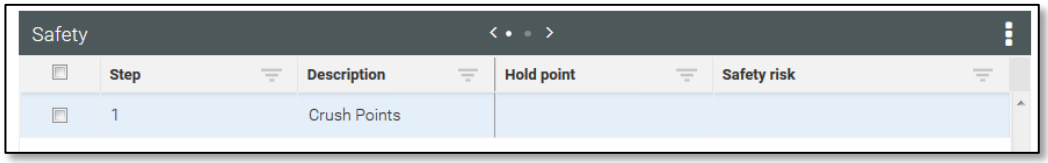
15. In the Quality data block, in the first row, select **1** in the Step field.
16. In the Description field, type **Torque Inspection**.



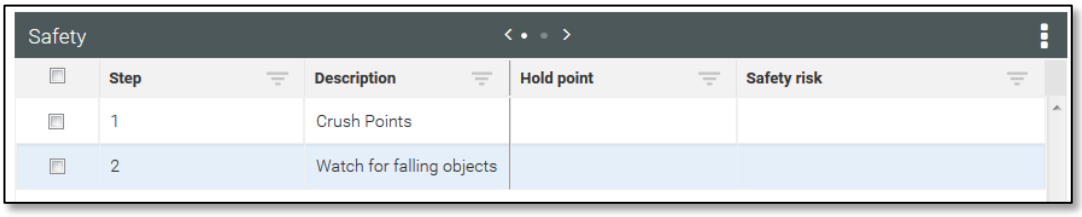
17. In the Hold Point field, expand the Hold point drop-down list and select **Yes**.



18. In the Safety data block, in the first row, select **1** in the Step field and type **Crush Points** in the description field.



19. At the bottom of the Safety data block, click on **Add safety item**.
20. In the resulting blank row, select **2** in the Step field.
21. In the Description field, type **Watch for falling objects**.



22. On the Breadcrumbs bar, select **Work plans** to go back to the Work plans page and view your completed work plan and work package.

3.4 Work Package Import

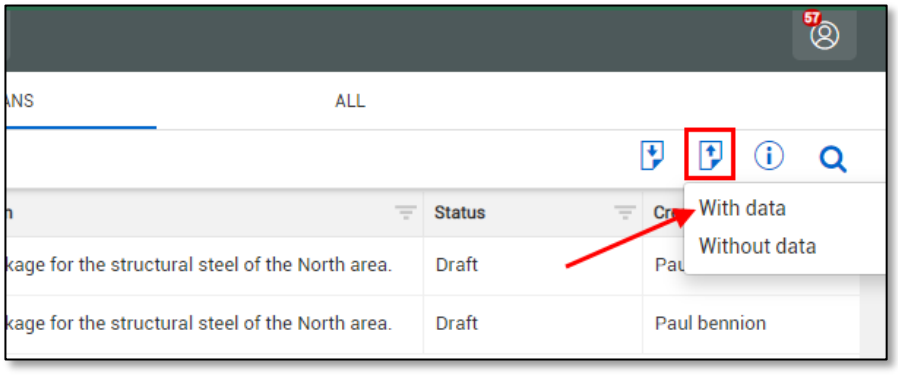
Scenario
Sometimes you have multiple, similar work packages to create and a faster way to create them would make planning more efficient. By using the Import Template, the project team can input multiple work packages in an Excel document and upload it into Plan.

Import Template

Creating and copying work packages can be time consuming. You can use an Excel import template to upload multiple work packages with their overview information already populated.

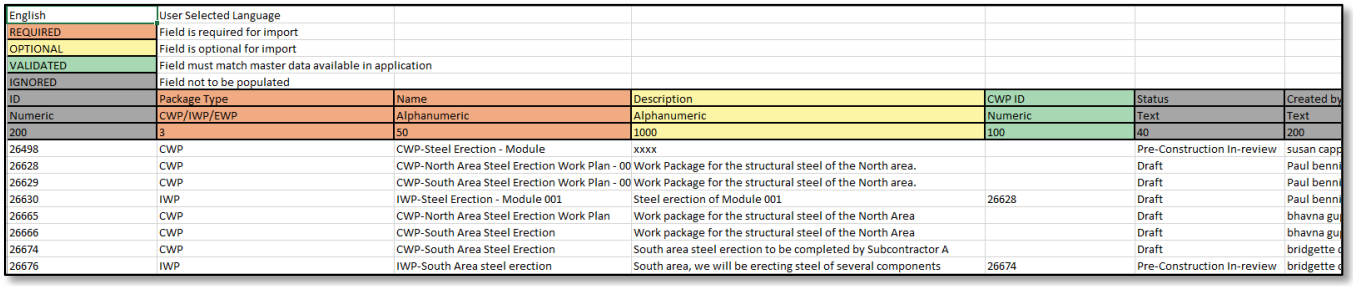
Step by Step 3.4.1 – Create Work Packages from Excel Import

1. On the Work plans page, My Work Plans tab, click on the **Export** button, and select to export **With Data** and open the export file.



2. Open the export file.

- This opens up the Excel template to use for the import. It also contains the data from the current work packages on the Work plans page
- You may need to select **Enable editing** at the top of the spreadsheet prior to entering data



English	User Selected Language					
REQUIRED	Field is required for import					
OPTIONAL	Field is optional for import					
VALIDATED	Field must match master data available in application					
IGNORED	Field not to be populated					
ID	Package Type	Name	Description	CWP ID	Status	Created by
Numeric	CWP/IWP/EWP	Alphanumeric	Alphanumeric	Numeric	Text	Text
200	3	50	1000	100	40	200
26498	CWP	CWP-Steel Erection - Module	xxxx		Pre-Construction In-review	susan capp
26628	CWP	CWP-North Area Steel Erection Work Plan - 00	Work Package for the structural steel of the North area.		Draft	Paul benni
26629	CWP	CWP-South Area Steel Erection Work Plan - 00	Work Package for the structural steel of the North area.		Draft	Paul benni
26630	IWP	IWP-Steel Erection - Module 001	Steel erection of Module 001	26628	Draft	Paul benni
26665	CWP	CWP-North Area Steel Erection Work Plan	Work package for the structural steel of the North Area		Draft	bhavna gu
26666	CWP	CWP-South Area Steel Erection	Work package for the structural steel of the North Area		Draft	bhavna gu
26674	CWP	CWP-South Area Steel Erection	South area steel erection to be completed by Subcontractor A		Draft	bridgette c
26676	IWP	IWP-South Area steel erection	South area, we will be erecting steel of several components	26674	Pre-Construction In-review	bridgette c

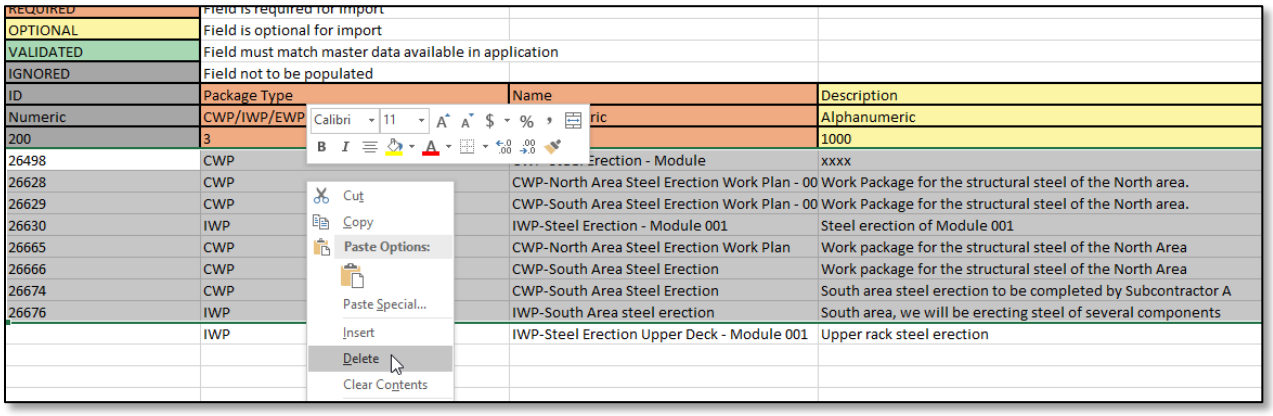
TIP

Excel templates "with data" are typically used to update existing components.

3. Input information into your template to be uploaded. At the bottom of the list, add the following information:
   - Package Type: **IWP**
   - Name: **IWP-Steel Erection Upper Deck - Module [your module number]**
   - Description: **Upper rack steel erection**
   - Assign the proper CWP to your work package in the CWP ID field

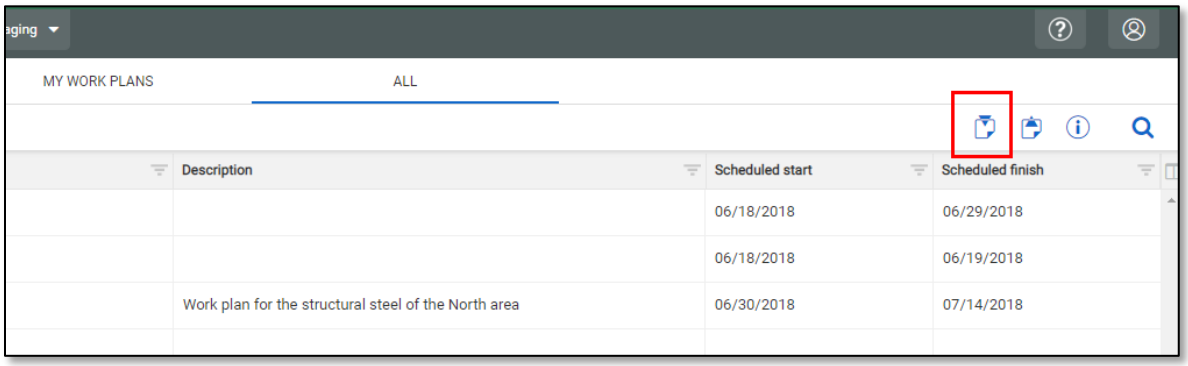
English	User Selected Language			
REQUIRED	Field is required for import			
OPTIONAL	Field is optional for import			
VALIDATED	Field must match master data available in application			
IGNORED	Field not to be populated			
ID	Package Type	Name	Description	CWP ID
Numeric	CWP/IWP/EWP	Alphanumeric	Alphanumeric	Numeric
200	3	50	1000	100
26498	CWP	CWP-Steel Erection - Module	xxxx	
26628	CWP	CWP-North Area Steel Erection Work Plan - 00	Work Package for the structural steel of the North area.	
26629	CWP	CWP-South Area Steel Erection Work Plan - 00	Work Package for the structural steel of the North area.	
26630	IWP	IWP-Steel Erection - Module 001	Steel erection of Module 001	26628
26665	CWP	CWP-North Area Steel Erection Work Plan	Work package for the structural steel of the North Area	
26666	CWP	CWP-South Area Steel Erection	Work package for the structural steel of the North Area	
26674	CWP	CWP-South Area Steel Erection	South area steel erection to be completed by Subcontractor A	
26676	IWP	IWP-South Area steel erection	South area, we will be erecting steel of several components	26674
	IWP	IWP-Steel Erection Upper Deck - Module 001	Upper rack steel erection	26629

4. Delete all the work packages that came with the template.

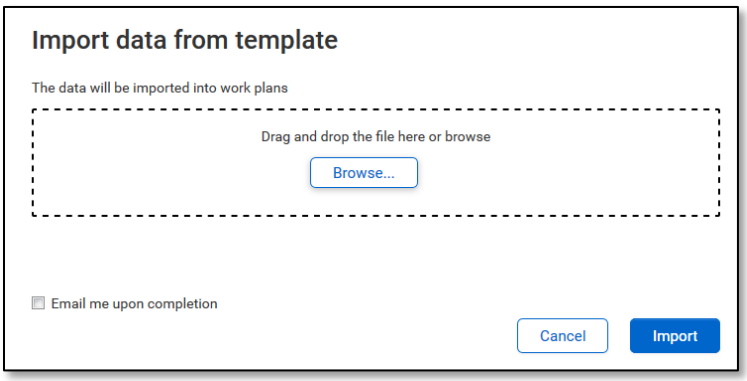


5. Save this Excel file to your desktop as **[Your Initials] Plan Upload**.
6. In InEight Plan, click the **Import** button on the Components page.

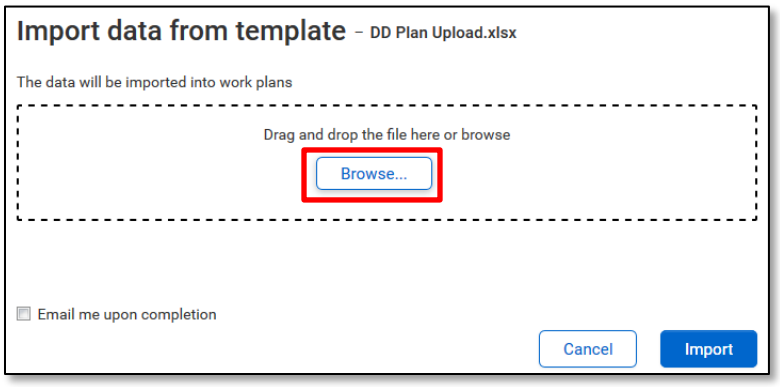
> **TIP**
>
> *Excel templates "without data" are used for creating new components from scratch, usually during project setup.*



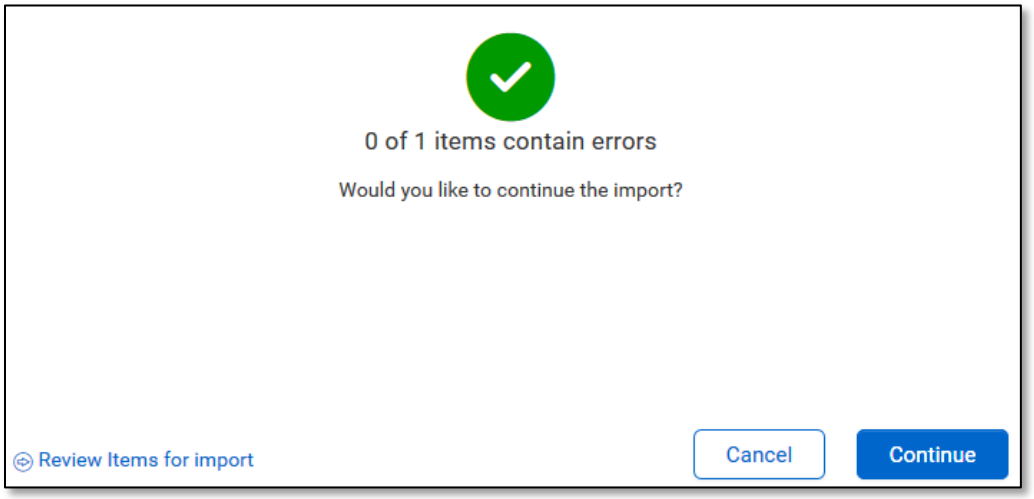
- An Import data from template window appears



7. Click the **Browse** button to find your saved template.



8. Click the **Import** button.
   - Another window appears, indicating whether any errors occurred



9. Select **Continue** if no errors occurred.
10. Once the import is complete, click **Close.**

Exercise 3.1 – Enter Work Package Details

Now that you have learned to create work packages and fill out all details, create your own construction work package (CWP) and installation work package (IWP) using the method you prefer. Make sure to fill out all details for your installation work package.

1. Include at least one safety item.
2. Include at least two components.
3. Include at least two labor resources.
4. Include at least two pieces of equipment.

Congratulations, you have completed this exercise!

Lesson 3 Review

1. What is the highest-level work package you can create in InEight Plan?
   a. Installation work package
   b. Discipline work package
   c. Construction work package
   d. Component
   e. Comprehensive work package

2. This type of work package allows you to manage a smaller, more detailed scope of work that is “progressable”.
   a. Installation work package
   b. Construction work package
   c. Advanced work package
   d. Discipline work package

3. You can group _____ under _____ to organize your work.
   a. CWPs, IWPs
   b. IWPs, CWPs
   c. work plans, work packages

4. On the Details tab, what data blocks contain open entry fields? (Select all that apply)
   a. Labor
   b. Equipment
   c. Safety
   d. Budget
   e. Component
   f. Work sequence
   g. Environmental

5. Utilizing the import template, you can upload which of the following?
   a. Construction work packages
   b. Installation work packages
   c. a & b
   d. None of the above

Lesson 3 Summary

As a result of this lesson, you can:

- Explain how to manage work packages
- Create a construction work package
- Create an installation work package
- Edit and review work package details
- Import work packages