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# LESSON 1 – 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

#### **Lesson Topics**

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#### 1.1 INEIGHT CLOUD PLATFORM OVERVIEW

#### 1.1.1 Project Management and Lifecycle

Most projects that you are working on will follow a typical lifecycle. It is broken down into different roles and the people involved. We will break those roles and people down into four locations:

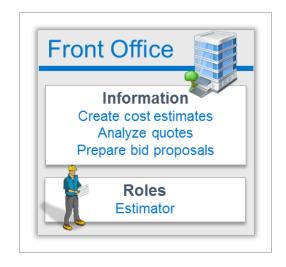
- · Front office
- · Field office
- Jobsite
- · Back office

#### 1.1.1.1 Front Office

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

The front office focuses on getting work and typically houses estimators who, during the *bidding phase* of the project, start out by estimating its value. This is done by calculating cost estimates, analyzing quotes, and capturing all the data necessary to submit a bid to the client.

Once complete, they prepare the bid proposal, submit it to the client, and find out if they are the preferred contractor to do the work. If they have the winning bid, they can start the *planning phase* and preparing to build the project.



#### 1.1.1.2 Field Office

What work roles are typically found 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. The

Field office relays this information to the other field personnel, so they understand what the budgets for the work are, how they should build the job, who the suppliers of materials are, and if there are any subcontractors, etc.

#### **Contract Procurement**

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

#### **Work Planning and Quantity Tracking**

The field office is where the field engineers and superintendents responsible for the work prepare work plans for the foremen and their crews, breaking down the work into manageable pieces. They then create quantity-tracking plans, formulate inspections and create daily plans to send to the foremen on the jobsite.



#### **Change Management**

As issues arise, project engineers record and submit issues, get them approved through the client, and execute change orders.

#### **Inspections Management**

Inspections, as well as actual time and quantities from the jobsite, come back to the field office where they are review and approval before going to the back office.

#### 1.1.1.3 Jobsite

What types of employees work at the jobsite? What type of information do they capture as they build the work? Where does that information need to go and why?

The jobsite is where you find the quality controller, safety manager and foreman. 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 inspections before and after the work is complete. The foreman also captures the time of each of the craft workers and the quantity completed each day, based on the plan provided from the superintendent and field engineer.

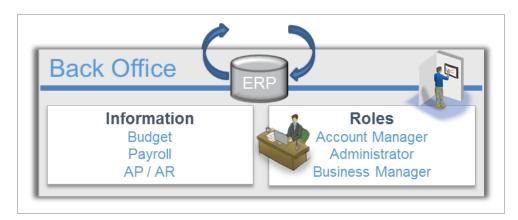
All this information is relayed back to the field office where it can be verified and approved.



#### 1.1.1.4 Back Office

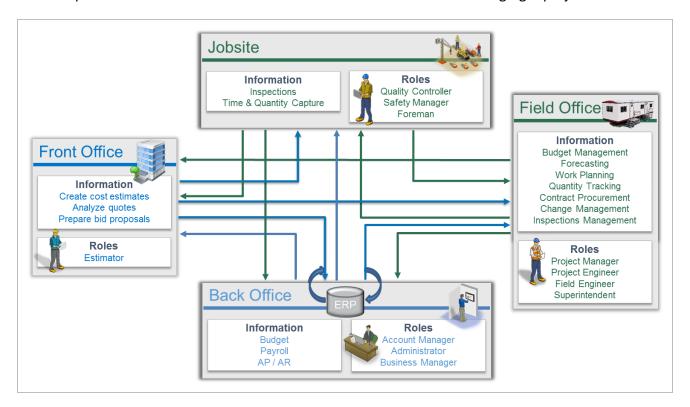
What functions take place in the back office, related to the project? Why is the back office a critical element of managing the project?

The back office is where the account managers and administration staff keep track of budgets, make sure the payroll is correct and completed in a timely manner, keep track of all the accounts payable and receivable, and take care of revenue. After a contract is created, the business manager verifies purchase orders are generated. All the "actual" data, whether it be time or dollars then is communicated back to all the other areas of the job.



#### 1.1.1.5 Problems with Existing Systems

Often issues arise when it comes to communication between all the different areas of a project. Information must flow quickly and accurately between the different areas, but often it is lost, miscommunicated, or slowly received. In some cases, information must be re-entered in a new system and is duplicated. This can cause all sorts of issues when it comes to managing a project.



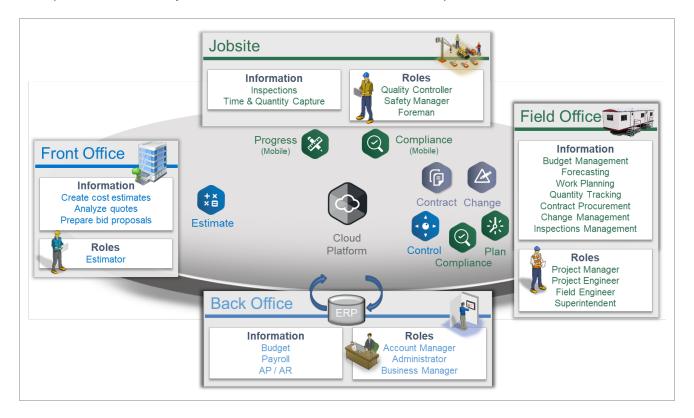
Employing too many systems to transmit information on a project can result in duplication, which is not efficient. Here are a few examples of such inefficiencies:

- 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?

#### 1.1.2 What is InEight Cloud Platform?

The InEight cloud platform was designed and is continually updated to address these issues. The cloud platform of software applications designed to help companies visualize, estimate, manage, control, and connect all aspects of capital and maintenance projects. The cloud platform is built 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.



#### 1.1.3 How Does InEight cloud platform Integrate in to a Project?

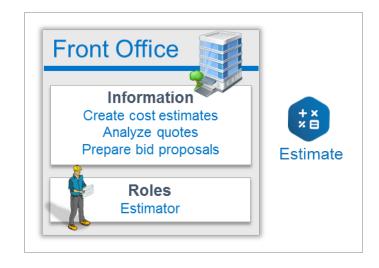
#### Scenario: Step 1

Skyline Construction Company decides to bid on a project to build a concrete foundation.

Upon submittal, the client informs them 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 then transfers all the information from the estimate to **InEight Control** where the project can be managed. This includes the cost item estimates, awarded quotes, bid and proposal documents, and the estimate budget structure. During this transition, the



project management team can modify the estimate easily to conform to how the project 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.

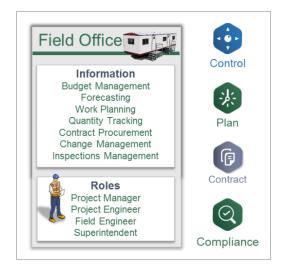
The project manager and engineers procure contracts for material and subcontracted work.

Then, inspections are created for quality of the work to ensure it meets the specifications as well as safety.

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

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

Engineers also utilize **InEight Compliance** to create the forms necessary for both the quality and safety



inspections. They can then send these to **InEight Compliance Mobile** for the responsible person to complete them in the field.

#### Scenario: Step 3

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

The superintendent can go into InEight Plan and create a daily plan for his crew to erect the formwork needed for the foundation. He brings in all the quantities, budgets and claiming schemes from the work package his field engineer created and breaks it down into what Jill's crew needs to complete tomorrow. He adds production goals for the day and safety notes related to the formwork installation. He communicates this to his foreman by syncing it to her, where the foreman can open the InEight Progress app on her iPad.



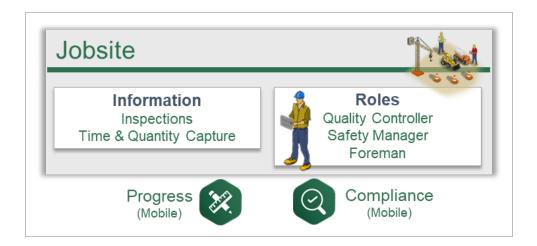
#### Scenario: Step 4

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 and creates a plan with Jill to schedule the proper times.

The foreman reviews the plan in the **InEight Progress** app on her iPad and adjusts 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 for the day. The quality controller uses the **InEight Compliance** app on his iPad to perform the inspection.

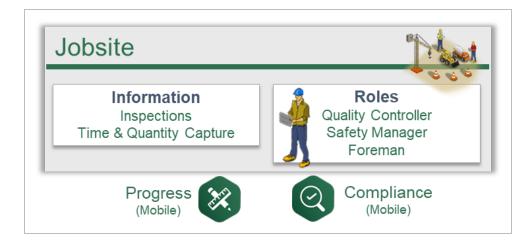


#### Scenario: Step 5

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 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 in the quantities completed and can see her crew's productivity for the day. She will be able to communicate this to the crew in the morning.

Once complete, she approves the daily plan and synchronizes it, so 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 Plan** 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 can make any necessary changes to the plan tomorrow based on the productivity information he received.

The field engineer is can also verify the inspections were completed in the **InEight Compliance** application.

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

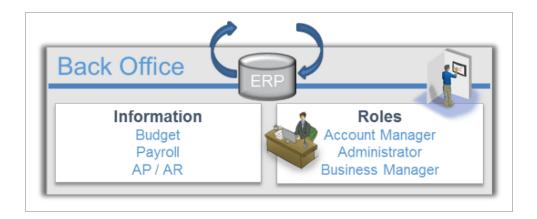


#### Scenario: Step 7

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 forecasting.

Within the **ERP system**, the account manager and administrators review all the time that has come in, adjust where necessary, and submit the payroll to ensure everyone is paid accurately and on time. They then synchronize this information 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 management in the front office views all the actual quantity and cost information, compares it to the budget, and projects the final cost of each operation. Forecasts are then finalized for the project.

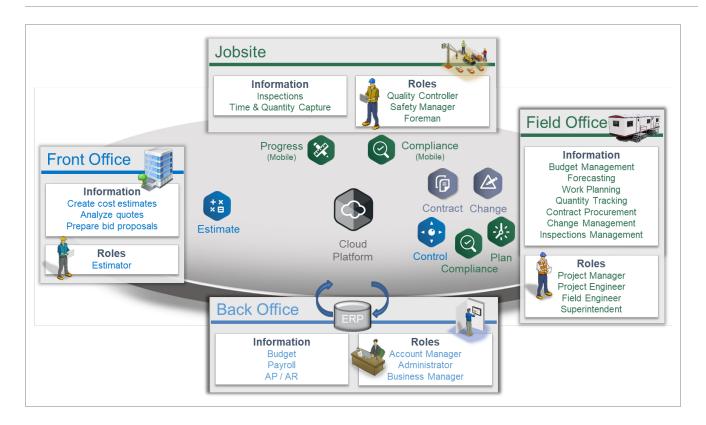
In **InEight Control**, project engineers and managers can view all the actual quantities and costs from the jobsite and analyze the information to determine if they are going to meet their budgets. If, after review, they see that a few operations are spending more time and money due to weather delays,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

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



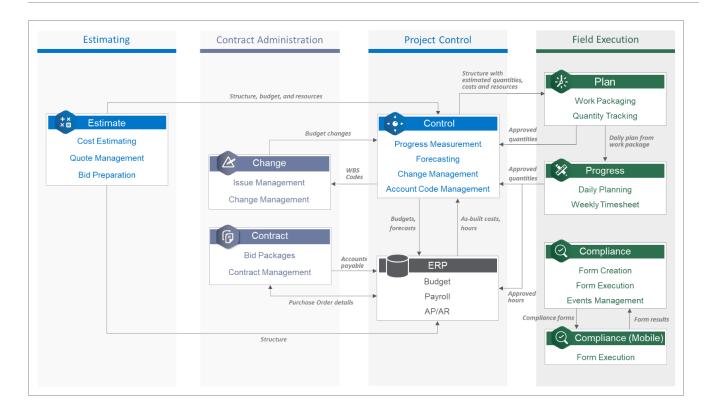
#### 1.1.4 Summary

No matter what location you are in or what role you have, the information created for your project is communicated to all the InEight cloud platform applications and shared through the Cloud Platform. The **InEight Cloud Platform** is also able connect and communicate to your **ERP system** and other 3<sup>rd</sup> party applications to utilize the same information, eliminating the need to re-enter data. All this information can then be archived for future reference, and selected information can easily be turned over to the client.



#### 1.1.5 InEight cloud platform Workflow

The following workflow diagram illustrates in greater detail what information travels between the InEight cloud platform applications and the **ERP system** and direction in which it flows.



#### 1.2 PLAN WORK PACKAGING OVERVIEW

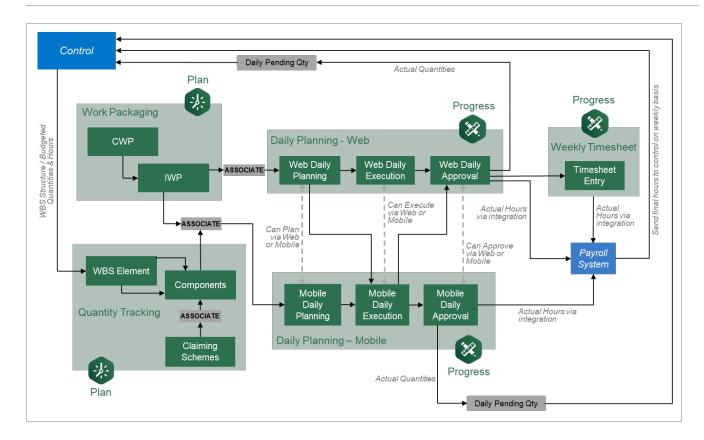
In Eight Plan is an application within the In Eight portfolio of products. It is a tool for engineers and superintendents to plan their work and track quantities during the construction of the project.

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.

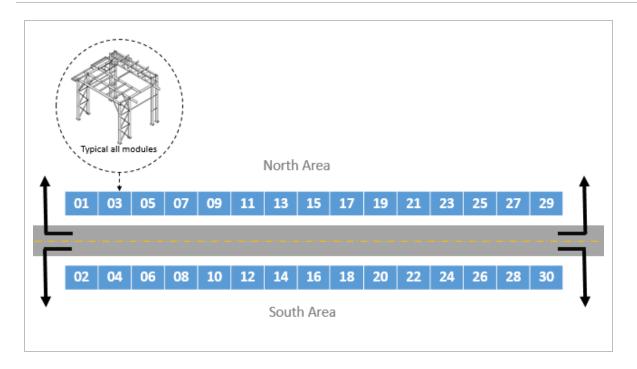
#### 1.2.1 InEight Plan Work Flow

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

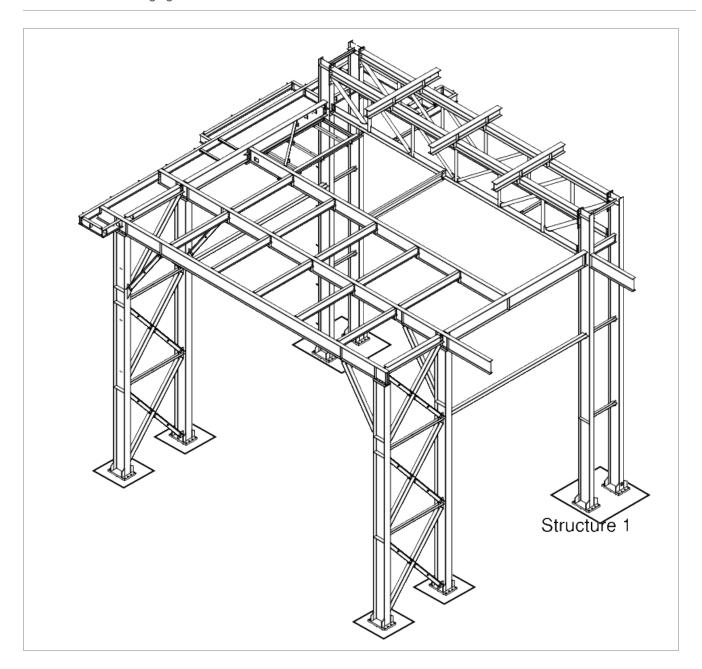


#### Scenario

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.

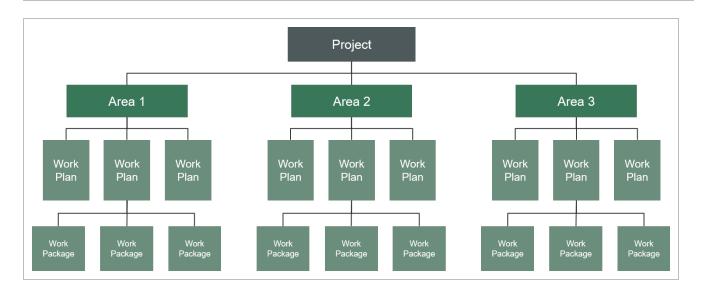


The image below depicts a layout for a steel structure project. The project consists of erecting 30 separate steel structures on opposite sides of a road. Each structure or module has been assigned a number 1-30.

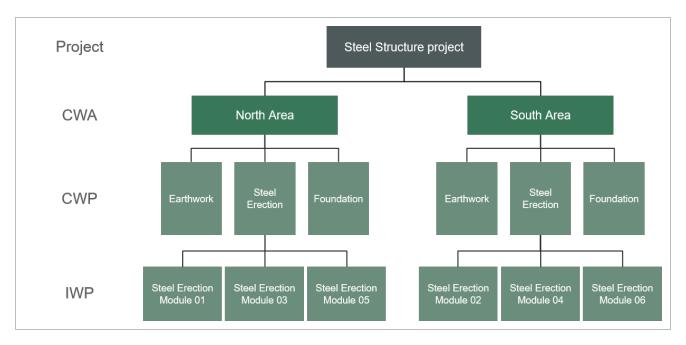


#### 1.2.2 Work Packaging

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 areas (CWAs), 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:

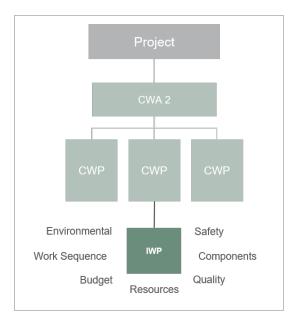


#### 1.2.2.1 Work Package Details

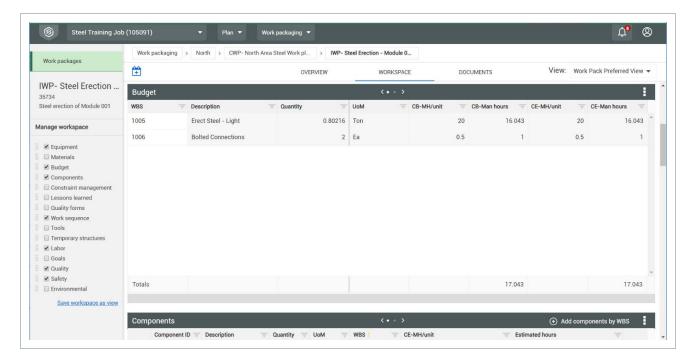
Work package details include the following information:

- · Work sequence
- Budget

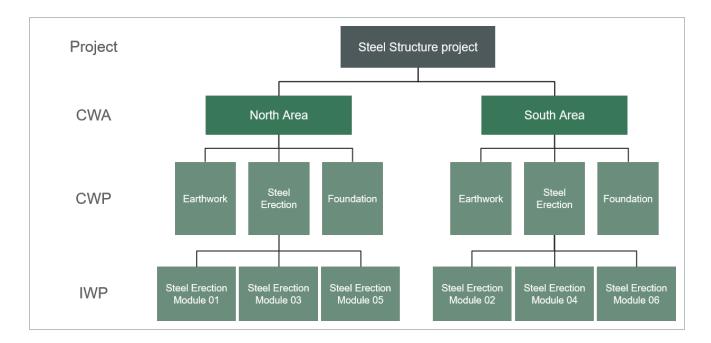
- · Resources required
- Components and quantities
- Safety, quality, and environmental concerns



The image below shows what some of the details of an installation work package looks like in Plan:



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



NOTE

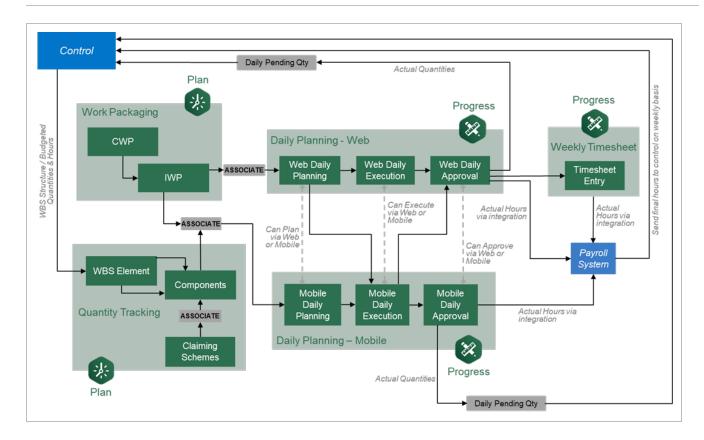
In Work Package Management, you will learn about work plans and work packages in detail, including how to create them and define plan details.

#### 1.2.2.2 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.



Plan User Guide Lesson 1 Review

#### **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 > CWA > CWP > IWP
  - b. CWA > IWP > Project > CWP
  - c. Project > Work plan > CWA > CWP
  - d. Project > CWA > 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

Lesson 1 Summary Plan User Guide

• Explain the high-level work flow of Plan – Work Packaging



### **LESSON 2 – GENERAL NAVIGATION**

**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

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Plan User Guide 2.1 Page Navigation

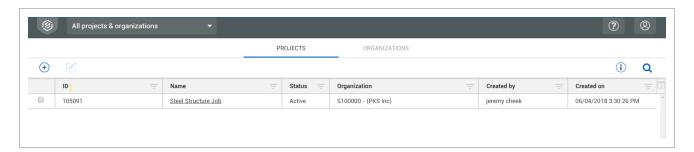
#### 2.1 PAGE NAVIGATION

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.

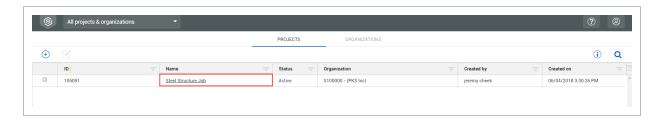


Selecting a project takes you to the Project home landing page for that project. From the home page, there are two different ways to access the Plan Work packaging module. The following Step by Step shows you both ways.

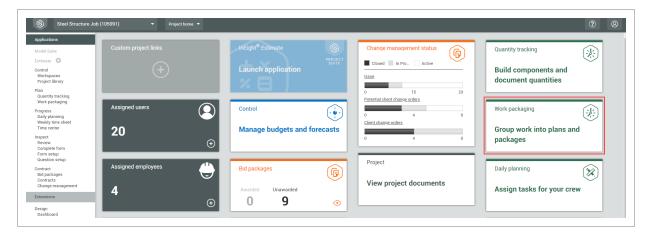
# 2.1 Step by Step 1 — Navigate to the Work Plans Page via the Project Dashboard

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

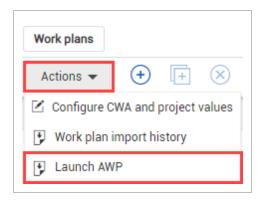
2.1 Page Navigation Plan User Guide



- 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. Click the Actions drop-down, then select Launch AWP.

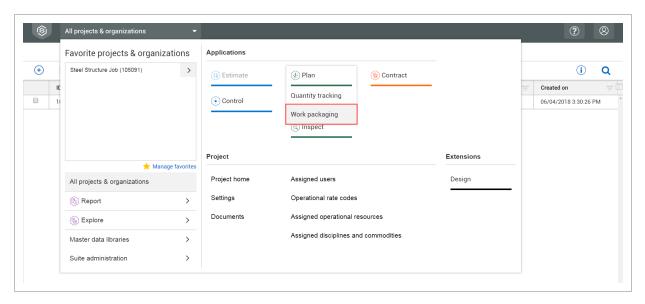


4. This opens the Work plans page.

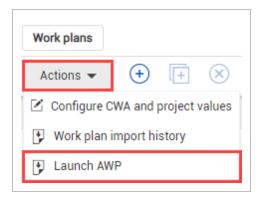
Plan User Guide 2.1 Page Navigation

#### 2.1 Step by Step 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. Click Actions drop-down, then select Launch AWP.



3. This opens the Work plans/packages page.

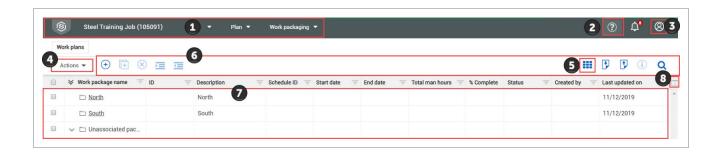
TIP This is how you will navigate to the Quantity Tracking module as well.

You will go over quantity tracking in the InEight Plan – Quantity Tracking course.

2.1 Page Navigation Plan User Guide

#### Overview - Work Plans/Packages 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	Block View	View the Work Plans/Work packaging page in a card view layout, the page displays the most recent saved work package, as well as a card for each work package associated with the CWA or CWP in the same order and data as the default grid view.
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.



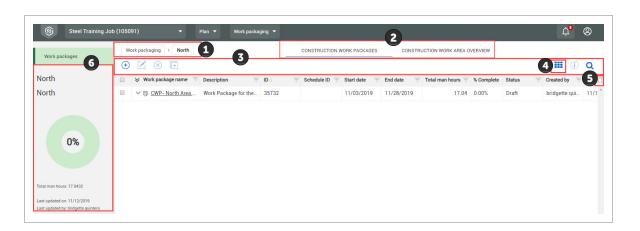
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Plan User Guide 2.1 Page Navigation

# Overview - Area/Construction/Installation Work Packages Pages

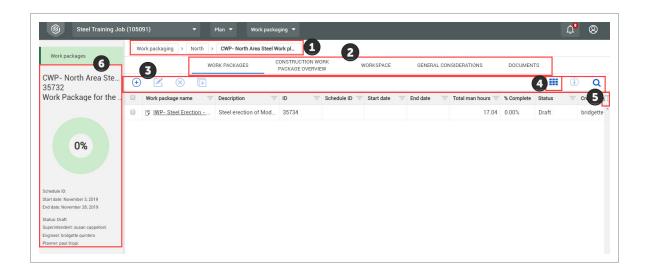
Title		Description	
1	Breadcrumbs	Navigational links that allow you to track your path from the page you are currently viewing back to the work plans/packages page. Furthermore, identifies what and where you are within a work package.	
2	Tabs	Navigate between different functions on a page. The blue line indicates what tab you are currently on.	
3	Toolbar	Contains functions for the page you are on: add, edit, delete, export, import, show details, and search.	
4	Block View	View the Work packages page in a card view layout, the page displays the most recent saved work package, as well as a card for each work package associated with the CWA or CWP in the same order and data as the default grid view.	
5 Column Chooser Add or hide columns to make the plans		Add or hide columns to make the plans/packages list user specific.	
6	Side Panel	Contains a brief summary of your CWA, CWP, or IWP, fed from their overview and workspace tabs as well as associated components. The percent complete displayed relates to the associated components' percent complete.	

### 2.1.1 CWA

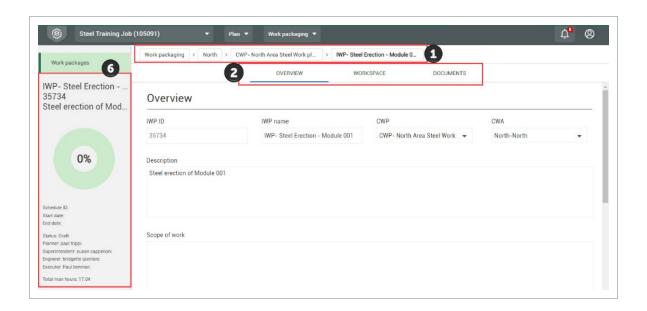


2.1 Page Navigation Plan User Guide

#### 2.1.2 CWP



#### 2.1.3 IWP



TIP

The **Construction Work Packages/Work Packages** tab displays all the work plans that *you* have created or are assigned to as the Superintendent, Engineer, or Foreman.

Plan User Guide 2.2 Columns

### 2.2 COLUMNS

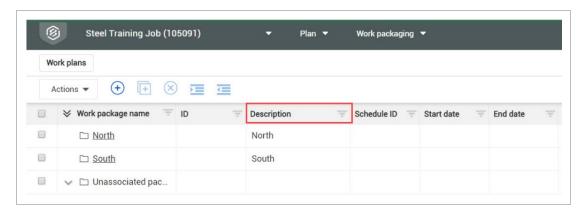
Within the InEight Plan Work plans page, you can customize columns according to your preferences. Changes made to the placement of your columns will be retained the next time you access the page.

#### 2.2.1 Move Columns

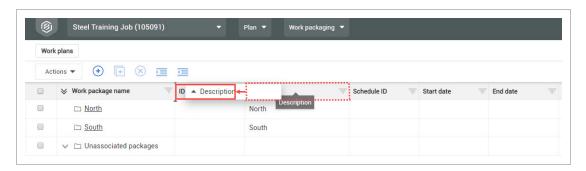
You can move a column from one place to another to customize your view using drag and drop.

#### 2.2 Step by Step 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



2.2 Columns Plan User Guide

#### 2.2.2 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.

#### 2.2 Step by Step 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

#### 2.2.3 Filter Columns

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

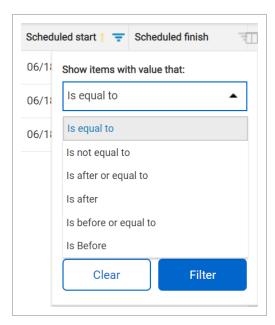
# 2.2 Step by Step 3 — Filter Columns

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

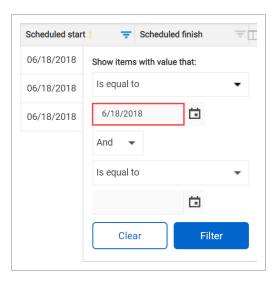


2. In the resulting drop-down list, select **is equal to**.

Plan User Guide 2.2 Columns



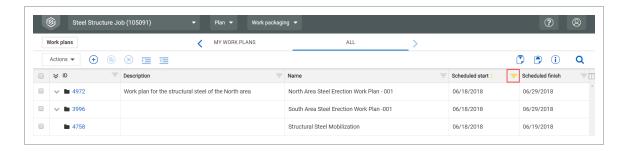
3. In the first search box, type 6/18/2018.



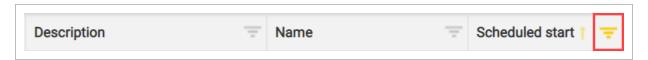
#### 4. Click on the Filter button.

- 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.

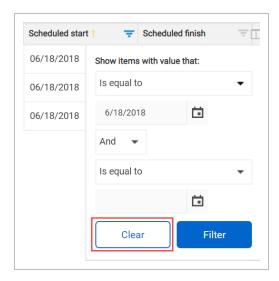
2.2 Columns Plan User Guide



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



6. Click Clear to clear your filter.



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.

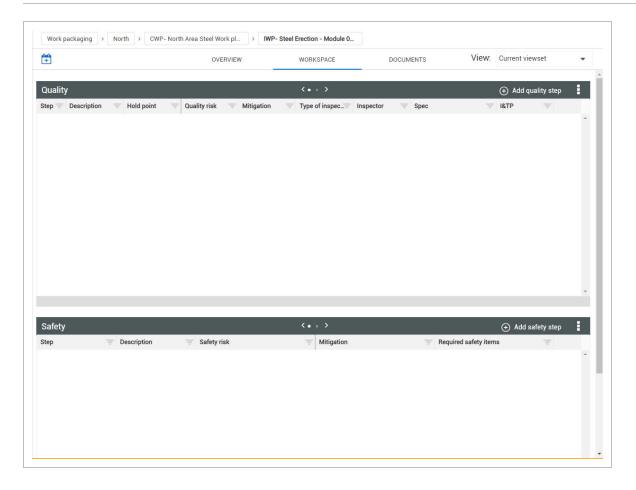
- 1. Find a discipline by using the column sort function.
- 2. Remove the columns you do not need in your view.
- 3. Apply a filter you would use to make the data more relevant.

#### Congratulations, you have completed this exercise!

# 2.3 DATA BLOCKS

On the Workspace tab of an opened installation 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.

2.3 Data Blocks Plan User Guide



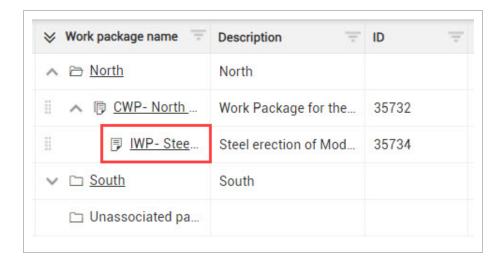
Some data block fields allow you to fill in key work package information.

#### 2.3.1 Add Data Blocks

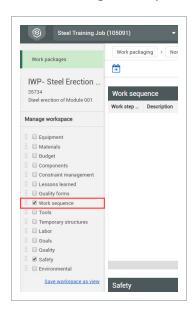
# 2.3 Step by Step 1 — Add Data Blocks

1. From the Work plans/packages page, select a **hyperlink** under the ID Column for an installation work package (IWP).

Plan User Guide 2.3 Data Blocks



- 2. Once you are in an individual work plan, select the **Workspace** tab.
- 3. On the Manage workspace slide out panel on the left, select Work sequence.



4. Also select the Labor, Equipment, Components, Budget, Quality, and Safety data blocks.



- You can scroll up and down between the data blocks to view your selections
- You can sort and filter columns whether they are in a data block or in a register page

2.3 Data Blocks Plan User Guide

#### 2.3.2 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.

#### 2.3.3 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.

#### 2.3 Step by Step 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.

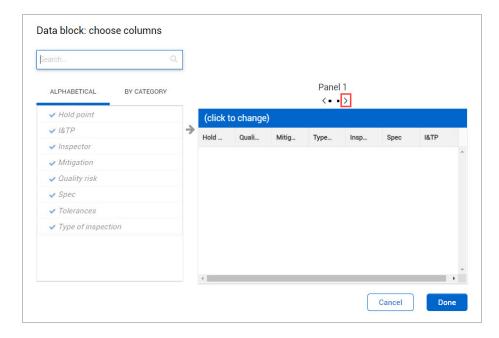


2. Select **Choose columns** from the drop-down menu.

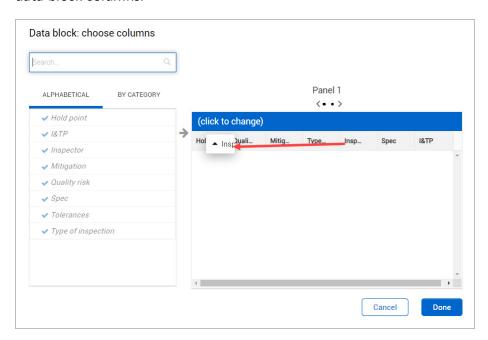


3. On the resulting slide out panel, click the **right arrow** to navigate to Panel 2 of the data block, then click back to Panel 1.

Plan User Guide 2.3 Data Blocks



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



NOTE

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 Plan User Guide

#### 2.4 VIEWSETS

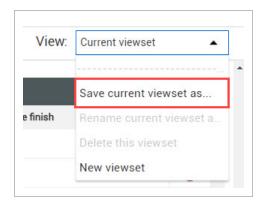
Once you have all desired data blocks organized to your liking, you can create a saved view of your page so that you can always revert back to it. This saved view is called a viewset.

#### 2.4 Step by Step 1 — Create a Viewset

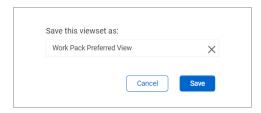
1. On the Workspace tab of your selected installation work package, Select the **View** drop-down arrow to save the data block setup you created in Step by Step 2.3.1.



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.

NOTE 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/packages page, create an installation work package viewset that you would use.

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

#### Congratulations, you have completed this exercise!

Lesson 2 Review Plan User Guide

#### **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. You can NOT sort and filter columns if they are in a data block. Only on a register page.
  - a. True
  - b. False
- 3. 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
- 4. On the Workspace tab of an installation 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

Plan User Guide Lesson 2 Summary

- Manage data blocks
- Create viewsets

Lesson 2 Summary Plan User Guide

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# LESSON 3 – WORK PACKAGE MANAGEMENT

**Lesson Duration: 60 minutes** 

#### **Lesson Objectives**

After completing this lesson, you will be able to:

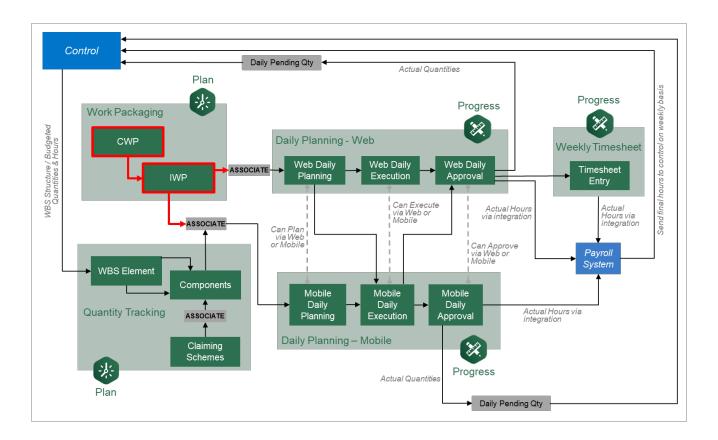
- Explain how to manage work packages
- Create a construction work package
- Create an installation work package
- Edit and review work package details
- Import work packages

# **Lesson Topics**

3.1 InEight Plan Workflow – Work Package Management			
3.2 Work Package Management Overview			
3.2.1 What is Advanced Work Packaging (AWP)?	56		
3.2.2 Work Packages	56		
3.3 Work Package Creation			
3.3.1 Create a Construction Work Package (CWP)	59		
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3.5 Work Package Import		
3.5.1 Import Template	75	
Exercise 3.1 — Enter Work Package Details		
Lesson 3 Review		
Lesson 3 Summary	81	

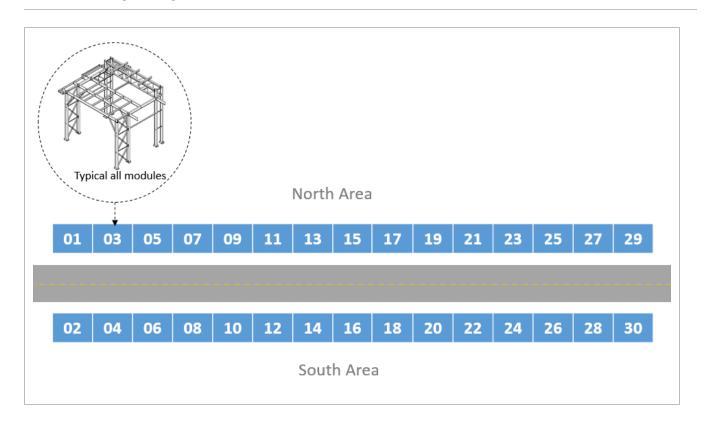
# 3.1 INEIGHT PLAN WORKFLOW - WORK PACKAGE MANAGEMENT



# 3.2 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.



# 3.2.1 What is Advanced Work Packaging (AWP)?

**Advanced Work Packaging (AWP)** is a standardized way to plan the execution of a construction project including design, procurement, and installation, changing the planning process to be execution driven. It is a way to approach your construction project beginning with the end in mind. In the past, planning was usually siloed, Engineering first, then Procurement, and finally Construction. AWP starts at the end of Construction and works backwards.

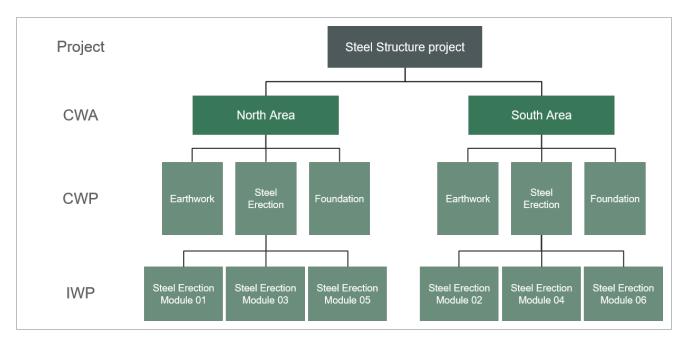
The Work Packaging module is a way for you to break down your work into manageable pieces, as well as have all items available for your crew for installation before they start the work, and track how much you have installed. In the end, it allows you to enact a detailed and well-organized plan for your work. You accomplish this by breaking work into work packages.

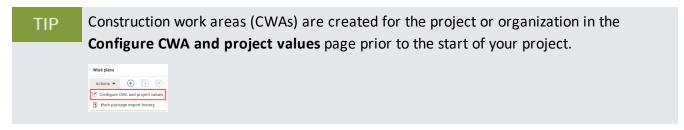
# 3.2.2 Work Packages

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

- Construction Work Area (CWA)
- Construction Work Package (CWP)
- Installation Work Package (IWP)

Using the scenario above as an example, assume that you initially break the project into two construction work areas (CWA): 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.





#### 3.2.2.1 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.

#### 3.2.2.2 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.

### 3.3 WORK PACKAGE CREATION

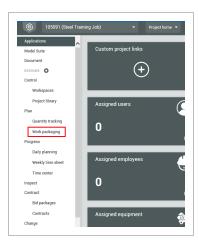
The first step in utilizing the Work Packaging module is to set up your work package structure.

# 3.3.1 Create a Construction Work Package (CWP)

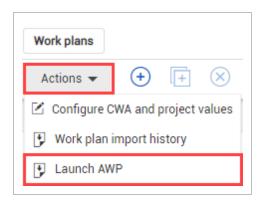
The following steps walk you through creating a construction work package.

# 3.3 Step by Step 1 — Create a Construction Work Package (CWP)

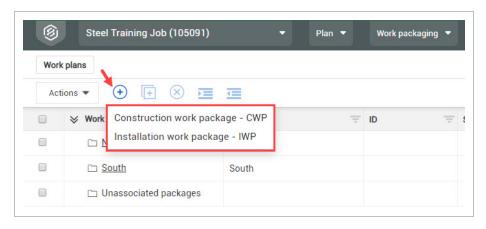
 From the Steel Structure Training Job's Project home landing page, navigate to the Work packaging page.



2. Click Actions drop-down, then select Launch AWP.



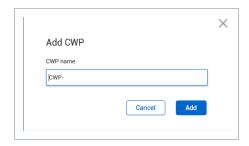
3. Click the **Add** button on the left toolbar and select **Construction work package – CWP** from the drop-down list.



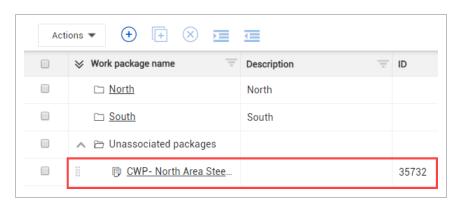
This is where you can also add Installation work packages (IWPs)

Construction work packages and installation work packages can also be created within the construction work areas, for example the North construction work area, by clicking on the North construction work area folder then select the add button.

- In the new dialog box, type North Area Steel Erection Work plan [Your Initials] after the CWP -.
  - Note that the CWP name automatically begins with "CWP-" by default



- 5. Click **Add** to finish creating the work package.
  - Note that the CWP created will be located in the Unassociated packages folder by default when the CWPs or IWPs are not created within their appropriate construction work area folder



#### 3.3.2 Edit Work Packages

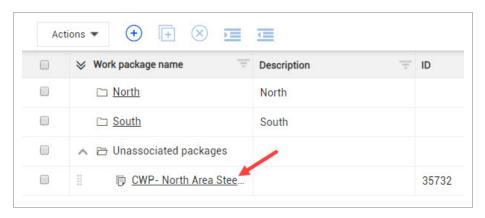
After creating the work package, you may need to go in and edit the details. This includes:

- Schedule start and finish dates
- CWP Description

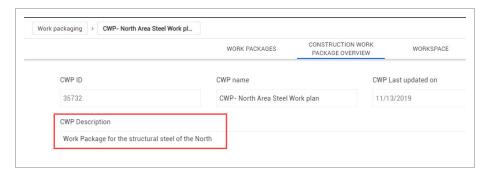
- CWA description and ID
- Plan Status
- Other fields

### 3.3 Step by Step 2 — Edit a Work Package

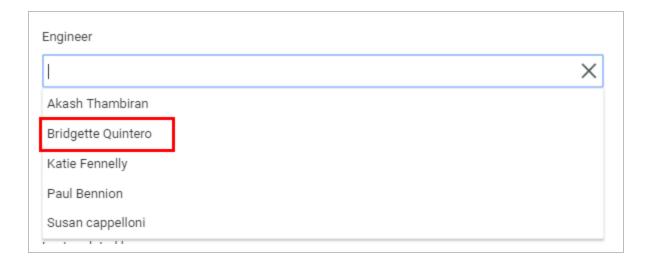
1. From the Work plans/packages page, select the hyperlink **ID** on your newly created package.



- This takes you into the Work packages tab of your work package
- 2. Select the Construction Work Package Overview tab
- 3. Under CWP description, type Work Package for the structural steel of the North area.



- The CWP ID will automatically generate
- 4. In Schedule start, select a date.
- 5. In Schedule finish, select a later date.
- 6. Select Bridgette Quintero as the Engineer.



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

- 7. In a similar manner, type/select **Susan Cappelloni** as the Superintendent and **Paul Trippi** as the Planner.
- 8. Now that you have all the CWP overview details, you can go back to the Work packages page by selecting **Work packages** in the Breadcrumbs.

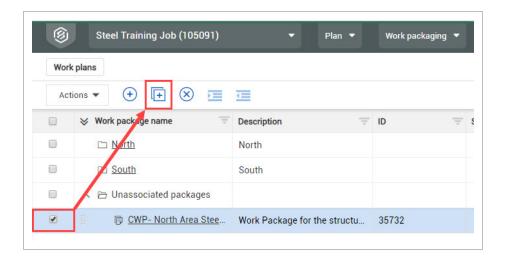


# 3.3.3 Copy Work Plans

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.

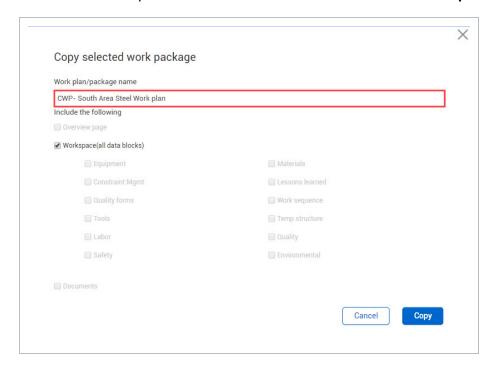
#### 3.3 Step by Step 3 — Copy a Work Package

1. On the Work plans/packages page, select your previously created work plan, then select the **Copy** icon.



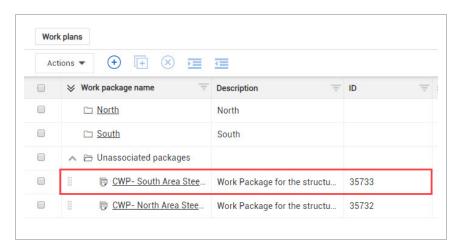
TIP You can only copy one plan/package at a time.

- 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].



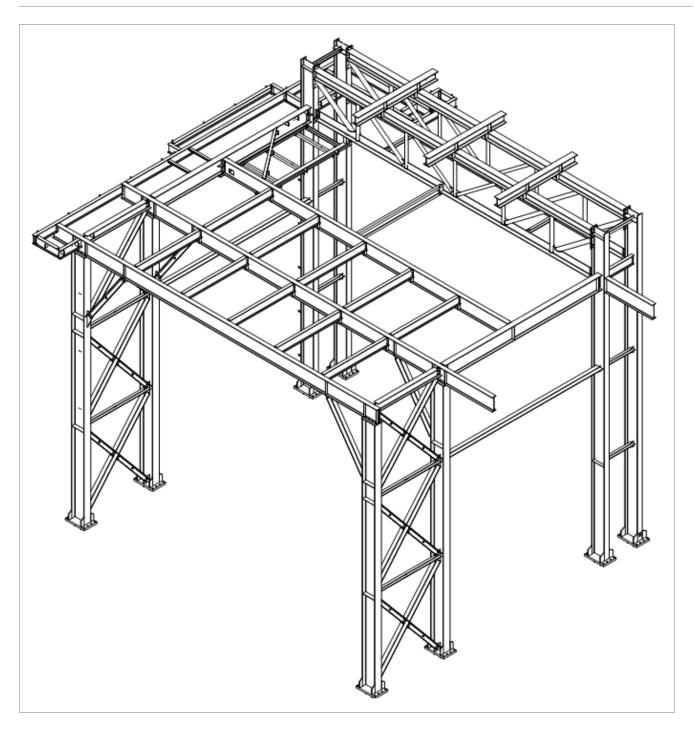
- 3. Uncheck Workspace (all data blocks).
- 4. Select Copy.

· A new work package has been created



# 3.3.4 Create an Installation Work Package (IWP)

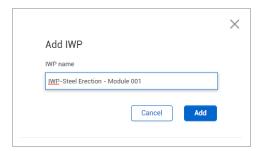
Continuing with the scenario above, you will create an installation work package for the Steel Erection of Module 01.



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

# 3.3 Step by Step 4 — Create an Installation Work Package (IWP)

- 1. On the Work plans/packages 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].



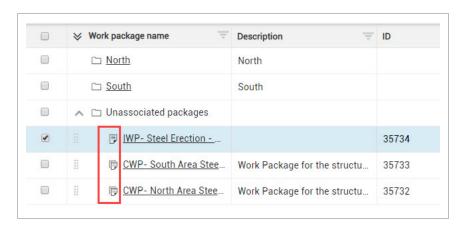
4. Click Add.

#### 3.3.5 Group Work Packages

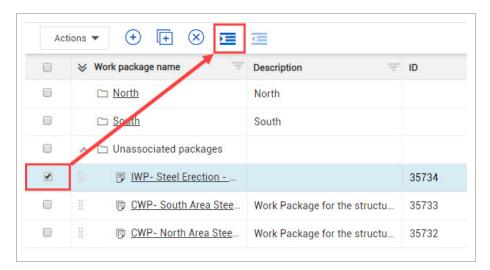
After creating work packages, you can group them underneath the plans you have created. This helps with the organization and planning of the work.

# 3.3 Step by Step 5 — Group a Work Package

- On the Work plans/packages page, select the installation work package you just created.
  - Notice that CWPs and IWPs have different icons

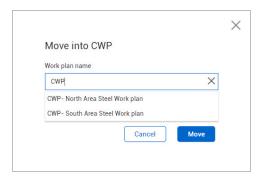


2. Click the Move into CWP button ( ).



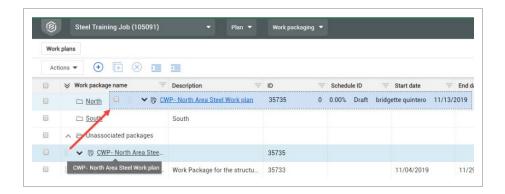
You can also group installation work packages into construction work packages by clicking anywhere in the row for the installation work package and dragging it over top of the desired construction work package.

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



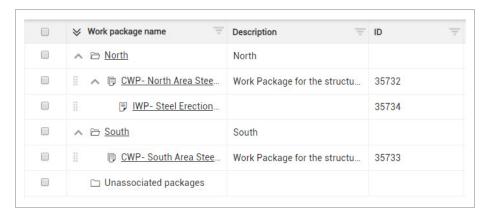
- This is a dynamic field and will bring up a drop-down to select from as you are typing
- 4. Select the CWP you want to move it to, in this case select **CWP North Area Steel Work plan**, then click **Move** to move the package.
- 5. Click and hold on the CWP North Area Steel Work Plan, then drag and drop it over the North Construction work area folder.

TIP



You can also group construction work packages into construction work areas by editing the CWP in the Construction Work Package Overview tab, then selecting the appropriate CWA ID or CWA Description from the drop-down.

6. Your work packages are now grouped.



# 3.4 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.

# 3.4.1 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

#### 3.4 Step by Step 1 — Installation Work Package Overview

- 1. On the Work plans/packages page, select the hyperlink **ID** of your recently created installation work package.
- In the Overview tab of your installation work package, populate the description with Steel erection of Module 001



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

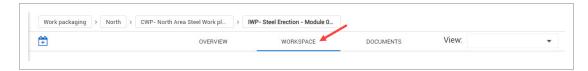
# 3.4.2 Installation Work Package Details Tab

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

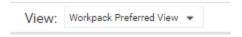
using data blocks. Some of the data blocks are open entry fields, such as safety, environmental, and work sequence. However, other data blocks use validated fields based off previously entered information. These include Labor, Budget, Component, and Equipment data blocks.

#### 3.4 Step by Step 2 — Installation Work Package Details

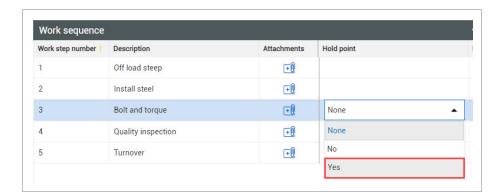
- On the My Work Plans tab of the Work plans page, select the hyperlink ID of your recently created installation work package.
- 2. Select the Workspace tab.



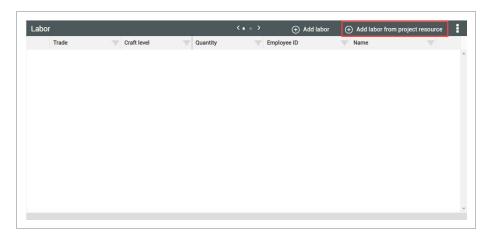
3. On the Workspace tab, change your view to your previously created viewset (see *General Navigation*).



- 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.



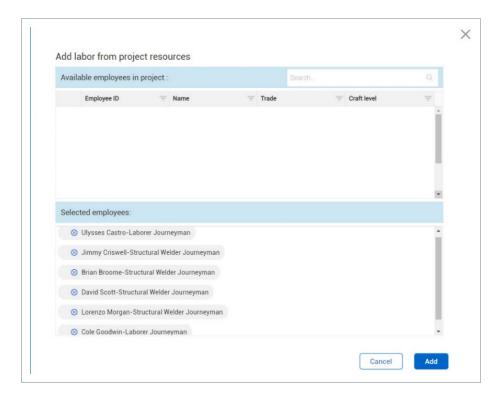
7. In the new dialog window, start searching for **Ulysses Castro**, then click the **add icon**.



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

You can add Multiple employees at a time in this dialog box. (Only employees who can be added to daily plans will show up in the drop-down selection – See your Account Administrator if you do not see an employee.)

8. Continue using the Search bar to look up and add five labor resources.



#### 9. Click Add.

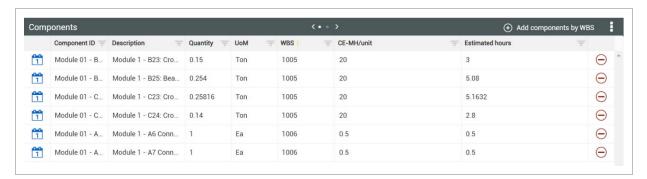
- The laborers appear in the Labor data block
- 10. In the Equipment data block, select **Add equipment from project resource**.



- 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 by WBS**.



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



NOTE

Also, a component can only live in one package at a time. It cannot live in both the CWP and its child IWP due to percent complete tracking purposes.

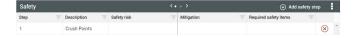
- 15. In the Quality data block, click **Add quality step**, then select **1** in the Step field.
- 16. In the Description field, type **Torque Inspection**.



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



18. In the Safety data block, click **Add safety step**, select **1** in the Step field and type **Crush Points** in the description field.



- 19. Click on Add safety item again.
- 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 packaging** to go back to the Work plans/packages page and view your completed work plan and work package.

#### 3.5 WORK PACKAGE IMPORT

#### Scenario

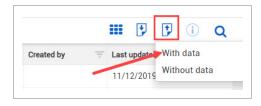
Sometimes you have multiple, similar work packages to create and a faster way to create them would make planning more efficient. By using the Import Template, the project team can input multiple work packages in an Excel document and upload it into Plan.

#### 3.5.1 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.

#### 3.5 Step by Step 1 — Create Work Packages from Excel Import

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

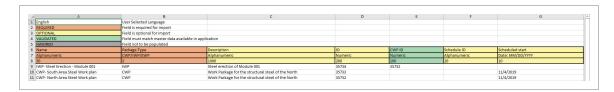


TIP Excel templates "without data" are used for creating new components from scratch, usually during project setup.

Excel templates "with data" are typically used to update existing work plans/packages.

2. Open the export file.

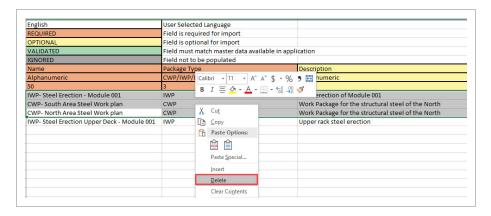
- This opens up the Excel template to use for the import. It also contains the data from the current work packages on the Work plans page
- You may need to select Enable editing at the top of the spreadsheet prior to entering data



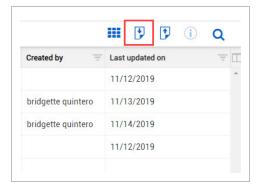
- 3. Input information into your template to be uploaded. At the bottom of the list, add the following information:
  - Name: IWP-Steel Erection Upper Deck Module [your module number]
  - Package Type: IWP
  - Description: Upper rack steel erection
  - Assign the proper CWP to your work package in the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



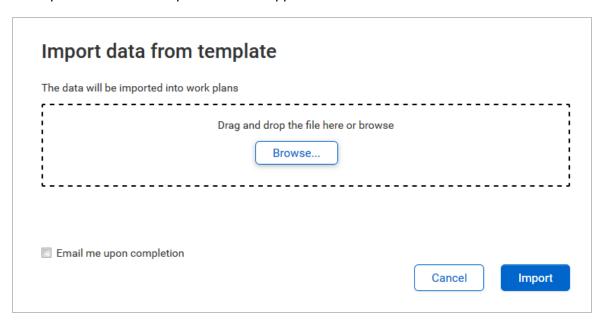
4. Delete all the work packages that came with the template.



- 5. Save this Excel file to your desktop as [Your Initials] Plan Upload.
- 6. In InEight Plan, on the Work plans/packaging page, click the Import button.



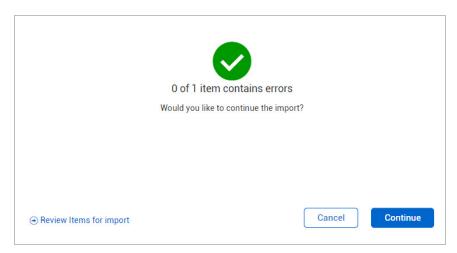
An Import data from template window appears



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 Plan User Guide

#### **Lesson 3 Review**

1.	This type of work package allows you to manage a smaller, more detailed scope of worl
	that is "progressable".

- a. Installation work package
- b. Construction work package
- c. Advanced work package
- d. Discipline work package

2.	You can group	under	to organize	vour work.
	1 Ou cuit Si oup	ariaci	to or garnize	, - a

- a. CWPs, IWPs
- b. IWPs, CWPs
- c. work plans, work packages
- 3. On the Workspace 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
- 4. 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

Plan User Guide Lesson 3 Summary

# **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