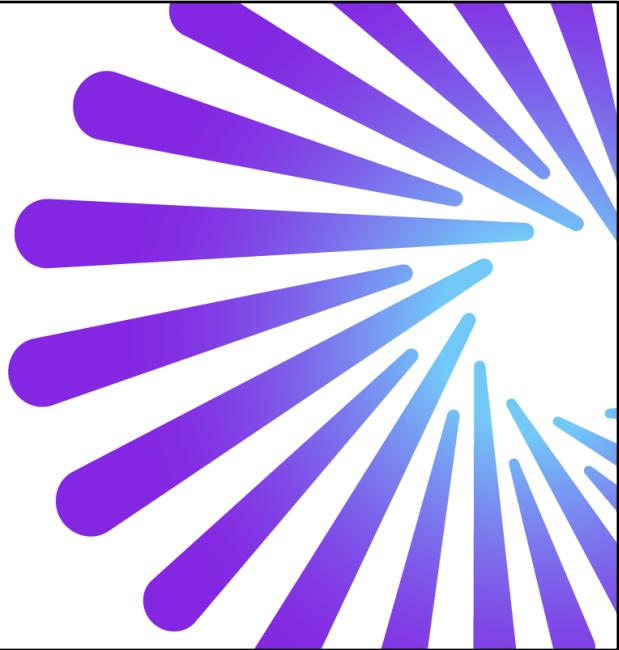


## FSM 6: Essentials **Core Processes**

IFS Academy



## Welcome

- Agenda: The Course & Today
- Practical Information & Safety
- About the Course & Learning Outcomes



## YOUR TRAINER

Name:

Contact number:

Email:

## **Agenda**

### **FSM Associate Course**

- 01.** FSM Introduction & Solution Overview
- 02.** FSM Core Entities
- 03.** FSM Core Processes



## **Agenda – Day 03**

- 01.** Field Service Management processes, mapping customer journey to process and system
- 02.** Understanding the basic Field Service Request process to task management
- 03.** Understanding the basic Repair Center / RMA process
- 04.** Understanding the basic Inventory & Logistics Process
- 05.** Understanding the Contract & Financial Management process



## Agenda

01. Field Service Processes:  
Introduction
02. Field Service Customer  
Journey
03. Service request
04. Service request & repair
05. Task management and  
schedule board



## Practical Information & Safety

- Our Venue for Today
  - Facilities & Access
  - Fire Alarms & other safety information
- Course Timings
  - We'll try to stick to the agenda!
  - Breaks
- Phones
  - Silent please ☺
  - If you need to take/make a call
- Respect



### GROUND RULES & HOUSEKEEPING WELCOME TO THE COURSE!

Overview of the building; staying in the same room for the course etc

Toilets are in X location

Drinks available in X location

Access to the building/room – any times when the room will be locked/unavailable

Fire alarm procedure / any tests planned?

Any other information notified by the venue

We will aim to stick to the timings laid out in the course agenda as closely as possible; this is so that we have time to get through all of the material

If you have additional questions that we don't have time for, please make a note of them and we can discuss them at the end of the day, or follow up after the course

The breaks are included in the agenda; if the group wishes to change any of these break times, we'll try to accommodate that, but we must ensure we cover the agenda and that this suits all of the participants

Please put your mobile phone to silent and only answer in case of emergency, otherwise use breaks to call back. When answering during the course, please leave the class room without interrupting the course

We understand that you may have other priorities to deal with while you are here; but there is a lot to cover in this course, and we'd really appreciate it if you could give us your full attention whenever possible.

The most important thing while we are all together over the coming hours/days, is that we each show respect for the other people in the room, regardless of their background, knowledge, experience or any other factor. Let's try to make it an enjoyable few days!

## Learning Outcomes

### FSM Core Processes



By the end of this section of the course, you will:

- Be able to utilise a real world understanding of an example Field Service Management processes, customer journey to process and system mapping
- Be able to articulate the basic Field Service Request, Inventory and Logistics, Repair Centre/RMA and Contract & Financial management processes, and the organisational factors affecting these.
- Be able to explain how the processes have corresponding functionality within the FSM solution





# Access?

# 1. Field Service Management Processes



## Field Service Management Processes

### Learning Outcomes



By the end of this lesson, you should have:

- A solid understanding of the organizational priorities, customer journey and system considerations that affect a field service business
- An understanding of the language and terminology used in a field service business
- An appreciation of the specific challenges that may apply to system implementation for a field service business

## Activity

Field Service Organizations

WHAT FEATURES OF A FIELD SERVICE  
ORGANIZATION CAN YOU RECALL FROM OUR  
DISCUSSION YESTERDAY?



Aim of this short activity is for delegates to reinforce the discussion from previous day and consolidate their understanding of a field service organisation

Give the participants a minute to call out the features:

Features of a field service business that make their system requirements complex:

- **Complex Work Requirements** – have to balance both predictable (maintenance) and reactive (break-fix) work, with differing priorities
- **Customer-focused** – most of the work done is to satisfy some level of customer expectation, SLA etc
- **Remote, mobile working** – means that a large part of the workforce work independently and are ‘separate’ to the main organisation, can have technical challenges around connectivity etc
- **Operational Focus** – activity tends to be focused on getting a job done, fixing/avoiding a breakdown – can make it difficult to implement new systems and make changes
- **Parts/Spares Requirements** – completion of work needs to be matched up with the purchasing and logistics of parts

## Field Service Management Processes

Typical Features Of A Field Service Business

Complex Work Requirements  
(Predictive & Reactive)

Customer-Focused  
(B2B & B2C)

Remote, Mobile Working

Operational Focus

Parts / Spares Requirements

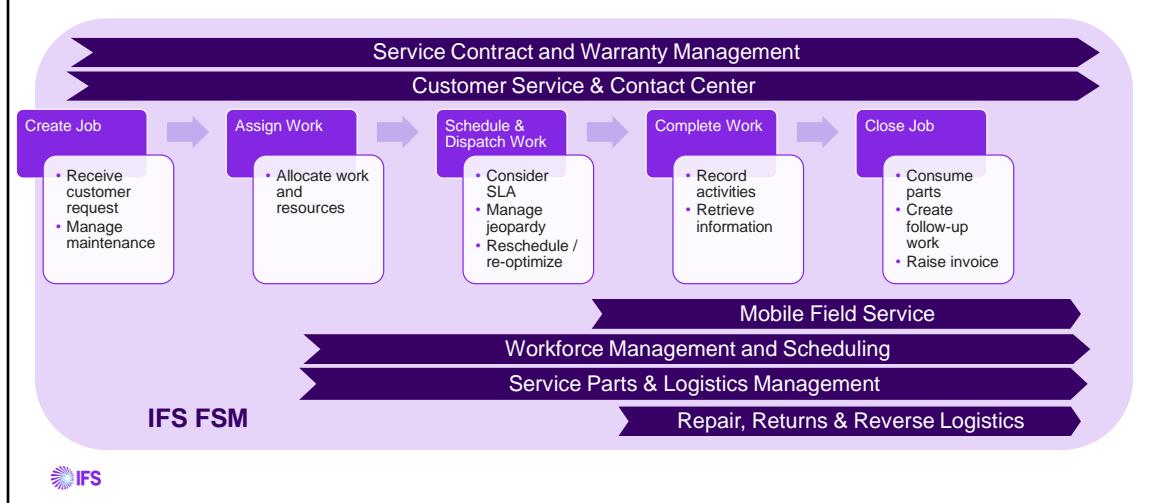


Features of a field service business that make their system requirements complex:

- **Complex Work Requirements** - have to balance both predictable (maintenance) and reactive (break-fix) work, with differing priorities
- **Customer-focused** – most of the work done is to satisfy some level of customer expectation, SLA etc
- **Remote, mobile working** – means that a large part of the workforce work independently and are ‘separate’ to the main organisation, can have technical challenges around connectivity etc
- **Operational Focus** – activity tends to be focused on getting a job done, fixing/avoiding a breakdown – can make it difficult to implement new systems and make changes
- **Parts/Spares Requirements** – completion of work needs to be matched up with the purchasing and logistics of parts

## Field Service Management Processes

### High-level Process



IFS Field Service Management supports the core Service Management processes:

- Service Contract & Warranty Management
- Customer Service & Contact Center
- Mobile Field Service
- Workforce Management & Scheduling
- Service Parts Management
- Repair, Return & Reverse Logistics

The product investments made in IFS Field Service Management are geared to enable organizations to expand and pursue commercial opportunities across all areas of the service value chain.

By focusing our skilled and experienced resources entirely on automating and optimizing service processes, we are able to develop leading-edge features before they become mission critical, enabling our customers to introduce new solutions and value-add services when they are ready, without disrupting their business.

## Field Service Management Processes

### Field Service Management Processes

#### Service Contracts

Fulfillment and management of service contracts:

- Warranty care
- After-sales care
- Enhanced service provision
- Preventative maintenance
- Call-outs

Covers business-to-business (e.g., photocopiers, industrial machinery) and business-to-consumer (e.g., boilers, white goods) – usually relates to some form of asset

**Key priorities / business drivers:**

- Meeting SLA
- Intelligent decision-making re sending a field technician
- Customer satisfaction and feedback
- Cost management



Service Contract and Warranty Management covers a range of services provided to customers who may have purchased equipment/asset from the organization or a third party.

## Field Service Management Processes

### Field Service Management Processes

#### Customer Service & Contact Center

Management of customer communications through the service process:

- Receive calls on issues and faults
- Gather information to support the issue resolution process
- Provide progress updates to customers

As well as traditional call center model, can also include social media, web-chat, remote support etc.

**Key priorities / business drivers:**

- Customer satisfaction and feedback
- Meeting call/contact targets, e.g., calls per day
- Access to job/task information

Mainly covered  
in IFS CE



Customer Service & Contact Center is the primary customer-facing process, responsible for liaising with the organization's customers about requests for service and the completion of any subsequent work.

Most of the IFS functionality for this process area sits within CE (Customer Engagement) but there are clear overlaps with the processes and information held in FSM

## Field Service Management Processes

### Field Service Management Processes

#### Mobile Field Service

Provision of service in a location remote from the organization's office base, e.g.:

- Domestic premises
- (Customer's) Business premises – factory, office
- Public highway, railway etc.
- A field!

**Key priorities / business drivers:**

- Staying connected to organizational processes and information (access, connectivity and communications)
- Mobile device management
- Minimizing travel, optimizing routes



Mobile Field Service is the ability to deliver services in a remote location, whilst remaining connected to organizational processes and systems.

## Field Service Management Processes

### Field Service Management Processes

#### Workforce Management and Scheduling

Allocation and management of work to be completed in the field, including:

- Work prioritization
- Field resource management
- Scheduling and optimization
- Jeopardy management

**Key priorities / business drivers:**

- Balancing competing priorities around service vs cost
- Meeting SLAs and ensuring the right work is completed at the right time
- Maintaining balance between planned and reactive work
- Ensuring engagement and compliance from field workers

Elements  
covered by IFS  
PSO



Workforce management and scheduling is the operational coal-face for the field service business. It incorporates the mechanics of sending a field technician to a job.

Some of the IFS functionality for this process area sits within Planning & Scheduling Optimisation (PSO) as this is where dynamic and scenario-based scheduling takes place. However, FSM has a standard scheduling and dispatch board for basic functionality

## Field Service Management Processes

### Field Service Management Processes

#### Repair, Returns & Reverse Logistics

Facilitates the return and repair of faulty, broken or unused parts and equipment, including:

- Return of parts from the field via stores, collection or other process
- Issuing of Return Merchandise Authorizations (RMA)
- Feeding back into quality management processes

#### Key priorities / business drivers:

- Rate of part returns (avoidance of stock loss)
- Cost efficiency
- Understanding opportunities for improvement
- Providing traceability



Repair, Returns & Reverse Logistics is effectively the opposite of the previous process which allows field workers to send parts back to the organisation for the purposes of quality management, cost efficiency etc

## Field Service Management Processes

### Field Service Management Processes

#### Service Parts & Logistics Management

Provision of the parts and equipment to facilitate the completion of work in the field, including:

- Stock and inventory management and replenishment
- Distribution of required parts to field technicians
- Management of stores locations/warehouses
- Maintaining parts catalogues and information

**Key priorities / business drivers:**

- Ensuring optimal levels of stock across the operation
- Controlling van stocks
- Balancing travel time/cost against warehousing
- Ensuring up to date asset information



Service Parts and Logistics Management is the process that ensures field workers have the parts and equipment they need to complete work in the field.

## 2. Service Request



## Service Request

### Learning Outcomes



By the end of this lesson, you should have:

- Recognize and understand the Service function and associated processes
- Recognize and understand child relationships of Service Requests
- Understand the significant parts of the setup for Service Requests

## Service Request

### The Start Of The Customer Journey

Imagine the scene.....

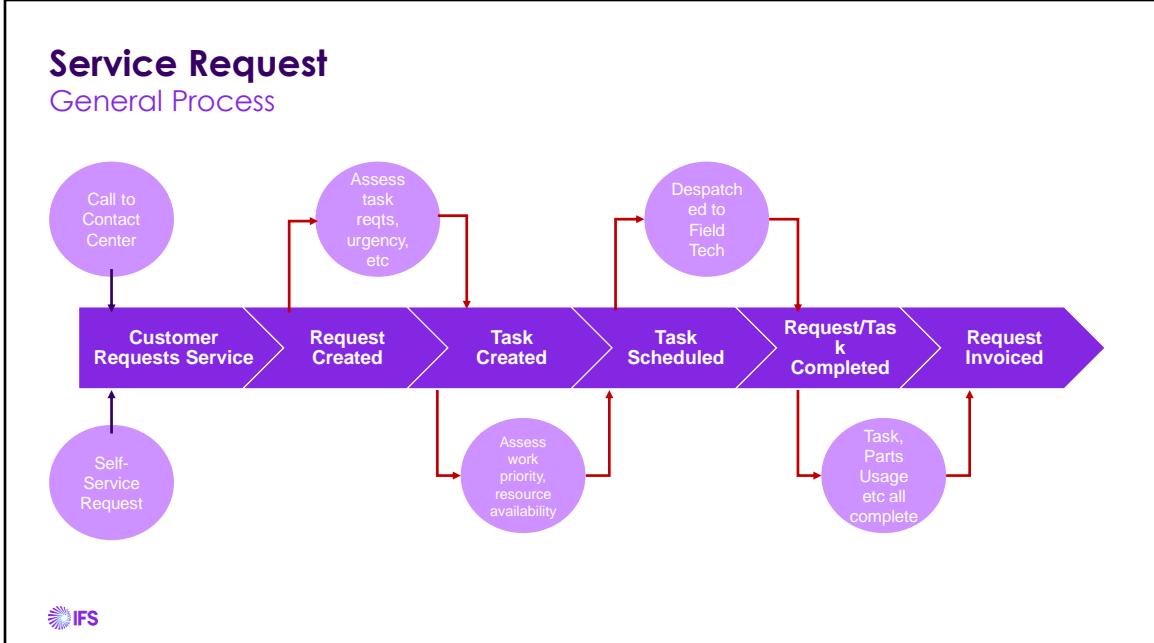
"You've been out for the day at the zoo with your family. The zoo was a long way from home, but it was worth it to see the children getting face to face with some interesting creatures! Now you're on your way home, everyone is tired and the toddler is staying to complain of being hungry. It's fine, you should be home in time to get him his tea and into bed.

Suddenly, there's a load **bang** and the car gradually slows down until it's not moving at all. There's smoke coming from the bonnet and lights are flashing on the dashboard, but you don't know what they mean.

Thankfully, you have breakdown cover, so you call the number shown on the sticker on your windscreens..."

So, what happens next??





Most of the FSM core business processes begin with creation of a Request, which simply stated is **a record of a Customer Need for any type of Service**. The input to create a Request is normally triggered by the customer who requires some kind of service, whether it is an electrician regarding wiring of a house or plumber to service a boiler. A customer can do this by:

- Calling the company to create the Request.
- Customer Portal – so customer creates the Request themselves.

Once the **Request is created**, the type of job that is required for the technician needs to be decided. That means – what skill should be required?, where is the job to take place? What is the estimated time it would take?

The **task then is scheduled** to technician(s) via the appointment booking or schedule board.

Once the technician has finished the job **the task needs to be completed** with the technician stating how long it has taken along with what parts have been used.

When all tasks on a request are completed then the request will be completed resulting in the request being **ready to be invoiced**.

The next several lessons will walk us through the general process. The *IFS FSM Services* course will take you through various call taking scenarios.

## Service Request

### Service Process Elements

- The **Service Request process** comprises some fundamental elements:

#### REQUEST

- Required to begin the service process
- Records information from and about the customer and the issue/fault

#### TASK

- Creates the visit activity for technician(s)

#### WORK ASSIGNMENT

- Can be done manually via the Schedule Board, or automatically with PSO
- Assigns the route and suggests the appropriate technician

#### DEBRIEF

- Records the consumption of parts and labor
- Completion of the task

#### FINANCIALS

- Facilitates the financial transactions needs to close the process loop



There are fundamental elements of any service call. In this course, we will look at these elements at a high level.

**Requests** are required to begin the service process. Requests are most commonly used to record the different information of the customer, what products/parts that need to be serviced.

A **task** is most commonly looked at as a visit from a technician or technicians, so it records what type of visit is required.

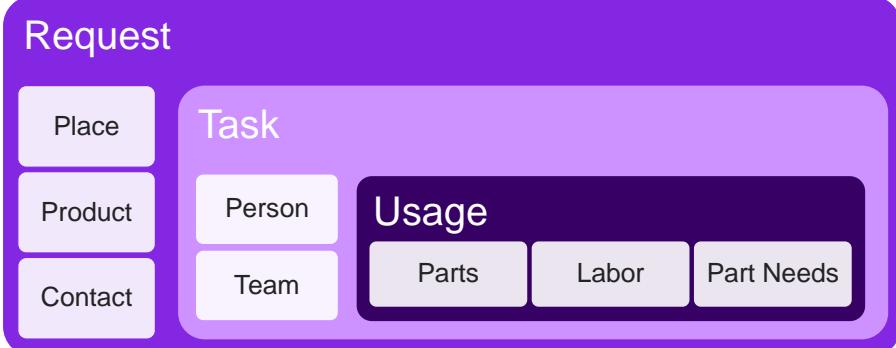
Scheduling always a requirement, whether it is manual using the schedule board or using IFS PSO (Planning and Scheduling Optimization). **Work Assignment** assigns the routes for the technician and understand who is best to do the job. This includes skills, where the technician is, parts etc.

During a **Debrief** the technician states what parts are used, labor associated to the job and completes the task.

Every customer wants to bill for work they have done. **Financials** creates an invoice for the customer.

## Service Request

Request, Task, Usage Relationships



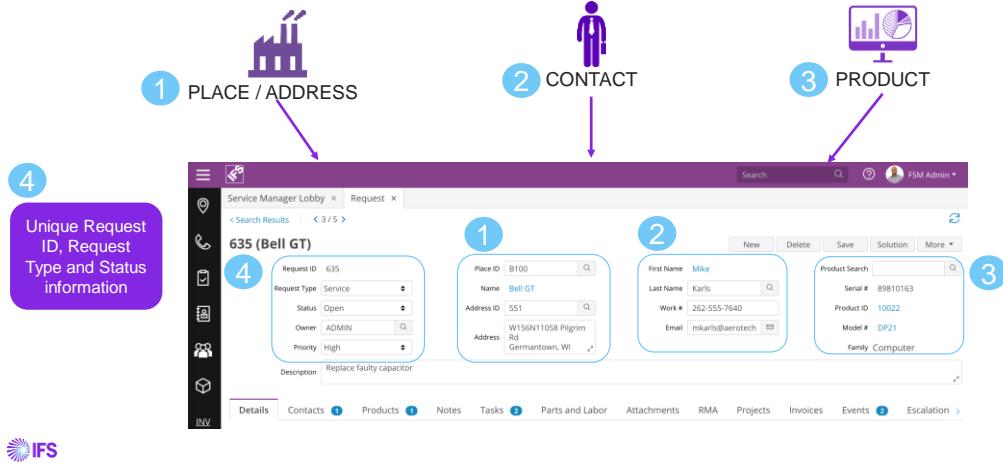
### A Reminder from Day 1

A Request, the heart and soul of FSM, is related to many other records that are created or linked to the Request throughout the service process. Service requests are used to record the following information during the call-taking process: the place where service is required, the products that require service, Contact information, information that describes the problem, and information that classifies the request, such as the request type and priority. Requests are also created by automated processes, for example preventative maintenance and engineering change orders. They can also be created from integrations with equipment that can send diagnostic information. After a service request is created, tasks are created and the tasks are scheduled and assigned.

## Service Request

### Creation Of The Request Header

- To create a Request, we need:



In the previous section of the training, *IFS FSM Core Entities*, we learned that there are core entities that must exist before we can do anything in the application. To create a request, you must have a Request ID which is a unique identifier for the service requested. Once you have created the request, you must have a **place**. **Contacts** and **products** are optional; however, most businesses use them.

Associated to the place record, you have an **Address**. When setting up place records for customers, specify at least one address as the default address. This address will default on the request, though it can be changed.

You can select **Products** for each item you service. It is related to a Place record and has some unique identifier, whether a serial number, an asset number, or some other identifier you affix to the product.

The **Contacts** is who is requesting the service. We recommend at least one Contact record be created and associated with the customer place.

You will need a **Description** describing why there is a need for service.

The **Request Type** identifies the type of request. This field can be used with business rules to create processes for assigning tasks.

The **Status** identifies the state of the request (open, closed, cancelled, complete).

## Service Request

### Pop-ups At Creation Of Request

#### Contract Information

M570QA (MKEPDE40) - Contract Selection					
Place ID	A100	Model ID			
Active Contracts					
ID	VER	TYPE	START DATE	END DATE	COVG TYPE
103290	1	BASIC PLUS	5/3/2017	5/3/2018	PLACE
103290	1	BASIC PLUS	5/3/2017	5/3/2018	PLACE

#### Open Requests

Open Requests									
Place A100 has the following open requests:									
Request ID	Description	First Name	Last Name	Product ID	Model ID	Serial ID	Created	Created By	Modified
6567	A	Charlie	Weller	118704	APEX100	352353578329532853	7/24/2017 9:18 AM	CMCINTOSH	7/24/2017 9:19 AM
6566	H	Charlie	Weller	118704	APEX100	352353578329532853	7/24/2017 9:10 AM	CMCINTOSH	7/24/2017 9:11 AM
6505							7/17/2017 12:43 PM	ADMIN	7/17/2017 12:43 PM
6488	Test	Callum	McIntosh				7/14/2017 12:58 PM	CMCINTOSH2	7/14/2017 12:58 PM
6246	s	Charlie	Weller	112075	APEX100	029161	7/7/2017 9:10 AM	CMCINTOSH	7/7/2017 10:13 AM
6226	Broken	FSM	Admin				7/6/2017 3:35 PM	ADMIN	7/6/2017 3:35 PM



As the request is created, several popups may appear. If there are more than one open requests, you may get the Open Request popup as you identify the place ID. Likewise, if there is a place contract for the customer, you may receive a popup identifying the contract. This popup will also occur if there is a contract for the product you selected. If you click "OK" then contract details will be applied to the request.

These are some of the more significant application parameters used regarding popups at request creation.

**Display\_open\_requests\_for\_place** determines whether a pop-up appears with all open requests for the specified place when a place ID is entered on a new request. Values are Y (yes) and N (no).

**Open\_requests\_for\_place\_row\_limit** determines the number of rows to return on the pop-up. It is ignored if **display\_open\_requests\_for\_place** is N (no).

Set **contract\_types\_to\_exclude** value to the contract types for which corresponding contracts do not appear in the Contract Selection window.

Set **display\_active\_contracts** if you want active, posted contracts to appear on contract selection screens.

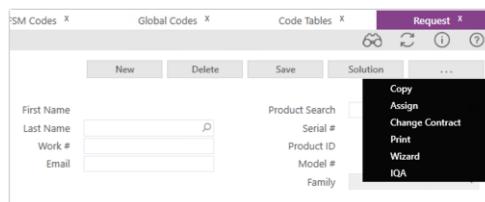
**Default\_req\_contr\_type** identifies the default contract type on the Details tab of the Request screen for new requests. Values are defined on the Contract Type screen. Does not apply to preventative maintenance or engineering change order requests.

The **display\_eco\_alerts** is another popup that can occur. When a product is specified on an open ECO request, setting this parameter to Y (yes) causes an alert to appear when the product is added to another request. We will discuss ECOs in a later lesson.

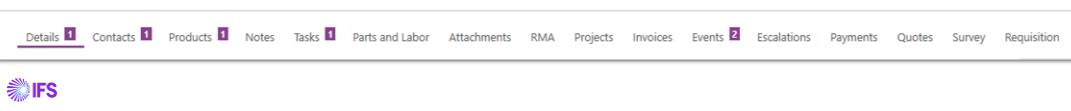
## Service Request

### Other Request Fields And Tabs

#### Buttons



#### Tabs



When a customer has items for service, you record the problem, product, place, and contact information using a request. There are some addition buttons and tabs on the Request screen.

#### Buttons

**New** creates a new Request

**Delete** a Request

**Save** all changes on the request

**Copy** the current request to a new one

**Assign** defines the list of Technicians available for this Service call. Business Rules are required.

**Change Contract** is used to select contracts to apply to the request; if contracts are already applied, then it is used to remove applied contracts

**Print** the Service Request. This Report can be modified to meet your company needs

**Wizard** is used to begin using the request wizard, an alternate method of entering request information. It can be modified to meet the needs of your company.

**Solution** is used to view documents identified as solutions by matching keywords in request information

**IQA** is used to begin using the intelligent question and answer feature, which uses a series of questions to decide an action to perform

For the tabs:

**Contacts** and **Products** can be saved two ways: attached to the Place and unique to this request.

**Events** can be automatically created which are defined in Business Rules or manually created.

**Notes** can be added as additional information to the request.

**Attachments** can be added to the request.

The **RMA tab** is used to view authorized returns and collect unit information. If the customer has an open request with products that require an RMA, you can use the auto RMA feature on the Products tab of the Request screen.

**Projects** are used manage multiple, related requests and for performing work that is to be tracked but not billed.

**Payments** are the recording of monetary transactions you perform. You can elect to use FSM to process card transactions using either a PayPal API or another API that you implement. Refunds only really work where a PayPal API or another API is connected.

**Requisition** enables creation of requisitions, a request to purchase parts or goods and services, which can then be used by purchasing agents to create purchase orders for the appropriate suppliers.

We will discuss Escalations, Quotes, Parts and Labor and Surveys in later courses.



Show Basic Data on Company, Invoice and Payment Basic Data

Show the Basic Data in the Financials/Supplier Invoice/Basic Data (Mainly Authoriser, Invoice types, Invoice Series, Connecting Invoice Series to Invoice Types)

Set up a Supplier Group:- Group ID XX - Trade Supplier

Create a Tax Code and Withholding Tax

Create a Supplier

Connect the Tax Code to Supplier and set up the Withholding Tax

Add Supplier Group into Posting control IP1 (Account 2460)

Set up the tax postings. Mainly IP3, PP48, PP49 . Set up others if required.

## Practice & Learn

### Service Request

- Make sure your place has products and contacts associated
- Go to Service, Requests
- Create New request
  - Add Description of the problem
  - Set Place ID = Your place ID
  - Select a contact from your Place
  - Select a Product from your Place
  - Set Request Type = Site Visit





By the end of this lesson, you should:

- Recognize and understand the Service function and associated processes
- Recognize and understand child relationships of Service Requests
- Understand the significant parts of the setup for Service Requests

# Task And Assignment



## Task And Assignment

### Learning Outcomes

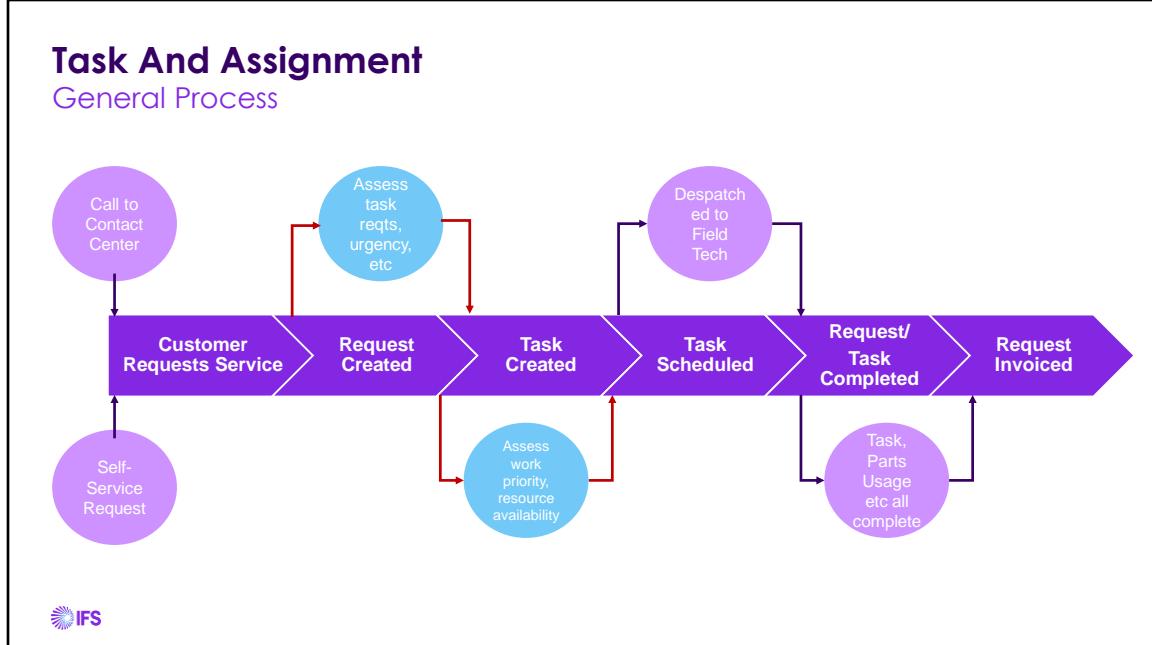


By the end of this lesson, you should:

- Understand Task functions
- Understand the required configuration for rule-based Task assignment
- Understand the required elements and be able to manually assign a Task

## Task And Assignment

### General Process



In this lesson, we will discuss the creation of the task and the assignment to the technician. **Tasks identify what needs to be done to satisfy a request for service**, who will do the work and how long it will take to finish. Tasks are assigned to a Team and/or Person and scheduled using Schedule Board or IFS PSO (Planning and Scheduling Optimization). Tasks are created from and are related to Requests; however, tasks can also be related to Projects. Many times it may take more than one task to complete the service to the customer. For that reason, many tasks can be associated to one request. You can set up business rules so as a task is completed, another is automatically generated to continue your processes. Tasks are normally created using task templates.

There are two ways to create the task and assign to a technician or team. We will discuss both ways.

## Task And Assignment

### Setting Up The Tech

**1** Status: Active (app or mobile user), Virtual (portal user or subcon), or Inactive

**2** Dispatchable: Determines whether a Person can be assigned Tasks via the Schedule Board

**3** Work Calendar: Specifies working hours and exceptions

**4** Skills: Used during work assignment to match Person with Task

**5** Place: Shows Person's relationship to different places, eg for starting / ending work and for stock

Normally the technician will either be a Mobile user or using the Technician Portal to complete his work. We will discuss Mobile and the Technician Portal in later courses. For you to understand set up and the flow of the process, we will show you the functionality from the smart client.

On the Person record, we will need to populate the following fields:

**Status** determines if the person is Active (Actual Application users, Actual Mobile users), Virtual (Portal users, Subcontractors, Integrations) or Inactive (No longer current users). If our technician is employed by our company and we want him to log into the application, we will want to make his Status = Active. If we have subcontractors whose work we want to record but they do not log into the application, set the Status = Virtual.

**Dispatchable** determines whether the person can be assigned tasks using the Schedule Board.

For notifications, either an email or mobile phone number needs to be populated.

**Work Calendar** are used to specify working hours and exceptions for persons or places. We will discuss them later in this lesson.

The **Skill** tab includes skills and certifications associated with the person. These skills are used during work assignment to compare with the skills specified on the Product record and the Place record. For example, a product might require a certain type of certifications where a place might require proficiency in a certain language.

The **Place** relationship tab includes associated places by type of relationship. For example, the Works from place identifies default place for a person. This is required by Tasks and Schedule Board.

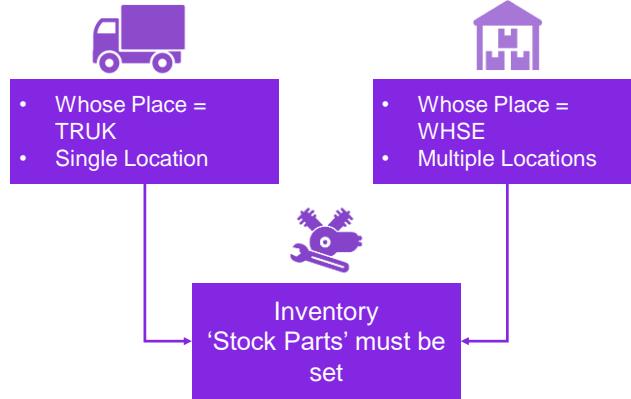
**Place for stock** identifies the default location of stock for service representatives. This is used with Tasks and Portals. Populating this field provides the technician with fewer keystrokes when creating part needs and part usage but also helps prevent typing errors.

**Starts work from** identifies the place where the person begins work. This is used by Tasks and IFS Planning and Scheduling Optimization (PSO).

**Ends work at** identifies the place where the person finishes work. This is used by Tasks and IFS Planning and Scheduling Optimization (PSO).

## Task And Assignment

### Setting Up The Truck And Warehouse



While Places can be any physical or virtual site including **Warehouses** to store service parts and **Work sites** are where your employees work, such as a repair center, warehouse, call center, or headquarters.

At this time, we will only look at the set up for truck and warehouses.

**Whose Place** determines whether the place belongs to your organization or to another organization such as a customer, supplier, third-party repair, and so forth. For the truck, the whos place will be TRUK. For the warehouse, the whos place will be WHSE.

**Locations and Bins** tab if the place holds inventory. The **Stock Parts** must be set to add to this tab. Normally a truck will have a single location whereas a warehouse will have multiple locations. A location is an area within your place where you hold stock. A bin is a subset of a location.

As we saw with Persons, Places also have place relationships. This relationship sets the defaults for shipping and receiving and stocking parts.

## Task And Assignment

### Task Template

- Use business rules to automatically select pre-populated tasks with default information
- Optional, but can speed up processing of repeatable tasks
- Task Template Groups put task templates into a hierarchy

The screenshot shows a software interface for managing tasks. At the top, there's a header with fields like Task ID (307), Place ID (MD102), Owner (MIDWEST), Unit ID (349), and various contact details. Below this is a table titled 'Task Template' with three rows: 'Triage', 'Service', and 'Test'. Each row has a 'SEQ' column (1, 2, 3), a 'TYPE' column (Triage, Service, Test), a 'NAME' column (Check Install Site, Install Item, Test), and a 'STEP TEXT' column (Check Install Site, Install item, Test item works to specification). There are also columns for 'REQUIRED', 'COMPLETED', and 'COMPLETED ON'.



Now that we have our technicians and trucks created, we are **almost** ready to create a request for the customer and assign our technician. To facilitate the creation of tasks we will want to set up Task Templates. Tasks are normally created using task templates to default information. Task Template records are optional—they need not be set up. However, task templates enable you to use business rules for automatic task selection and succession as a request is assigned and completed. If you choose not to use task templates, all task information is entered manually. Task templates are most useful when multiple requests are received for the same services.

Task templates must be created to default certain information on the task, which are required by the **Task Selection rule (process 01)**. Rules are evaluated when the **Assign** button is clicked on the Request screen or the Task screen or preventative maintenance requests are generated and no task template was specified. You set up task templates for the types of work your organization usually performs. You can set up templates in hierarchical lists by using the Task Template Group screen. Task templates are found under the Service, Admin, Task Template menu item. Make sure that all the codes you want to select on the Task Template are first set up in the Global or Code tables.

Assignment is the process of assigning a team and optionally a person to a task. The **Work Assignment rule (process 04)** is used to perform assignment. Rules are evaluated when a task is created except when clicking **New** on the Task tab of the Request screen or on the Task screen. Skill information assists you in selecting the appropriate person. Skills are specified on the Person record, the Place record, and the Model record. Skill levels are compared and the percentage match appears as a score on the Task Assign window. Persons appear sorted by score from highest to lowest. If you specify a value for the **appt\_min\_skill\_score** application parameter, a person with a score lower than the specified minimum does not appear.

When adding part needs to a task template, you need to make sure that the part has a stocking location and available stock. Part needs are created without specifying place, location, or address values. Part needs have an entered and unallocated status until these attributes are specified, after which the part needs can be allocated, picked, and shipped. These status values can be assigned using business rules.

**Task Steps** of a task which a person/technician have to perform before the Task is completed. For example, a technician may have to do a pre-inspection of the unit before the service is performed, perform the service, then post-inspection of the unit after the service is performed. Note, on the Steps screen, you can see all the task templates that have those Steps.

There are significant fields within Task Template screen. This screen is used to specify default information that is applied to a new request.

**Task Duration Minutes** determines the default task duration.

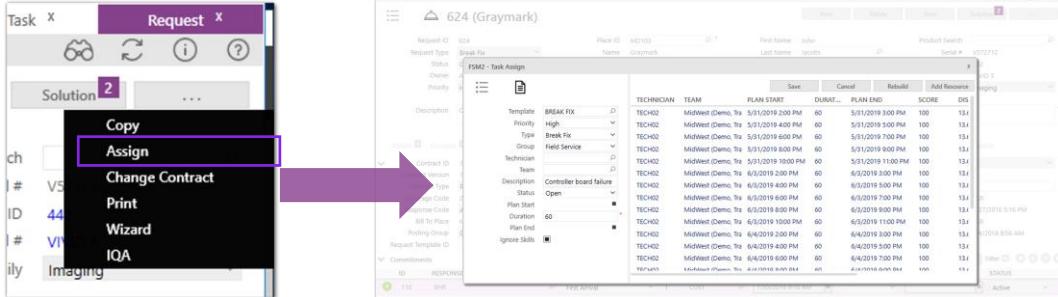
When a value is specified for the **Team ID** field, work delegation rules are ignored and the task is assigned to the specified team. **Description** determines the default description that is assigned to the task. If no value is specified, the task inherits the value of the problem description on the request.

**Crew Size** determines the number of resources to assign to this task using IFS Planning and Scheduling Optimization (PSO).

## Task And Assignment

### Assigning The Technician

#### Assign Button



Now it is time to assign the task. Assign button is located on the Request screen. Assigning is the process to create tasks, schedule and perform skill calculations on who should do the work. We will look at the business rules in a later lesson.

**The Left panel is driven by Task Selection rules.**

**The Right panel is driven by Work Assignment rules.** We will discuss the set up of the Task Selection and Work Assignment rules in a later lesson.

**Creates a task using task templates** The left panel of the assign window is where the task creation process can be triggered using task templates. The task selection business rule can default the task template ID.

The **Work Assignment** business rule can be used to predetermine which team and/or person can do the work. The result of the available people will be visible in the right panel of the assign window.

**Skills Calculated** Skill information assists you in selecting the appropriate person. Skills are specified on the Person record, the Place record, and the Model record. Skill levels are compared and the percentage match appears as a score on the Task Assign window. Persons appear sorted by score from highest to lowest. If you specify a value for the APPT\_MIN\_SKILL\_SCORE application parameter, a person with a score lower than the specified minimum does not appear.

**Work Calendar/Rosters Calculated** The work calendar assigned to the person determines the person's working hours. Any calendar exceptions are considered non-working hours unless the available indicator is selected. A person status of active and a selected dispatchable option determine that a person can be assigned to a task. If a Roster record is active for a team/person the shifts in the roster shall be used instead of the work calendar assigned to the person.

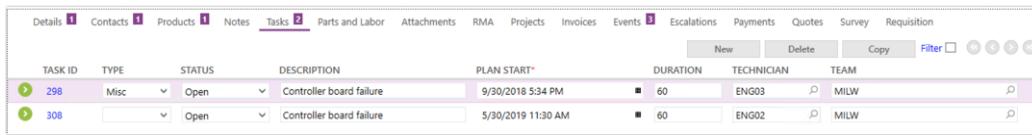
**Distance Calculated** is the value of the distance calculated by Bing Maps as the driving distance from the address on the request to the place works from defined on the person. If the person has no place works from defined, then the current location of the person is used.

The **Appointment Scheduling** feature is used to view persons and their available times slots within a specified window. For example, you can specify a window of seven days beginning tomorrow, and each person with available time slots two hours or longer all appear. You then assign the time slot that your customer prefers.

## Task And Assignment

### Manual Assignment

- **Manual Assignment** means you proactively select the Technician, Team and/or Duration of the Task, from within the request, rather than taking this information from a task template or business rules
- Team is still needed
- Description will be defaulted from previous Task
- Time and Date will default to current



Tasks							Parts and Labor	Attachments	RMA	Projects	Invoices	Events	Escalations	Payments	Quotes	Survey	Requisition
TASK ID	TYPE	STATUS	DESCRIPTION	PLAN START*	DURATION	TECHNICIAN	TEAM	New	Delete	Copy	Filter						
298	Misc	Open	Controller board failure	9/30/2018 5:34 PM	■ 60	ENG03	MILW										
308		Open	Controller board failure	5/30/2019 11:30 AM	■ 60	ENG02	MILW										



When you manually assign tasks, you still need to have teams. Only the business rules and task templates are not used with the creation of the task. To create the task, you click the “New” button in the Task tab or on the Summary tab. If there are previous tasks, the Description will default to the new task as well as the current date and time. You must manually enter the Technician and/or Team and/or Duration.



Go to Services, Request

Search for the Request ID created from previous lesson

Click Assign button

Select and Save the Technician in the Task Assign popup screen

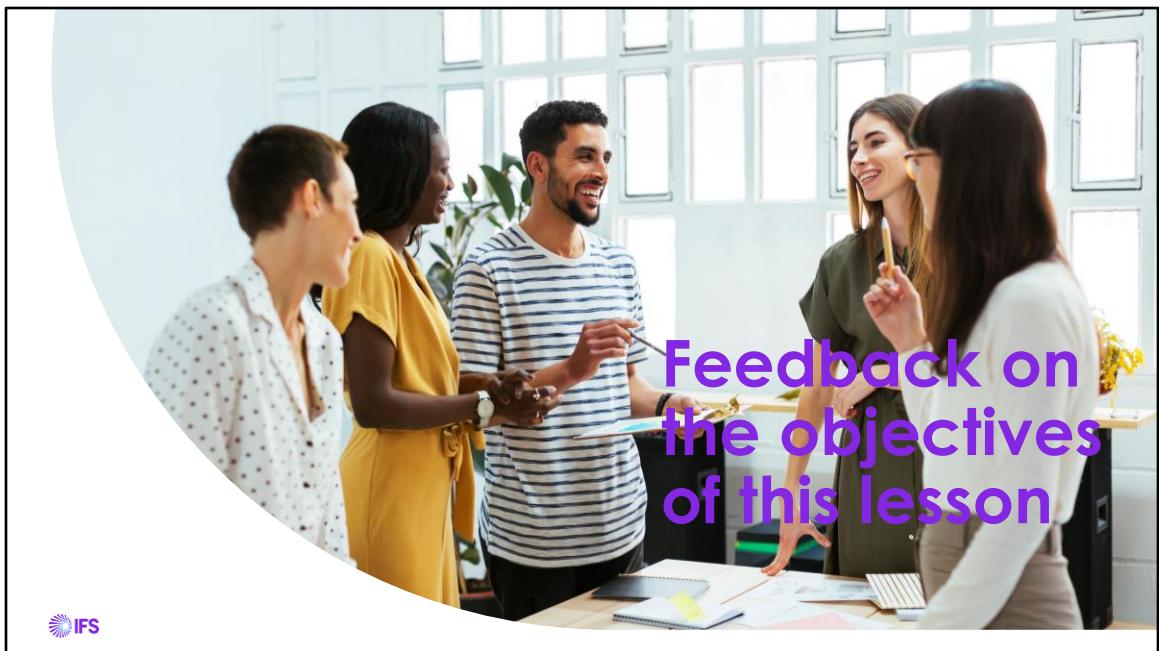
Note the Team ID and Task ID for next lesson

## Practice & Learn

### Task And Assignment

- Go to Service, Requests
- Search for your Request from the previous lesson
- Click the Assign button
- Double-click the desired technician or highlight and click “Save”
- Create a manually-assigned task





By the end of this lesson, you should:

Understand Task functions

Understand the required configuration for rule-based Task assignment

Understand the required elements and be able to manually assign a Task

# Schedule Board



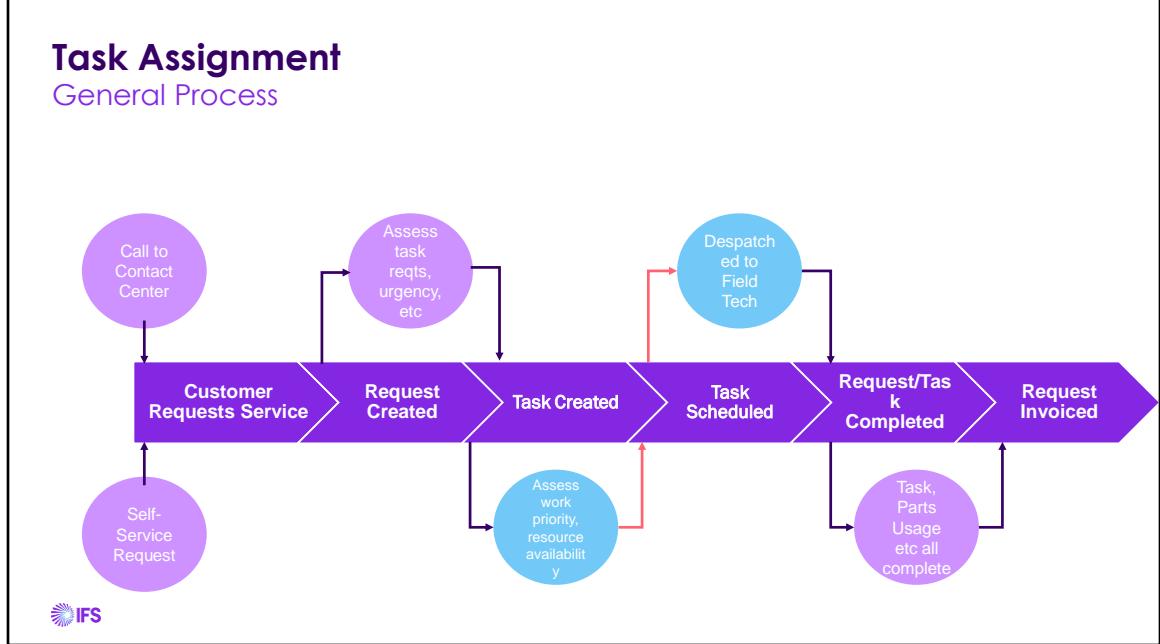
## Schedule Board

### Learning Outcomes



By the end of this lesson, you should:

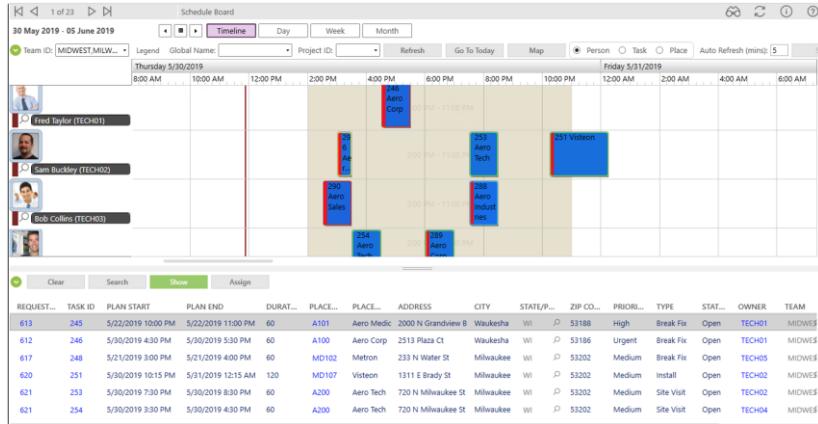
- Understand the Schedule Board functions
- Understand how to set and control the Schedule Board
- Understand right-click menu functions



The Schedule Board provides a graphical, gantt-style view of the open and in-progress Tasks and Assignments

## Schedule Board

### Features



The **Schedule Board** is a **graphic view** of the current assignments and to assign tasks to team members. You typically perform this procedure when managing multiple field service representatives or when tasks must be assigned to a specific technician instead of anyone on the team. The view is persons by team and sub-team across multiple time zones, always appearing in local time zone. Local means call taker's time zone. For example, if you dispatch in the Central time zone and technicians and employees in all time zones use the 8:00 a.m. to 5:00 p.m. work calendar, your technicians in the Eastern time zone appear to you to work from 7:00 a.m. to 4:00 p.m. If a place in the Mountain time zone is open from 10:00 a.m. to 6:00 p.m., its availability appears to you as 11:00 a.m. to 7:00 p.m.

If a task was manually assigned, the Schedule Board can be used to reassign or unassign tasks.

If the appropriate business rules are set up, events and notification messages are created.

Assigned tasks can be **viewed** on a calendar by month, week, day or timeline. You can drag and drop single or multiple tasks to assign/re-assign.

The display is **grouped** by person, place or task and accommodates

You can use global name **filters** to view only tasks for places associated with specific global name

You can use **color coding** for easy identification. Color coding is under Admin, Color Settings menu item. You can customize most colors on Schedule Board using color settings.

If you use **rosters**, the work times specified on the roster are used instead of work calendars. We discussed Rosters in a earlier lesson.

There are business rules that are significant to the Schedule Board.

**Task Event Generation** process creates task events. Rules are evaluated after specified information is inserted or updated on the database and all rules are evaluated.

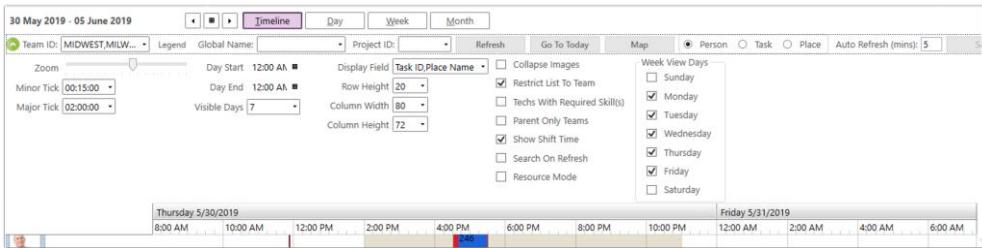
**Task Event Notification** process creates notifications based on task events. Rules are evaluated after specified information is inserted on the database and all rules are evaluated with all matching values returned.

**Person Event Generation** process creates person events. Rules are evaluated after specified information is inserted or updated on the database and all rules are evaluated.

## Schedule Board

### Settings And Controls

Settings and Controls at the top of Schedule Board



At the top of the Schedule Board, the buttons, fields, options, settings and controls determine how Schedule Board appears. To view all the functions, click the orange toggle. Settings are retained between sessions.

You can **view** the calendar by month, week, day, or using a timeline. Selecting one of Timeline, Day, Week, or Month changes the timeline or calendar view that appears below.

You can **display** the Schedule Board grouped by person, place, or task.

The **Team ID** field enables you select the team and related sub-teams that appears. You can select more than one team.

The **Global Name** filter enables you to view only tasks for places associated with a selected global name.

The **Project** filter enables you to view only tasks associated with a selected project ID.

The **Map** button enables you to view a Bing map of task locations and optionally person locations when using GPS-enabled devices.

**Person, Task, and Place options** enable you to group resources by the corresponding records.

**Collapse Images** option enables you to view or hide images such as pictures on Person records.

**Restrict List to Teams** option enables you to restrict search results to the specified teams.

**Parent Only Teams** option enables you to restrict search results to parent teams only.

**Auto Refresh** enables you to set the automatic refresh interval in minutes; the **Pause** button temporarily stops automatic refresh.

Zoom control enables you to expand timeline or calendar views to see time periods in greater detail.

**Major Tick** determines the major divisions that appear in the header, for example one day; **Minor Tick** determines the minor divisions that occur in time, for example 15 minutes. Task boundaries are on the minor tick, for example a task can start on the hour, or 15, 30, or 45 minutes past the hour. These settings are unique to timeline and each calendar view.

**Day Start and Day End** determine the times that are shown on the timeline and calendars. **Visible Days** determines the number of days that appear. These settings are common to all views.

**Display Field** enables you to determine what information appears on a task card: task ID, address name, global name, repair tag, request ID, or place name. You can select one or two items. This setting is common to all views.

**Row Height** field enables you to set the height of the row in timeline view. The height is specified in pixels.

**Column Width** field enables you to set the width of rows in day view and week view. The width is specified in pixels. **Column Height** field enables you to set the height of rows in day view and week view. The height is specified in pixels. **Parent Only Teams** option enables you to select only parent teams instead of parent teams and sub-teams. This setting is common to all views.

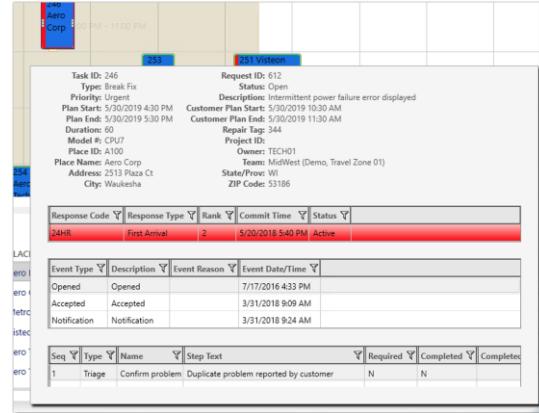
**Show Shift Time** option enables you to select whether to show the shift times in the shift time blocks. This setting

applies to all views.

## Schedule Board

### Using The Schedule Board: Task

- Hover over task to display task information



If you hover over a task, a Task Card will appear with task information. They identify the tasks that are assigned to a team member using colors you specify. If you hover on the task card using your mouse pointer, information about the task appears. If travel time is specified on the task, the outline of the task card is extended to include the travel time. By right-clicking on a task card, you can view the route on a map from the previous task to the specified task.

There several ways methods to assign or re-assign task or to move tasks:

You can **drag and drop** to assign, re-assign or move tasks. Tasks can be assigned to any team member, regardless of the team to which the task is currently assigned. To work with one team at a time, collapse all other teams on the Schedule Board and filter the task list. If an alert appears, you must assign the task at another date or time.

You can perform the following to tasks by using the **right click menu on the task**:

- Reassign a task to a different person (runs Work Assignment rule- process 04).
- The Unassign option enables you to remove a person as task owner.
- Change the date and time option enables you to change the planned start date.
- The Assign Additional Resource option enables you to add a resource to the task.
- Change task status of the task.
- The Show option enables you to show ECO or PM tasks for that place that could be assigned with the specified task.

If you **double click on the task**, you are taken to the Task Modify screen where you can assign, re-assign or move tasks.

There are application parameters significant to Schedule Board.

**Allow\_parallel\_tasks** to allow multiple, overlapping tasks, set this value to Y (yes). If this value is N (no), an error occurs when a parallel task is assigned using Repair Board or a task is edited or assigned manually.

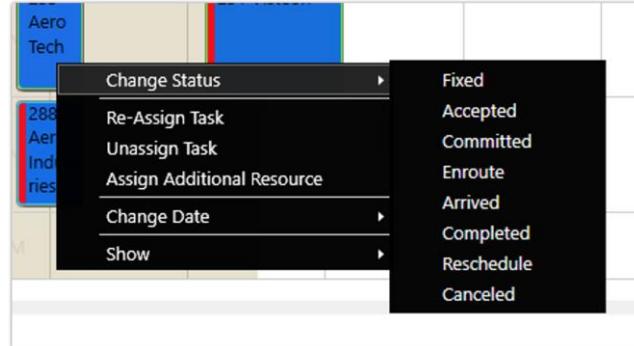
**Schedule\_board\_show\_eco\_pm** to show an indicator on the Repair Board for automatically-generated preventative maintenance and engineering change order tasks, set this value to Y (yes).

## Schedule Board

### Using The Schedule Board: Task

Many actions can be performed on a task via a right click and selecting from the menu items:

- Change Status
- Re-Assign
- Unassign
- Assign Additional resource
- Change Appointment Date
- ...



If you hover over a task, a Task Card will appear with task information. They identify the tasks that are assigned to a team member using colors you specify. If you hover on the task card using your mouse pointer, information about the task appears. If travel time is specified on the task, the outline of the task card is extended to include the travel time. By right-clicking on a task card, you can view the route on a map from the previous task to the specified task.

There several ways methods to assign or re-assign task or to move tasks:

You can **drag and drop** to assign, re-assign or move tasks. Tasks can be assigned to any team member, regardless of the team to which the task is currently assigned. To work with one team at a time, collapse all other teams on the Schedule Board and filter the task list. If an alert appears, you must assign the task at another date or time.

You can perform the following to tasks by using the **right click menu on the task**:

- Reassign a task to a different person (runs Work Assignment rule- process 04).
- The Unassign option enables you to remove a person as task owner.
- Change the date and time option enables you to change the planned start date.
- The Assign Additional Resource option enables you to add a resource to the task.
- Change task status of the task.
- The Show option enables you to show ECO or PM tasks for that place that could be assigned with the specified task.

If you **double click on the task**, you are taken to the Task Modify screen where you can assign, re-assign or move tasks.

There are application parameters significant to Schedule Board.

**Allow\_parallel\_tasks** to allow multiple, overlapping tasks, set this value to Y (yes). If this value is N (no), an error occurs when a parallel task is assigned using Repair Board or a task is edited or assigned manually.

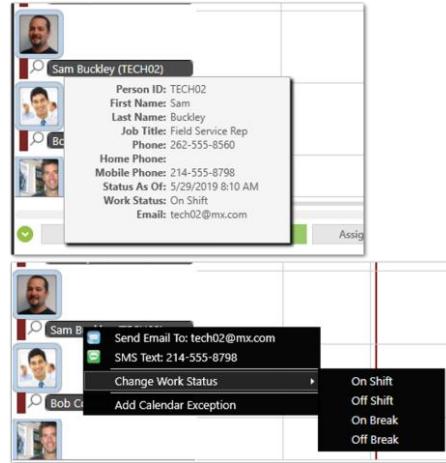
**Schedule\_board\_show\_eco\_pm** to show an indicator on the Repair Board for automatically-generated preventative maintenance and engineering change order tasks, set this value to Y (yes).

## Schedule Board

### Using The Schedule Board: Person

#### PERSON FUNCTIONS VIA SCHEDULE BOARD:

- Hover over shows person details
- Right Click to:
  - Send email or SMS
  - Change working status
- Click through to Person record to make changes



If you hover over a person, the Person Cards will appear with person information. If you double click on the Person, you will be taken to the Person record.

You can perform the following on persons:

- Send messages such as email, SMS or Skype to the technician.
- Change the Work Status, eg On Break
- Add calendar exceptions enables you to add a work calendar exception for the person.

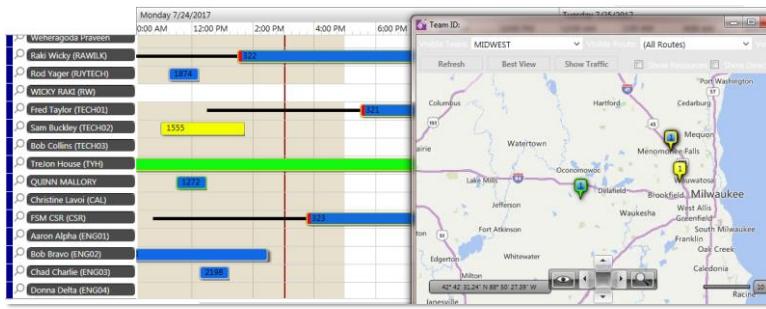
There are application parameters significant to Schedule Board.

- Set **schedule\_board\_person\_display\_format** value to a value that identifies how you want a person's name to appear on the Repair Board. Values are 1 (person ID), 2 (first, last) 3 (first, last, person ID in parentheses), 4 (last, first), 5 (last, first, person ID in parentheses), and 6 (person ID, first in parentheses).
- Set **schedule\_board\_person\_tooltip\_duration** value to the number of seconds that a person card appears when hovering on the person's name on the Repair Board.
- Set **Show\_place\_cal\_except** for an alert to appear when assigning a task for a place with a restricted calendar or the person has a work calendar exception that prevents assignment, set this value to Y (yes).

## Schedule Board

### How Schedule Board Is Used - Map

#### Map



The Map screen is used to view the routes for the specified team on the specified date. You can filter the results to show the route for a specified person. Waypoints appear on the route that correspond to tasks performed at a place.

At the top of the Map screen, the following fields and options determine what appears on the map.

**Visible Team** field enables you to view a specific team's routes. **Visible Route** field enables you to view a specific person's route. **Visible Date** field enables you to select the day whose routes you want to view.

**Show Resources** option enables you to see the locations of each person. **Show Directions** option enables you to view driving directions to each place on the route. **Show List Points** option enables you to view individual tasks on the map.

**Refresh** button enables you to refresh the map with current information, before the automatic refresh. **Best View** button enables you to fit routes on the map screen. Used to easily zoom out after looking at map detail. **Show Traffic** button enables you to toggle current traffic conditions on to off.

At the bottom of the map screen, two indicators and three controls enable you to customize the map view.

In the lower left corner, latitude and longitude appear, corresponding to the position of the cursor tip.

In the lower center, the left-most icon of an eye is a menu that enables you to select whether the map appears as a road map or as a satellite view. In the lower center, the directional arrows enable you to pan the map. Clicking the center button toggles the controls visible. In the lower center, the right-most icon of a magnifying glass enables you to zoom in and out of the map.

In the lower right corner, a map scale appears.

The right-click menus appear when you right-click on the specified object. Some options may not appear based on application parameters and Schedule Board settings.



IFS

Go to Service, Schedule Board.  
Show the unassigned search results. Drag and dropping task  
Show assigned tasks on board  
Move one task. Move several tasks at a time.  
Re-Assign task. Un-assign task.  
Assign additional resource. Change date. Change status.  
Show Send email/SMS to person.  
Change work status. Add calendar exception.  
Show different views: Day, Week, Month, Person, Team.  
Show colors.

## Practice & Learn

### Schedule Board

- Go to Schedule Board. Select the Teams your instructor tells you.
- In Search Results area, click Search to retrieve all tasks. Find your request.
- Drag and drop onto Schedule Board to a technician in the team.
- Move it to a different time and person within the team. Move a group of tasks to another tech.
- Change the view to be a Week, a Day and a Month.





By the end of this lesson, you should:

Understand the Schedule Board functions

Understand how to set and control the Schedule Board

Understand right-click menu functions

# Task And Request Completion



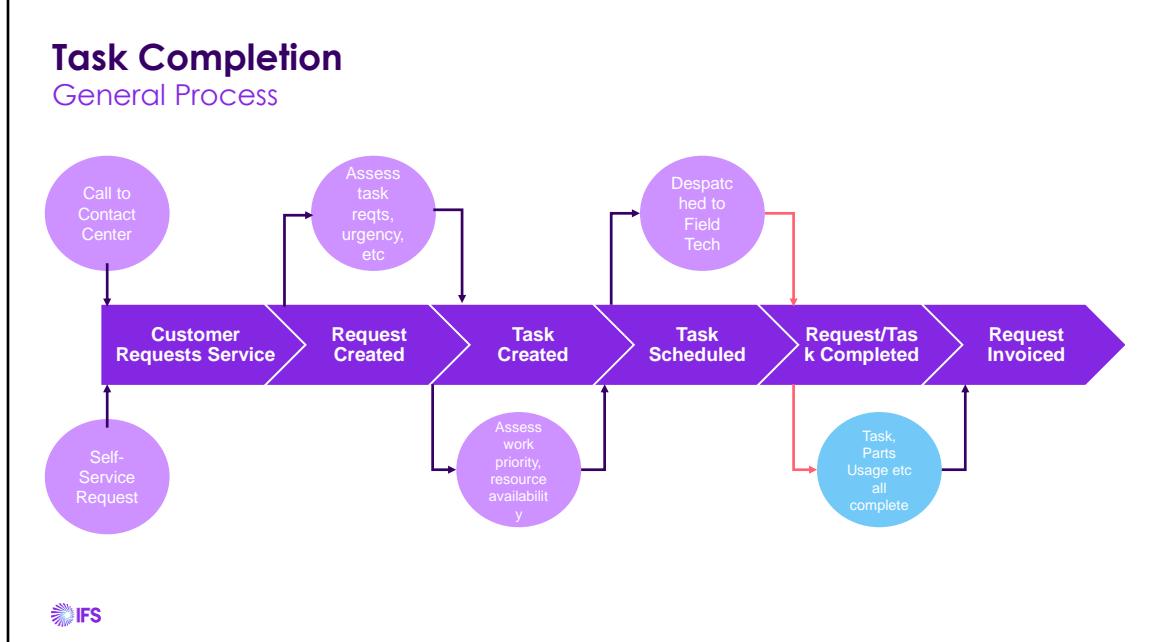
## Task And Request Completion

### Learning Outcomes



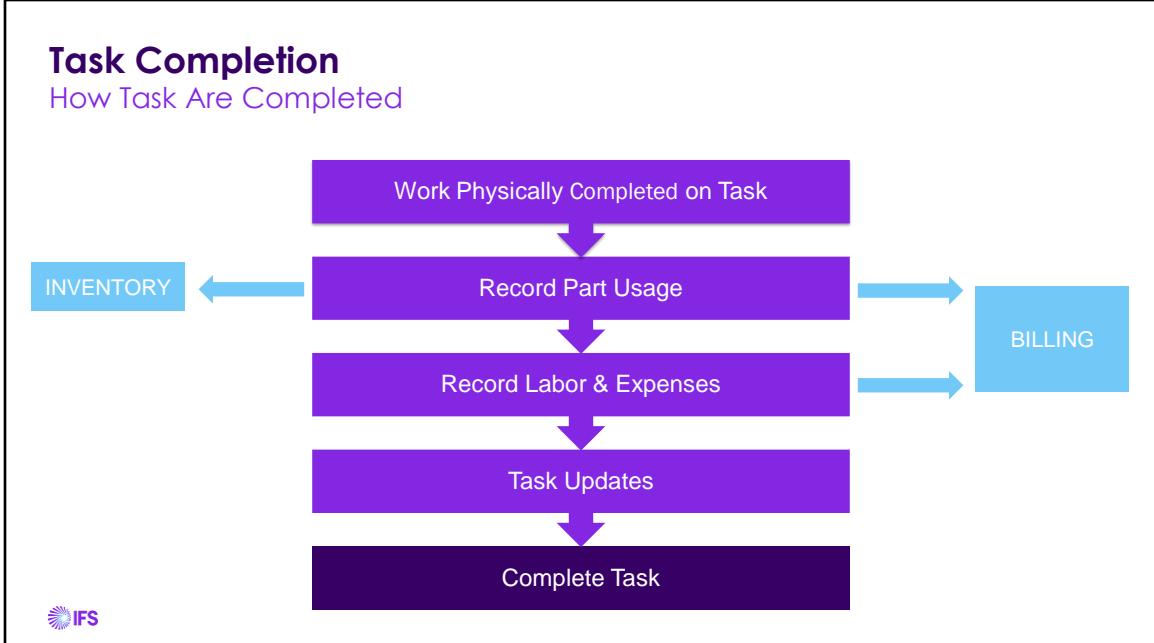
By the end of this lesson, you should:

- Understand the methods and effects of completing a Task
- Appreciate how business and pricing rules can work with Task Completion
- Understand the steps around Task and Request completion



Task completion moves the activity away from operational delivery into inventory management and billing functions

As you perform the assigned work, you record certain information, usually for inventory and billing purposes. Typically, you record the parts you used and the time you spent performing the assigned work. Task debrief and completion is the process used to enter parts, labor, and other information on tasks and then complete the tasks and ultimately the service request. Most of the Task Completion process is normally performed by remote employees using our FSM Mobile or Portal client applications. This will be discussed in later courses.



Task completion is done for inventory and billing purposes. The Task screen is used to record all information relevant to the performing of the task.

Once the work has physically been completed, the technician will record the parts used. This includes part and serials, meter readings and part dispositions created for exchanged or repairable items. Part dispositions are usually performed for bio-hazardous parts, expensive parts or parts of which you want to keep track.

Labor, travel, expense and miscellaneous charges are recorded for billing purposes. Task updates include actual work date and time, job resolution, quality information.

Upon completion of the task, application parameters can be used to auto-complete request when all tasks are completed. Task succession rules automatically create and follow-up tasks for the request.

These are some of the more significant application parameters used within Task Completion:

**Auto\_complete\_request** is if you want to automatically complete a parent request when all tasks are completed, set this value to Y (yes).

**Auto\_complete\_task** is if you want to automatically complete tasks when a parent request is completed, set this value to Y (yes).

**Freeze\_request\_status** is if you want to prevent changes to requests after they have been changed to a certain status.

**Freeze\_task\_status** is if you want to prevent changes to tasks after they have been changed to a certain.

**Set\_check\_for\_billing\_on\_request\_status** default behavior is to set the check for billing indicator on a request when the request is closed or completed.

## Task Completion

### Significant Functions

Arrival

Departure

Details	Part Usage	Labor and Expenses	Part Needs	Notes	Events	Readings	Attachments	Skills	Steps	Survey	Quality	Escalations	Contacts	Resources	Predecessors	Comments
Travel To Duration	20		Add Meters	<input type="checkbox"/>				Latest Start	<input checked="" type="checkbox"/>				Project ID			
Travel From Duration	20		Pick Complete	<input type="checkbox"/>				Critical	<input type="checkbox"/>				Latitude			
Actual Start			Allow Violation	<input type="checkbox"/>				Out of Hours	<input type="checkbox"/>				Longitude			
Actual End			Plan Travel Start	5/22/2019 10:00 PM				Allow OOH	<input type="checkbox"/>				Created By	ADMIN		
Duration Days			Plan Travel End	5/22/2019 11:40 PM				Override OOH	<input type="checkbox"/>				Created	5/21/2019 2:36 PM		
Group			Actual Travel Start					Access Group	<input type="checkbox"/>				Modified By	ADMIN		
Earliest Start			Actual Travel End					Category	<input type="checkbox"/>				Modified	5/21/2019 2:43 PM		
ETA			Work Duration					Parent Task ID	<input type="checkbox"/>							
Contract ID			Contract Version					Contract Type	<input type="checkbox"/>							
Note																



The first step of the task debrief and completion process is to for the task to physically be done. As you perform the assigned work, you record certain information, usually for inventory and billing purposes. Typically, you record the parts you used and the time you spent performing the assigned work. Debrief can be performed at any time before task completion, depending on your organization's procedures and the assigned work to be performed. Normally, you use the Technician Portal or handheld device with an FSM mobile application to perform the debrief. For this course, we will use the FSM smart client to perform debrief.

You are able to automatically update beginning, ending, and travel times on a task based on changes to the task status. **Task Status Based Times (process 134)** business rule can update the task dates and times when the task status changes. You can specify any information on a task as an input parameter. You can also specify information on tables that can be related to the task. Output parameters for the business are actual start date and time, actual end date and time, actual travel start date and time, and actual travel end date and time.

## Task Completion

### Usages

- Completion of a Task will often result in one or more Usage records being generated:

#### PART USAGE

- Records usage of apart from Stock
- Can be priced from pricing rule or manually
- Part line code determines billing rule
- Price can be zero (not to be re-billed to customer)

#### NON-PART USAGE

Indicates time was spent on the Task, and includes:

- Labor
- Miscellaneous Charges
- Expenses
- Freight

Line code determines billing

Time can be booked directly to the Request (field workers) or via Time & Expense screens for office-based staff – separate line items



A Part Usage is what was used performing service on the part. A **part usage** is an indication that a part was used during service. Prices and costs can be applied to part usages via the Part Pricing rules found under the Financials menu. You can also enter a price manually, for example when a pricing rule is not set up or when you want to override the price that is automatically applied. If you enter a price manually, it is never automatically repriced unless a business rule is set up to reprice or you delete the bill price.

Currency conversion is used when amounts are entered in a currency other than corporate currency including costs and prices. Currency conversion occurs any time an item is priced or a cost is calculated. For example, if you derive a price using pricing rules when part usage is entered, the price is converted at that time. Only when the part usage is repriced will the currency conversion be recalculated.

The part line code determines processing information such as how the part is billed. In general, you enter part usage for each part that was used. If the part was obtained using a part need, there is an option to indicate that the part need also indicates part usage. If you use a part need to sell a part, part usage is automatically created when the part is shipped to the customer. If you delete part usage, all related inventory transactions are reversed. You must define the **part pricing** before you enter part usage. If a pricing error occurs when entering usage because the price is out of date or there is an error with the exchange rate, the billing price will be \$0.00.

Part usages can **allow zero sell prices**.

If the technician needs to purchase a part in the field to finish a job, the "**Allow Sell Modify**" function will allow him to enter a cost on the usage.

A **non-part usage** is usually an indication that time was spent performing the service.

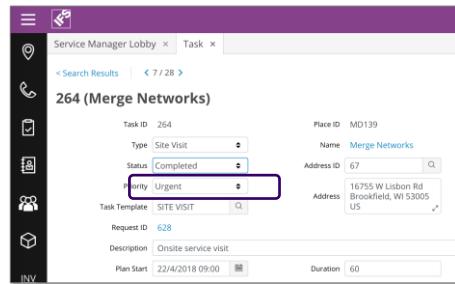
The line code determines processing information such as how the time is billed. In general, you enter non-part usage for each time block, for example, travel or labor. You can also enter non-part usage for miscellaneous charges, expenses, and freight. Time used is entered in two ways. First, for time spent specifically on requests, the

time is entered as non-part usage on that request. Second, for employees who do not perform work that can be billed on a request, for example your office staff, time is entered using Time and Expenses screens. Each different type of labor is specified on a separate line

## Task Completion

### Task & Request Resolution

- Simplest form of complete is changing the Task status to 'Complete'
- **Status** = most significant field for both Tasks and Requests for controlling processing
- Application parameters can automatically complete a Request and/or lock certain fields to prevent further updates
- Part & Non-Parts Usage is rolled up to the Request level once a Task is completed



The final step is to complete the task. The simplest form of completion is changing the task status to "Complete". **Task status** is the most significant field on the Task screen from a procedural perspective. Changing of the task status to a value that completes the task cause policy and business rules, based in part upon application parameters, to complete the corresponding request.

**Request status** is the most significant field on the Request screen, again from a procedural perspective. This field value is changed to complete based on all related tasks being complete.

There are several ways to complete the request. You can **manually change the "Status"** to "Complete" which will complete the request.

Or, to have the request **automatically complete**, use the application parameter, **auto\_complete\_request\_status**. This parameter identifies the status to assign to a request when the request is automatically completed. Values are defined on the **req\_status** code table. When not specified, current logic applies. This value is not specified upon installation.

If you do not want the problem description and text to be modified after saving the record, the application parameter, **lock\_request\_text**, will need to be set.

Parts and labor entered on tasks are rolled up to the related request.

The call taker is ready to open the next request.



IFS

Go to Service, Tasks

Show how to add part usage

Show how to add labor and expenses

Show how to add text

Change task status to Completed

Go back to request and show how part and non-part usage rolled up to request

Show how request has automatically been Completed

## Practice & Learn

### Task And Request Completion

- Go to Service, Tasks
- Find your task
- Add a new Labor
  - Set Labor code = Expense
  - Add an amount
- Change Task Status to Completed
- Go back to Request and verify Request has completed as well



Task and request will be completed and we will invoice the request in later lessons.



Lesson objectives:

- Understand Task Completion functions
- Understand Task and Request completion

# Service Requests: Review



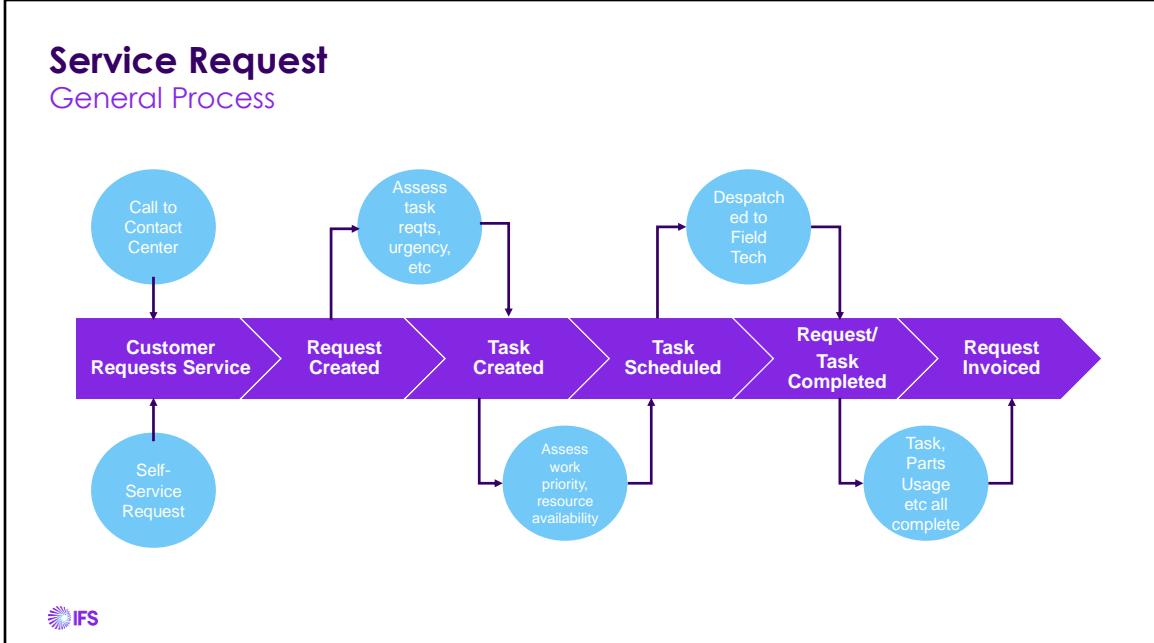
## Service Requests: Review

### Learning Outcomes



By the end of this lesson, you should:

- Feel you have consolidated your learning on Service Requests and are able to put all the component parts together
- Feel confident in describing the Service Request process
- Be able to identify the processes that overlap with Service Requests



Most of the FSM core business processes begin with creation of a Request, which simply stated is **a record of a Customer Need for any type of Service**. The input to create a Request is normally triggered by the customer who requires some kind of service, whether it is an electrician regarding wiring of a house or plumber to service a boiler. A customer can do this by:

- Calling the company to create the Request.
- Customer Portal – so customer creates the Request themselves.

Once the **Request is created**, the type of job that is required for the technician needs to be decided. That means – what skill should be required?, where is the job to take place? What is the estimated time it would take?

The **task then is scheduled** to technician(s) via the appointment booking or schedule board.

Once the technician has finished the job **the task needs to be completed** with the technician stating how long it has taken along with what parts have been used.

When all tasks on a request are completed then the request will be completed resulting in the request being **ready to be invoiced**.

The next several lessons will walk us through the general process. The *IFS FSM Services* course will take you through various call taking scenarios.

## Service Request Process

Review

### RAISE A SERVICE REQUEST

- Receive request for service from customer and raise in FSM

### CREATE & ASSIGN TASK

- Create Task based on the relevant Request and Assign based on business rules

### SCHEDULE TASK

- Use Schedule Board to allocate Task to a field worker and a time. (PSO for dynamic scheduling)

### COMPLETE TASK

- Record associated Usage (Part & Non-Part) and prepare for billing. Task/Request status as 'Complete'



## Agenda

- |    |                            |    |                              |
|----|----------------------------|----|------------------------------|
| 01 | Introduction               | 06 | Repair Review                |
| 02 | Repair Introduction        | 07 | Inventory & Logistics        |
| 03 | Repair Task and Assignment | 08 | Inventory & Logistics Review |
| 04 | Repair Board               |    |                              |
| 05 | Repair Completion          |    |                              |



## 3. Repairs Introduction



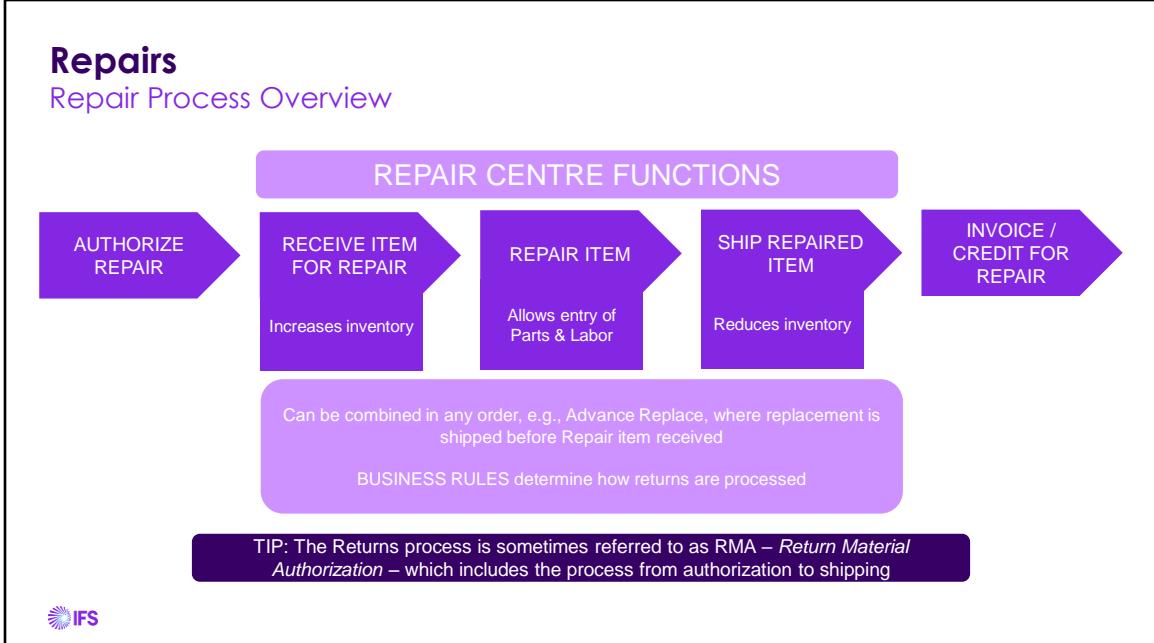
## Repairs

### Learning Outcomes



By the end of this lesson, you should:

- Understand the basic Repair processes
- Understand the various Repair functions available in FSM
- Be able to configure the basic Repair processes in FSM



Depending on how you run your business, you can create an RMA either when the customer calls your depot or when you receive an item on your dock. An item can be either a part or a product. A unit is a single item. You can authorize individual units or quantities. Key events in an RMA's cycle—such as authorizing, receiving, picking, and shipping units—can be recorded in the request event log.

**Authorization** is required to begin the repair process.

**Receiving** increments inventory upon receiving the unit.

**Repairing** allows entry of Parts and Labor, movement of the unit through inventory, and indication that unit is ready to ship.

**Shipping** decrements inventory upon shipping the unit.

**Billing** is used to invoice and credit the repairs.

Repair Center supports three basic transactions: receiving, repairing, and shipping. You can combine these three transactions to support any repair center operation. For example, you can provide an Advance Replace transaction in which you ship a replacement before you receive, repair, and return the customer's damaged unit. Basic repair components consist of the different return reason/processes that are available. Once the RMA is created it then needs to be received into the repair centers stock, once received it depends on the return type what happens next which we will go through but majority of the time the unit is either repaired or swapped, unit is then shipped back to the customer.

As stated there is many different return types which drive what process will occur.

Business Rules determine HOW your business fits within the FSM application. These are some of the more significant business rules used within Repair Center.

**Repair Center Place Rule** assigns a place for repair center, shipping, and receiving.

**Repair Center Turn-Around Time Rule** assigns a default number of days turn-around time to a request line.

**Service Warranty Generation** applies warranty coverage to repaired parts or products.

**Request Line Price Generation** creates prices for request lines.

**Repair Center Task Selection** creates a task based on request unit information. Rules are evaluated when the Assign button is clicked on the Repair Center screen and evaluation stops after the first match.

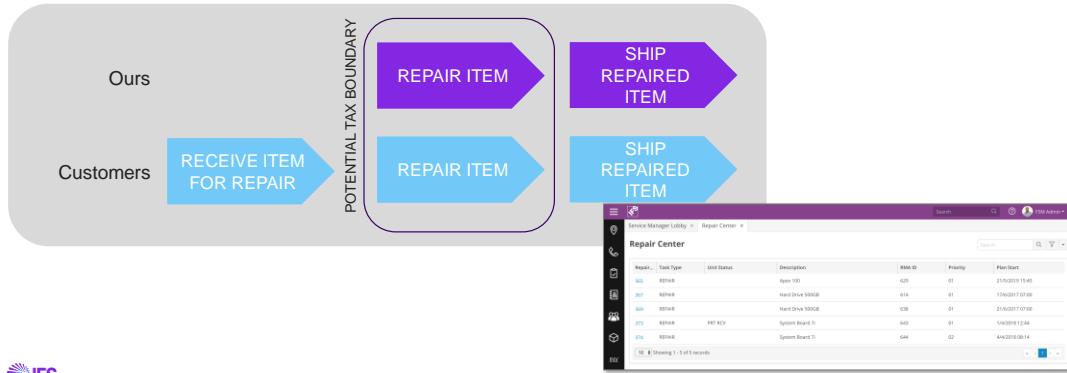
**Repair Center Return Reason** sets the return reason on a request line.

**Repair Center Location Rule** sets a place and location to ship or receive repaired parts or products.

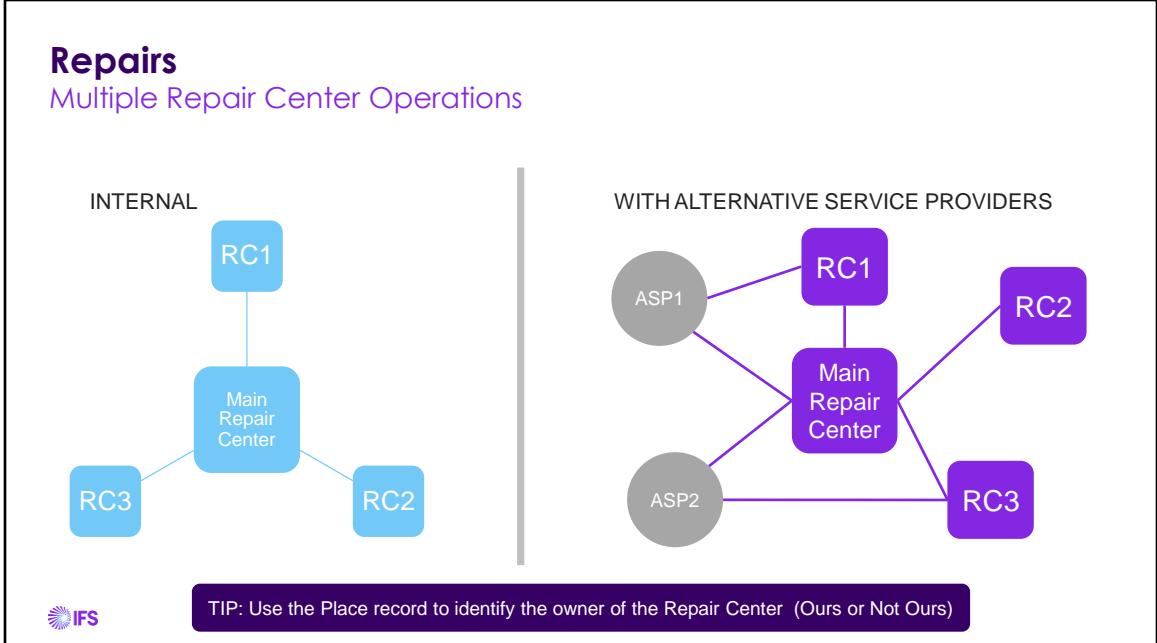
## Repairs

### Single Repair Center

- Even a single Repair Center may be set up with separate processing of Our and Customers' items, due to differences in tax treatments.



Repair Center is almost always involves inventory transactions. This diagram represents a single repair center operation. As you can tell there are a Receiving, Repair and Shipping areas – all stock transactions. Repair Center prefers to keep Customer (CUST) and Company (OURS) owned parts separated for taxation purposes hence the OURS vs CUST path thru the repair center. However, it is not a requirement. Also some customers tax the parts only within the 4 walls of the repair center whereby other customers do not. The application can be set up to do internal work orders (no shipping and receiving) to be done with the Repair Center.



A multiple Repair Center (RC) operation would consist of the main RC with alternate or satellite RCs. These Alternate RCs or ARCs will be set up and using the FSM application. The application can be set up to have the parts shipped in transit so it can be received at the ARC and seen in the application. The **Whos\_place** field on the Place record identifies the owner of the place (OURS or NOT OURS).

The **tat\_in\_hours** application parameter allows you to specify turn-around time in hours by setting the parameter to Y (yes). If you specify turn-around time in days, set the value of this parameter to N (no).

A multiple RC operation with ASPs would consist of the main RC with ARCs and ASP (alternative service providers / vendors). These ASPs do not use FSM application and purchase orders are created to receive in parts.

Using Repair Center you can:

Manage **3<sup>rd</sup> party repair** at depots other than your own.

Create a **Part disposition** RMA when a part is disposed or needs to be returned.

**RMA Quotes** are preliminary RMAs that contain estimated information to give customer an idea of how much the repair will cost.

**Auto RMA** is the creation of an RMA from service requests.

## **Repair Center & Reverse Logistics**

### **Any Type Of Repair**

Regardless of repair

- Returns Tracking by Serial Number
- Manufacturing, OEM & Service Warranties
- Quotations, Repair Limits, Approvals
- Shop Floor Routing, Repair Templates
- Quality Assurance
- Component Repair
- 3rd Repair Handling
- Recall Management
- Repair Reporting & Analytics



Create RMA via customer portal, FSM Smart-Client, Mobile Apps or via Inbound XML Message.

## Repair Center

### Return Reasons

Repair & Return



Advance Replace



Ship Only



Receive Only



- Loaner, Swap, Warranty Claim, Internal Work-order, DOA, (De-)Kitting, ECO Field Return
- RMA Created via Customer Portal, Mobile Apps, FSM Smart-Client or Inbound XML Message

### Business Rules

- Turnaround Time
- Receiving Discrepancy
- Service Warranty

- Location to Receive
- Repair Center to Repair
- Resource Assignment

- Financials
- Repair Limits
- Consolidate Shipping



## Repairs

### Using Place Records



- The most common use of Place records for Repair Center are:

CUSTOMER SITES Where service is delivered	WAREHOUSES Where parts are stored	WORK SITES Where employees work
<b>Place Fields</b>	<b>Description as relevant to Repairs</b>	
<b>Whose Place</b>	Affects the process when the Place to Repair is not the same as the Place to Receive	
<b>Allow Products</b>	Indicates whether Products are found at this Place	
<b>Stock Parts</b>	Indicates whether Parts can be held at the location	
<b>Billing Place</b>	Indicates whether bills can be sent to this Place, ie usually bills are not sent to a Warehouse	
<b>Calendar ID</b>	Indicates opening hours; used to calculate turn around time and days due back	
<b>Currency</b>	Flows down to any RMA that are created	
<b>Repair Center</b>	Checkbox that indicates the Place is a Repair Center	
<b>Default Receive/Ship Location</b>	Provides a default location for parts to be shipped to, or received from	



While Places can be any physical or virtual site, for repair center, the most common uses are for:

**Customer Sites**, where service is performed,

**Warehouses** to store service parts, and

**Work sites**, where your employees work, such as a repair center, warehouse, call center, or headquarters.

There are fields on the place record that are significant to the repair process.

**Whose Place** determines whether the place belongs to your organization or to another organization such as a customer, supplier, third-party repair, and so forth. Used during the repair process to affect the process where the place to repair is not the place to receive—a place that is not ours is a third-party repair center and a purchase order is created to ship the unit instead of creating a transfer part need.

**Allow Products** determines whether products are found at this place. Products are generally not found at a billing place, for example.

**Stock Parts** is used to determine whether parts can be stocked at the location.

**Billing Place** determines whether billing is sent to this place. Billing is not sent to a warehouse, for example. If you attempt to bill a place that is not a billing place, vouchers cannot be posted to invoices and the vouchers are listed with an error status.

**Calendar ID** determines the hours that the place is open. This is used to calculate the turn around time and days due back.

**Currency** states what currency the place uses, this will also apply to any RMA that are created.

**Repair Center** checkbox that when checked means that the place is a repair center.

**Default Receive Location** is when receiving the parts shall default to the location that is added to this field.

**Default Ship Location** is when shipping the parts shall default to the location that is added to this field.

There are bins on the place record that are significant to Repair Center.

**Locations and Bins** if the place holds inventory.

**Addresses** can be associated by Type. Addresses are used with part needs and shipments.

**Products** are installed at your customer places or de-installed in inventory.

**Global Name** is a way to group places together with whom you have a “national,” “regional” or “organizational” relationship. Business rules can be set up using Global Name.

## Repairs

### Using Part Records



PART Fields & Tabs	Description as relevant to Repairs
<b>Part-to-Product</b>	Indicates whether the Part can be used a template for a Product record.
<b>Serialized</b>	Indicates whether a serial number must be provided in all stock movements
<b>Controlled Part</b>	Indicates whether a Part Disposition is required when the Part is uninstalled
<b>Max Repair</b>	Indicates the maximum number of times the part can be repaired before being scrapped
<b>Bill of Materials</b>	Template used to create Product Structures, Parts List, Kits and Component Repair



Part records are used to identify particular items that are sold to customers or used during service or repair. A part is the smallest unit of inventory and can be one item, a sub-assembly, or an assembly. Products are sometimes identified using a Part record so they can be tracked when sold.

A part record needs to be created for inventory Stock records to be consumed during repair center operations. A part record needs to be created be used with part to product. The part-to-product option determines whether this part can be used as a template for a product record. If you are repairing this part, you must create a product record based on part information.

A part record needs to be created to be an alternate parts which identify parts that can be manually substituted for the specified part. This is used during a part need process.

A part record needs to be created to be a replacement parts which are automatically substituted for the specified part when the specified part is ordered after the effective date of the replacement and stock of the original part is zero.

There are fields and tabs on the part record that significant to the repair process.

**Part to Product** determines whether this part can be used as a template for a product record. If you are repairing this part, you must create a product record based on part information.

**Serialized** determines whether a serial number must be identified for all inventory movements

**Controlled Part** determines whether a part disposition is entered when a part is deinstalled.

**Max Repair** identifies the maximum number of times a part can be repaired before it must be scrapped. This is visible in the repair center screen when the tech is working on the unit.

**Bill of Materials** is the template used to create product structures for products based on this model, a parts list for servicing products, creating kits, and component repair.

## Repairs

### Return Reasons

- All RMAs have process codes, return reasons and business rules applied.
- Activities in the Repair Center are classified by return reason on the request line.

**Process Type** are FSM Codes that cannot be changed, but have to be assigned to create a Return process (eg Swap, Repair & Return, Receive Only etc). This determines how receiving, shipping and serial number tracking are handled

Return Reason	ADVR
Description	Advance Replace
Process Code	Advance Replace
Description	Advance Replace
Return Type	ADVANCE REPLACE

Under Warranty	Priority	Verify
Status Condition	Expedite Path	

Active	Count As Failure
Post To Usable Stock	Require Serials
Sequence	

Allow Credit	Allow Invoice
Install Product	Deinstall Product
Message ID	



All RMAs have process codes, return reasons and business rules applied. In this lesson we will look at process codes and return reasons.

Happenings in the repair center are classified on a request line by return reason. The return reason is the visual indicator for the return process. The return process and the process type is what is allowed by the system.

**Process type** are FSM Codes that can not be changed (i.e., Swap, Repair and Return, Advance Replace, Internal Work Order, Ship Only, Receive Only, Loan) but have to be assigned to create a return process.

The process type on the **Return Process** record determines how receiving, shipping, and serial number tracking is handled, but also states if Serials are required, if it is invoiceable, Install, Deinstall etc.

When a request line is created, all the corresponding process type, return type, return reason and business rules get applied to the line. The user is allowed to change any of the values for this request line only. Also, if any process type, return type, return reason and business rules change, new RMAs will be affected, not existing RMAs.

## Repairs

### RMA Header

- When creating a new RMA, some fields are provided by default.

The screenshot shows the RMA creation screen in the Service Manager Lobby. The form includes fields for RMA ID (638), Customer (A100), Name (Aero Corp), Address (Address ID 121, 2513 Plaza Ct, Waukesha, WI 53186), and Description (Repair failed disk drive). On the right, there are dropdowns for RMA Type (Repair), Status (Open), Priority (High), Category (Current Customer), Action, Group, Due, Plan Ship, Owner (ADMIN), Issued By (MX CORP), Bill To (A100), and Ship To (A100). Callouts highlight 'Address' and 'Description' as 'Defaults from Place record', and 'Owner' and 'Issued By' as 'Defaults from Person record'.

Now that we have the setup of the necessary records, we are able to create the RMA. Upon creation of the RMA, certain fields default. For example, from the Person logged in, the Owner and the Issue By. The “Issue By” is the place\_person relationship of Works From Place. The Place record will default the Address (to be used on the part need), the Bill To and the Ship To. The “Bill To” and “Ship To” are from the place\_place relationship.

## Repairs

### RMA Line

- Next, the RMA lines are required. Lines specify the quantities of items on the RMA.

**1** **Return Reason** – indicates why the item is in the Repair Center

**2** Item to Receive and Item to Ship fields can be populated from the Return Reason business rule (process ID 110)

**3** Receive to Place and Ship from Place can be populated from the Repair Center Place rule (process ID 20)

TIP: If the Return Reason is Ship Only or Advance Replace, a Part Need is created



Once we have the header of the RMA populated, we need to add the lines. First, select the Return Reason. The return reason is WHY will this item be in your repair center. The Item to Receive and the Item to Ship fields can be manually entered or automatically populated based on values on the Return Reason business rule (process ID 110). The Repair Center Place rule (process ID 20) can populate the Receive To Place and the Ship From Place. We will discuss business rules in a later lesson.

**Request Lines** are the quantity of part/models to be returned are listed on the RMA as request lines. Each line has one or more of the same kind of unit, whether model or part. The quantity to be returned is specified on the line.

**Request Units** are specified if parts are serialized. Then a unit per serial needs to be created. While you can enter serial numbers at authorization, we recommend that you enter them during receipt. Normally when a serial is authorized it is for a Loan or a Repair and Return transaction. If the serial ID is entered at authorization, it is visible in the receiving screen which may or may not be helpful to your receiving personnel.

If this is a ship only or advanced replace RMA, a part need is created and values from the return reason, return process and business rules will apply to the line.

## Repairs

### Rma Popups At Creation

Open Requests

Open Requests										
Request ID	Description	First Name	Last Name	Product ID	Model ID	Serial ID	Created	Created By	Modified	Modified By
1927				760	APEX100	20170508-01	5/8/2017 4:37 AM	ANVDE	5/8/2017 6:00 AM	ANVDE
1901							4/27/2017 3:32 PM	VIV	4/27/2017 3:33 PM	VIV
1900	f	Charlie	Weller	10014	DP21	89810155	4/26/2017 3:41 AM	CMCINTOSH	4/26/2017 2:42 AM	CMCINTOSH
1878	testing	Fred	Taylor				4/19/2017 11:01 AM	TECH01	4/19/2017 11:01 AM	TECH01
1873	For service TED			414	APEX100	AP001	4/19/2017 7:50 AM	DITEDE	4/19/2017 7:53 AM	DITEDE

Contract Information

SystemTest - Contract Selection					
Place ID	A100	Model ID	Product ID	Serial ID	
<u>Active Contracts</u>					
ID	VER	TYPE	START DATE	END DATE	COVG TYPE
101166	1	EXTEND BASIC COVERAGE	10/1/2011	9/30/2018	PLACE



All Repair Center processes begins with the authorization or creation of the RMA. Similar to the field request, several popups may appear. If there are more than one open RMA or request, you may get the Open Request popup as you identify the place ID. Likewise, if there is a place contract for the customer, you may receive a popup identifying the contract. This popup will also occur if there is a contract for the product you selected. If you click "OK" then contract details will be applied to the request.

These are some of the more significant application parameters used regarding popups at RMA creation.

**Display\_open\_requests\_for\_place** determines whether an alert appears with all open requests for the specified place when a place ID is entered on a new request. Values are Y (yes) and N (no).

Set **contract\_types\_to\_exclude** value to the contract types for which corresponding contracts do not appear in the Contract Selection window.

Set **display\_active\_contracts** if you want active, posted contracts to appear on contract selection screens.

**Default\_req\_contr\_type** identifies the default contract type on the Details tab of the Request screen for new requests. Values are defined on the Contract Type screen. Does not apply to preventative maintenance or engineering change order requests.

## Repairs

### Rma Popups At Creation

- When the RMA is created, pop-ups may appear to alert the user to related information within FSM.

**OPEN REQUESTS –**  
Indicates existing requests for the same Place ID which have not yet been closed

Open Requests										
Request ID	Description	First Name	Last Name	Product ID	Model ID	Serial ID	Created	Created By	Modified	Modified By
1927				760	APEX100	20170508-01	5/8/2017 4:37 AM	ANVEDE	5/8/2017 6:00 AM	ANVEDE
1901							4/27/2017 3:32 PM	VIV	4/27/2017 3:33 PM	VIV
1900	f	Charlie	Weller	10014	DP21	89810155	4/26/2017 2:41 AM	CMCINTOSH	4/26/2017 2:42 AM	CMCINTOSH
1878	testing	Fred	Taylor				4/19/2017 11:01 AM	TECH01	4/19/2017 11:01 AM	TECH01
1873	For service TED			414	APEX100	AP001	4/19/2017 7:50 AM	DITEDE	4/19/2017 7:53 AM	DITEDE

**CONTRACTS –**  
Identifies contracts related to the Product selected

SystemTest - Contract Selection					
Place ID	A100	Model ID	Product ID	Serial ID	
<u>Active Contracts</u>					
ID	VER	TYPE	START DATE	END DATE	COVG TYPE
101166	1	EXTEND BASIC COVERAGE	10/1/2011	9/30/2018	PLACE



All Repair Center processes begins with the authorization or creation of the RMA. Similar to the field request, several popups may appear. If there are more than one open RMA or request, you may get the Open Request popup as you identify the place ID. Likewise, if there is a place contract for the customer, you may receive a popup identifying the contract. This popup will also occur if there is a contract for the product you selected. If you click "OK" then contract details will be applied to the request.

These are some of the more significant application parameters used regarding popups at RMA creation.

**Display\_open\_requests\_for\_place** determines whether an alert appears with all open requests for the specified place when a place ID is entered on a new request. Values are Y (yes) and N (no).

Set **contract\_types\_to\_exclude** value to the contract types for which corresponding contracts do not appear in the Contract Selection window.

Set **display\_active\_contracts** if you want active, posted contracts to appear on contract selection screens.

**Default\_req\_contr\_type** identifies the default contract type on the Details tab of the Request screen for new requests. Values are defined on the Contract Type screen. Does not apply to preventative maintenance or engineering change order requests.



IFS

Point out every process must start with the Authorization of an RMA line

Point out RC almost always involves inventory transactions

Create a Repair and Return RMA for a customer for a serialized part

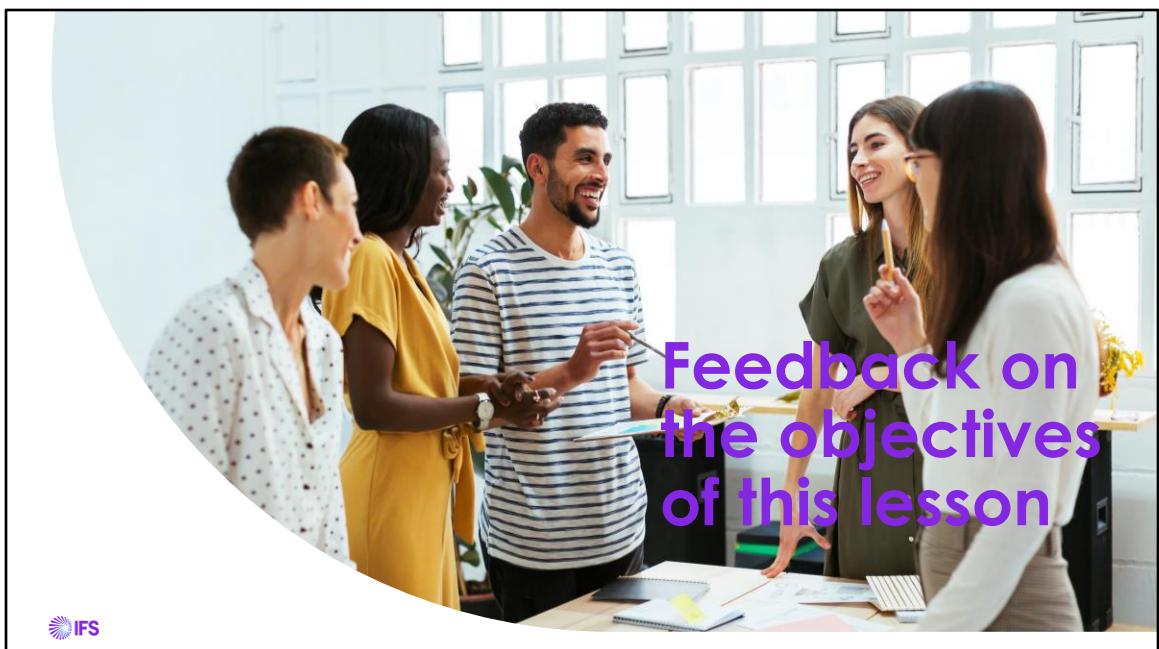
Receive the unit

## Practice & Learn

### Repairs

- Go to Repairs, RMA
- Create a new RMA for your customer
  - Select or Add a contact
  - Add a new Line, select Repair and Return reason
  - Item to Receive will be your part, quantity 1
- Note RMA ID, go to Inventory, Logistics, Receiving
  - Create a receipt with your RMA ID
  - Enter a serial ID that is not in stock
  - Post receipt





## Feedback on the objectives of this lesson

By the end of this lesson, you should:

- Understand the basic Repair processes
- Understand the various Repair functions available in FSM
- Be able to configure the basic Repair processes in FSM

# Repair Task And Assignment



## Repair Task And Assignment

### Learning Outcomes



By the end of this lesson, you should:

- Understand Repair Tasks
- Understand the differences between Tasks and Repair Tasks
- Be able to configure Repair Tasks in FSM

## Repair Task And Assignment

### Setting Up Techs For Repair Tasks

The screenshot shows the IFS Service Manager Lobby Person record interface. The main area displays a form with fields for Person ID (ENG06), Last Name (Foxrot), First Name (Frank), Work Phone (262-555-8560), Mobile Phone (262-555-7098), Email (eng06@mx.com), Job Title (Repair Technician), Category (Level 12), and FSM License type (NAMED). The 'Places' tab is highlighted. A sidebar on the left contains icons for Service Manager Lobby, Person, Search Results, and INV. On the right, there's a user icon and a skills comparison section.

**1 Status – determines whether Person is Active, Virtual or Inactive**

**2 Dispatchable – determines whether Person can be assigned Repair Tasks**

**3 Calendar – specifies working hours and exceptions**

**4 Skills – compared with skills required for the Product and Place**

**5 Places – indicates the default Place for the Person: required for Repair Board**

On the Person record, we will need to populate the following fields for the Bench Technicians:

**Status** determines if the person is Active (Actual Application users, Actual Mobile users), Virtual (Portal users, Subcontractors, Integrations) or Inactive (No longer current users). If our technician is employed by our company and we want him to log into the application, we will want to make his Status = Active. If we have subcontractors whose work we want to record but they do not log into the application, set the Status = Virtual.

**Dispatchable** determines whether the person can be assigned tasks using the Repair Board.

For notifications, either an email or mobile phone number needs to be populated.

**Work Calendar** are used to specify working hours and exceptions for persons or places.

The **Skill** tab includes skills and certifications associated with the person. These skills are used during work assignment to compare with the skills specified on the Product record and the Place record. For example, a product might require a certain type of certifications where a place might require proficiency in a certain language.

The **Place** relationship tab includes associated places by type of relationship. For example, the Works from place identifies default place for a person. This is required by Repair Board.

**Place for stock** identifies the default location of stock for service representatives. This is used with Tasks and Portals. Populating this field provides the technician with fewer keystrokes when creating part needs and part usage but also helps prevent typing errors.

## Task And Assignment

### Task Template

- Use business rules to automatically select pre-populated tasks with default information
- Optional, but can speed up processing of repeatable tasks
- Task Template Groups put task templates into a hierarchy

STEP ID	STEP ORD.	NAME	STEP TEXT	MODEL ID	TYPE	REQUIRED	ACTIVE
1378	1	Verify site stability	Verify site stability	P	P	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1379	2	Install DP17	Install DP17	P	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1380	3	Run diagnostics to ensure proper configuration	Run diagnostics to ensure proper configuration	P	P	<input type="checkbox"/>	<input checked="" type="checkbox"/>



To facilitate the creation of tasks we will want to set up Task Templates. Tasks are normally created using task templates to default information. Task Template records are optional—they need not be set up. However, task templates enable you to use business rules for automatic task selection and succession as a request is assigned and completed. If you choose not to use task templates, all task information is entered manually. Task templates are most useful when multiple requests are received for the same services.

Task templates must be created to default certain information on the task, which are required by the **Task Selection rule (process 01)**. Rules are evaluated when the **Assign** button is clicked on the Request screen or the Task screen or preventative maintenance requests are generated and no task template was specified. You set up task templates for the types of work your organization usually performs. You can set up templates in hierarchical lists by using the Task Template Group screen. Task templates are found under the Service, Admin, Task Template menu item. Make sure that all the codes you want to select on the Task Template are first set up in the Global or Code tables.

Assignment is the process of assigning a team and optionally a person to a task. The **Work Assignment rule (process 04)** is used to perform assignment. Skill information assists you in selecting the appropriate person. Skills are specified on the Person record, the Place record, and the Model record. Skill levels are compared and the percentage match appears as a score on the Task Assign window. Persons appear sorted by score from highest to lowest. If you specify a value for the **appt\_min\_skill\_score** application parameter, a person with a score lower than the specified minimum does not appear.

When adding part needs to a task template, you need to make sure that the part has a stocking location and available stock. Part needs are created without specifying place, location, or address values. Part needs have an entered and unallocated status until these attributes are specified, after which the part needs can be allocated, picked, and shipped. These status values can be assigned using business rules.

**Task Steps** of a task which a person/technician have to perform before the Task is completed. For example, a technician may have to do a pre-inspection of the unit before the service is performed, perform the service, then post-inspection of the unit after the service is performed. Note, on the Steps screen, you can see all the task templates that have those Steps.

There are significant fields within Task Template screen. This screen is used to specify default information that is applied to a new RMA.

**Task Duration Minutes** determines the default task duration.

When a value is specified for the **Team ID** field, work delegation rules are ignored and the task is assigned to the specified team.

## Repair Task And Assignment

Assigning The Technician

Assign Button

MS70QA (MKPDE40) - Task Assign										
		TECHNICIAN	TEAM	PLAN START	DURATION	PLAN END	SCORE	DISTANCE	EARLIEST START	LATEST START
Template	BREAK FIX	TECH400	AVENGERS	6/7/2017 7:00 AM	60	6/7/2017 8:00 AM	100		6/7/2017 6:00 AM	6/7/2017 8:00 AM
Priority		RTVTHMI	AVENGERS	6/7/2017 8:00 AM	60	6/7/2017 9:00 AM	100	961.81	6/7/2017 8:00 AM	6/7/2017 10:00 AM
Type	Break Fix	ADMIN	AVENGERS	6/7/2017 8:00 AM	60	6/7/2017 9:00 AM	100	967.30	6/7/2017 8:00 AM	6/7/2017 10:00 AM
Group	Field Service	RTVTHMI	AVENGERS	6/7/2017 10:00 AM	60	6/7/2017 11:00 AM	100	961.81	6/7/2017 10:00 AM	6/7/2017 12:00 PM
Technician		ADMIN	AVENGERS	6/7/2017 10:00 AM	60	6/7/2017 11:00 AM	100	967.30	6/7/2017 10:00 AM	6/7/2017 12:00 PM
Team		RTVTHMI	AVENGERS	6/7/2017 12:00 PM	60	6/7/2017 1:00 PM	100	961.81	6/7/2017 12:00 PM	6/7/2017 2:00 PM
Description	A/C Unit stopped working	ADMIN	AVENGERS	6/7/2017 12:00 PM	60	6/7/2017 1:00 PM	100	967.30	6/7/2017 12:00 PM	6/7/2017 2:00 PM
Status	Open	RTVTHMI	AVENGERS	6/7/2017 2:00 PM	60	6/7/2017 3:00 PM	100	961.81	6/7/2017 2:00 PM	6/7/2017 4:00 PM
Plan Start		ADMIN	AVENGERS	6/7/2017 2:00 PM	60	6/7/2017 3:00 PM	100	967.30	6/7/2017 2:00 PM	6/7/2017 4:00 PM
Duration	60	RTVTHMI	AVENGERS	6/7/2017 4:00 PM	60	6/7/2017 5:00 PM	100	961.81	6/7/2017 4:00 PM	6/7/2017 6:00 PM
Plan End		ADMIN	AVENGERS	6/7/2017 4:00 PM	60	6/7/2017 5:00 PM	100	967.30	6/7/2017 4:00 PM	6/7/2017 6:00 PM
Ignore Skills	<input checked="" type="checkbox"/>	TECH400	AVENGERS	6/8/2017 7:00 AM	60	6/8/2017 8:00 AM	100		6/8/2017 6:00 AM	6/8/2017 8:00 AM



Now it is time to assign the task. Assign button is located on the Repair Center screen. Assigning is the process to create tasks, schedule and perform skill calculations on who should do the work.

**The Left panel is driven by Task Selection rules.**

**The Right panel is driven by Work Assignment rules.** We will discuss the set up of the Task Selection and Work Assignment rules in a later course.

**Creates a task using task templates** The left panel of the assign window is where the task creation process can be triggered using task templates. The task selection business rule can default the task template ID.

**The Work Assignment** business rule can be used to predetermine which team and/or person can do the work.

The result of the available people will be visible in the right panel of the assign window.

**Skills Calculated** Skill information assists you in selecting the appropriate person. Skills are specified on the Person record, the Place record, and the Model record. Skill levels are compared and the percentage match appears as a score on the Task Assign window. Persons appear sorted by score from highest to lowest. If you specify a value for the appt\_min\_skill\_score application parameter, a person with a score lower than the specified minimum does not appear.

**Work Calendar/Rosters Calculated** The work calendar assigned to the person determines the person's working hours. Any calendar exceptions are considered non-working hours unless the available indicator is selected. A person status of active and a selected dispatchable option determine that a person can be assigned to a task. If a Roster record is active for a team/person the shifts in the roster shall be used instead of the work calendar assigned to the person.

## Repair Task And Assignment

### Repair Tasks Vs Tasks

- The process and set up for creating Repair Tasks is very similar to Tasks linked to a Service Request. The main differences between the two activity types are:

#### Repair Unit

A Repair Task always has an associated repair unit, ie the item to be repaired.

#### Repair Tag ID

A Repair Task also has a Repair Tag ID to associate the Task with the unit. A Repair Tag ID may have multiple associated tasks and is attached to the item that requires repair.

Repair Tag: 365  
Task ID: 275  
Serial #: AP009  
Product ID: 479  
Model: APEX100  
Part ID: APEX100  
Description: Apex 100  
Unit Status: Open  
Days Open:  
RMA ID: 629  
RMA Line: 6  
Task Type: Repair  
Owner: TECH02  
Team: MIDWEST  
Plan Start: 21/5/2019 15:45  
Duration: 30  
Place: MX REPAIR  
Location: RECEIVE  
Contract ID: 101166  
Contract Version: 1  
Plan End: 21/5/2019 16:15



Repair task creation and assignment is the process used to create at least one task for a new request unit and assign it to a person who performs the work. A request unit is the item you have received for repair. When the request unit is received, a repair tag ID is entered. You use the repair tag ID to find and track the tasks that are created for repair. Repair tags are frequently affixed to the unit for tracking purposes.

Repair tasks are similar to tasks on service requests, with the following differences:

Repair tasks are always associated with a repair unit

Repair tasks have a repair tag ID to identify them with a repair unit at a particular point in time.

For example, you may repair the same unit multiple times, but each repair instance has a different repair tag ID. You can use the Request Unit Default Repair Tag Value rule (process 75) to automatically fill the repair tag ID when the unit is received.

Using Repair Tasks you can:

Determine team or person being scheduled.

Duration is defaulted by template but can be overridden.

Business rules will be processed based on type of tasks.



IFS

Note the RMA that you created from the previous lesson.  
Go to Repairs, Repair Center.  
Manually assign the task.

## Practice & Learn

### Repair Task And Assignment

- Note the RMA that you created from the previous lesson
- Go to Repairs, Repair Center
- Search for your RMA
- Manually assign the task



# Repair Board

*\*These sections are very similar to the equivalent sections for Tasks and the Schedule Board.*



## Repair Board

### Learning Outcomes



By the end of this lesson, you should:

- Understand the Repair Board and how it works
- Understand setting and controls for the Repair Board
- Understand right-click menu functions

## Repair Board

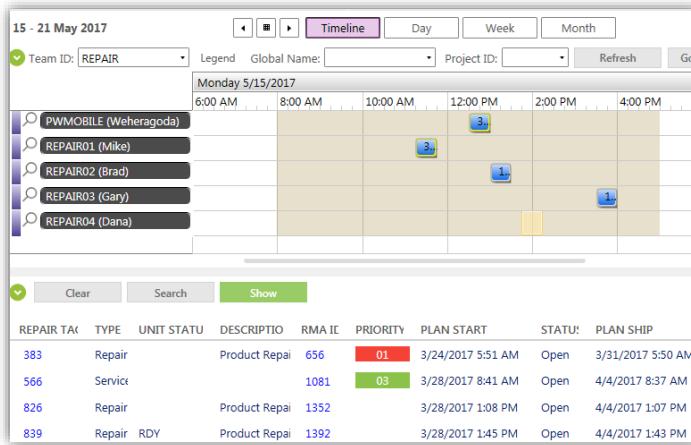
### Repair Board Features

Assign Tasks

Display

Filters

Color Coding



The **Repair Board** is a **graphic view** of the current assignments and to assign tasks to team members. You typically perform this procedure when managing multiple bench techs or when tasks must be assigned to a specific technician instead of anyone on the team. The view is persons by team and sub-team across multiple time zones, always appearing in local time zone. Local means call taker's time zone. For example, if you dispatch in the Central time zone and technicians and employees in all time zones use the 8:00 a.m. to 5:00 p.m. work calendar, your technicians in the Eastern time zone appear to you to work from 7:00 a.m. to 4:00 p.m. If a place in the Mountain time zone is open from 10:00 a.m. to 6:00 p.m., its availability appears to you as 11:00 a.m. to 7:00 p.m.

If a task was manually assigned, the Repair Board can be used to reassign or unassign tasks.

If the appropriate business rules are set up, events and notification messages are created.

Assigned tasks can be **viewed** on a calendar by month, week, day or timeline. You can drag and drop single or multiple tasks to assign/re-assign.

The display is **grouped** by person, place or task and accommodates

You can use global name **filters** to view only tasks for places associated with specific global name

You can use **color coding** for easy identification. Color coding is under Admin, Color Settings menu item. You can customize most colors on Repair Board using color settings.

If you use **rosters**, the work times specified on the roster are used instead of work calendars.

There are business rules that are significant to the Repair Board.

**Task Event Generation** process creates task events. Rules are evaluated after specified information is inserted or updated on the database and all rules are evaluated.

**Task Event Notification** process creates notifications based on task events. Rules are evaluated after specified information is inserted on the database and all rules are evaluated with all matching values returned.

**Person Event Generation** process creates person events. Rules are evaluated after specified information is inserted or updated on the database and all rules are evaluated.

## Repair Board

### Repair Board Views



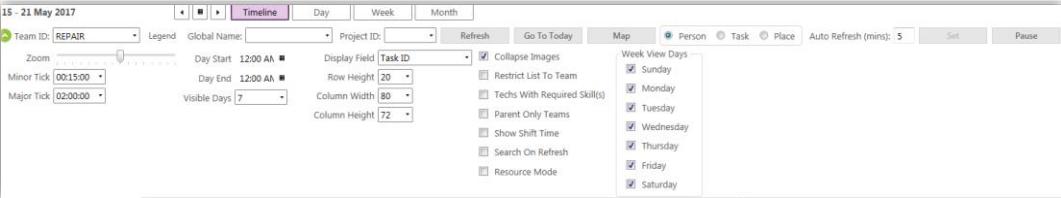
**View Options**



**Teams**



**Ticks**



IFS
Log In

At the top of the Repair Board, the following fields and options determine how Repair Board appears. To view all fields and options, click the orange toggle. Settings are retained between sessions.

**View buttons** by selecting one of **Timeline**, **Day**, **Week**, or **Month** changes the timeline or calendar view that appears below.

**Team ID** field enables you to select the team and related sub-teams that appear. You can select more than one team. The application parameter, `REPAIR_BOARD_TEAM_CATEGORY`, identifies the team categories used to filter the teams that appear on Repair Board. Values are defined on the `team_category` code table. Multiple values can be specified and must be separated by commas without spaces. When a value is not specified, all teams appear.

**Global Name** field enables you to filter tasks by global name.

**Project ID** field enables you to filter tasks by project ID.

**Refresh** button enables you to refresh now instead of waiting for automatic refresh.

**Go To Today** button enables you to easily reposition timeline or calendar to today's date and current time.

**Map** button enables you to view a map of task locations and optionally person locations when using GPS-enabled devices.

**Person, Task, and Place options** enable you to group resources by the corresponding records.

**Collapse Images** option enables you to view or hide images such as pictures on Person records.

**Restrict List To Teams** option enables you to restrict search results to the specified teams.

**Parent Only Teams** option enables you to restrict search results to parent teams only.

**Auto Refresh** enables you to set the automatic refresh interval in minutes; the **Pause** button temporarily stops automatic refresh.

**Zoom** control enables you to expand timeline or calendar views to see time periods in greater detail.

**Major Tick** determines the major divisions that appear in the header, for example one day; **Minor Tick** determines the minor divisions that occur in time, for example 15 minutes. Task boundaries are on the minor tick, for example a task can start on the hour, or 15, 30, or 45 minutes past the hour. These settings are unique to timeline and each calendar view.

**Day Start** and **Day End** determine the times that are shown on the timeline and calendars. **Visible Days** determines the number of days that appear. These settings are common to all views.

**Display Field** enables you to determine what information appears on a task card: task ID, address name, global name, repair tag, request ID, or place name. You can select one or two items. This setting is common to all views.

**Row Height** field enables you to set the height of the row in timeline view. The height is specified in pixels.

**Column Width** field enables you to set the width of rows in day view and week view. The width is specified in pixels. **Column Height** field enables you to set the height of rows in day view and week view. The height is specified in pixels.

**Parent Only Teams** option enables you to select only parent teams instead of parent teams and sub-teams. This setting is common to all views.

**Show Shift Time** option enables you to select whether to show the shift times in the shift time blocks. This setting applies to all views.

## Repair Board

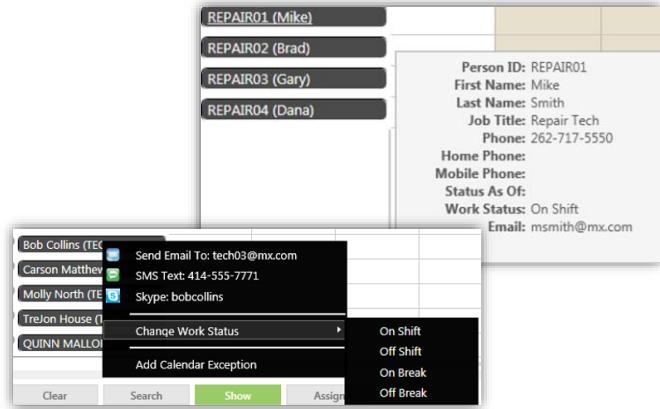
### How Repair Board Is Used - Person

View routes, tasks and person details

Update tasks

Update person information

Send SMS/Email



If you hover over a person, the Person Cards will appear with person information. If you double click on the Person, you will be taken to the Person record.

You can perform the following on persons:

Send messages such as email, SMS or Skype to the technician.

Change status option enables you to change the status of the person.

Add calendar exceptions enables you to add a work calendar exception for the person.

There are application parameters significant to Repair Board.

Set **schedule\_board\_person\_display\_format** value to a value that identifies how you want a person's name to appear on the Repair Board. Values are 1 (person ID), 2 (first, last) 3 (first, last, person ID in parentheses), 4 (last, first), 5 (last, first, person ID in parentheses), and 6 (person ID, first in parentheses).

Set **schedule\_board\_person\_tooltip\_duration** value to the number of seconds that a person card appears when hovering on the person's name on the Repair Board.

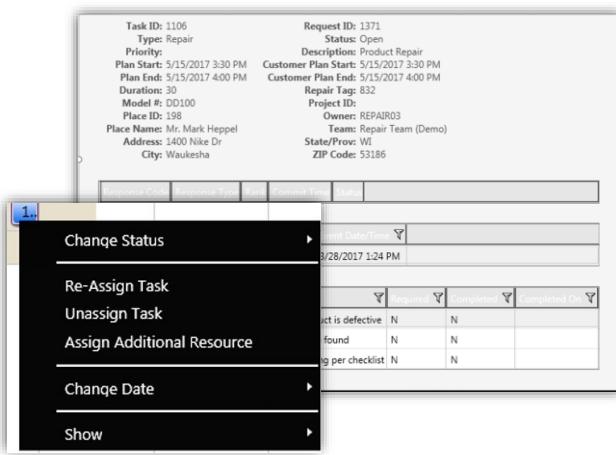
**Show\_place\_cal\_except** for an alert to appear when assigning a task for a place with a restricted calendar or the person has a work calendar exception that prevents assignment, set this value to Y (yes).

## Repair Board

### Using The Repair Board: Task

#### REPAIR TASK FUNCTIONS VIA SCHEDULE BOARD:

- Reassign Task
- Unassign Task
- Change planned start date
- Assign Additional Resource
- Change Repair Task status
- Show ECO or PM Tasks in same Place



If you hover over a task, the Task Cards will appear with task information. They identify the tasks that are assigned to a team member using colors you specify. If you hover on the task card using your mouse pointer, information about the task appears. If travel time is specified on the task, the outline of the task card is extended to include the travel time. By right-clicking on a task card, you can view the route on a map from the previous task to the specified task. There are several ways methods to assign or re-assign task or to move tasks.

You can **drag and drop** to assign, re-assign or move tasks. Tasks can be assigned to any team member, regardless of the team to which the task is currently assigned. To work with one team at a time, collapse all other teams on the Repair Board and filter the task list. If an alert appears, you must assign the task at another date or time.

You can perform the following tasks by using the **right click menu on the task**:

Reassign a task to a different person (runs Work Assignment rule- process 04).

The Unassign option enables you to remove a person as task owner.

Change the date and time option enables you to change the planned start date.

The Assign Additional Resource option enables you to add a resource to the task.

Change task status of the task.

The Show option enables you to show ECO or PM tasks for that place that could be assigned with the specified task.

If you **double click on the task**, you are taken to the Task Modify screen where you can assign, re-assign or move tasks.

There are application parameters significant to Repair Board.

**Allow\_parallel\_tasks** to allow multiple, overlapping tasks, set this value to Y (yes). If this value is N (no), an error occurs when a parallel task is assigned using Repair Board or a task is edited or assigned manually.

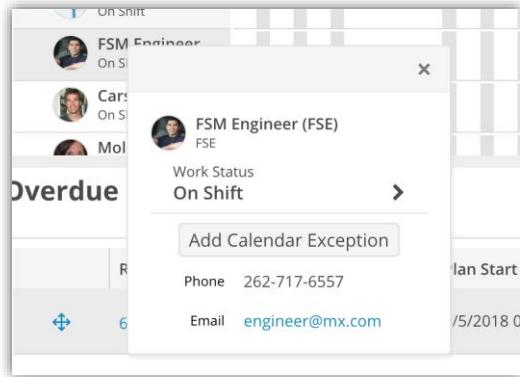
**Schedule\_board\_show\_eco\_pm** to show an indicator on the Repair Board for automatically-generated preventative maintenance and engineering change order tasks, set this value to Y (yes).

## Repair Board

### Using The Repair Board: Person

#### PERSON FUNCTIONS VIA REPAIR BOARD:

- View routes, (if applicable) tasks and person details
- Update Repair Tasks
- Update Person information
- Send SMS / email



If you hover over a person, the Person Cards will appear with person information. If you double click on the Person, you will be taken to the Person record.

You can perform the following on persons:

- Send messages such as email, SMS or Skype to the technician.
- Change the Work Status, eg On Break
- Add calendar exceptions enables you to add a work calendar exception for the person.

There are application parameters significant to Schedule Board.

- Set **schedule\_board\_person\_display\_format** value to a value that identifies how you want a person's name to appear on the Repair Board. Values are 1 (person ID), 2 (first, last) 3 (first, last, person ID in parentheses), 4 (last, first), 5 (last, first, person ID in parentheses), and 6 (person ID, first in parentheses).
- Set **schedule\_board\_person\_tooltip\_duration** value to the number of seconds that a person card appears when hovering on the person's name on the Repair Board.
- **Show\_place\_cal\_except** for an alert to appear when assigning a task for a place with a restricted calendar or the person has a work calendar exception that prevents assignment, set this value to Y (yes).



Go to Repairs, Repair Board

Show the unassigned search results. Drag and dropping task

Show assigned tasks on board

Move one task

Drag and drop several tasks at a time

Show different views: Day, Week, Month, Person, Team

Show colors

## Practice & Learn

### Repair Board

- Note the RMA that you created from the previous lesson
- Go to Repairs, Repair Board
- Select the Teams your instructor tells you
- Under tasks, find your RMA
- Drag and drop on Repair Board
- Move the task around from tech to tech and to a different time





IFS

By the end of this lesson, you should:

Understand the Repair Board and how it works

Understand setting and controls for the Repair Board

Understand right-click menu functions

# Repair Completion



## Repair Completion

### Learning Outcomes



By the end of this lesson, you should:

- Understand the Repair Completion functions
- How to allocate Parts and Labor/Expenses to a Repair
- How to record quality information related to a Repair

## Repair Completion

### Completing The RMA

Similar to Service Requests, an RMA must also be completed. RMA completion may include the following steps:

- Similar to with Service Requests, **Part & Labor Usage** will be reflected in inventory and billing records
- If the consumed part is controlled, a record of the **Part Disposition** also needs to be created
- A records needs to be created of the **Transfer of the Request Unit**, to show it leaving the Repair Center via the Transfer Unit and/or Transfer Bin functions
- If there is a related **Warranty** that covers the repair, this will need to be applied
- If the Part-to-Product indicator has been set on the Part, a **new Product record** will be created



Similar to completing a service request, an RMA must also be completed.

As you perform the assigned work, you record certain information, such as **Part and labor usages**, usually for inventory and billing purposes.

Sometimes, a **part disposition** needs to be performed, if it is a controlled part. At that time, you are prompted to enter a part disposition.

Request units are **transferred** to track them from receiving to the repair bench to shipping. Two buttons on the Repair Center screen, **Transfer Unit** and **Transfer Bin**, enable you to transfer a single unit or a bin full of like units. Items that you repair may be covered by **warranties** and may be applied when you ship the unit. Three types of warranties are recognized: OEM, Manufacturer, Service

For parts where the part-to-product option is set and the part is installed, a **new Product record** is created for that part.

## Repair Completion

Different Functions Triggered by Buttons

The screenshot shows a software interface for 'Repair Completion'. At the top, there is a horizontal bar with several buttons: 'Save', 'Assign', 'IQA', 'Change Contract', '...', and 'Repair'. The 'Repair' button has a dropdown menu open, displaying the following options: 'Transfer Unit', 'Transfer Bin', 'Apply Warranty', and 'Exchange'. Below the top bar, there are three input fields labeled 'Task ID', 'Task Status', and 'Task Type'. In the bottom left corner of the main area, there is a small IFS logo.

There are buttons on the Repair Center screen that are significant.

**Assign** is used to create a new task and assign team/person.

**IQA** allows the use of Intelligent Questions and Answers that can narrow down a part dependent on the answer given. We will discuss IQA in a later lesson.

**Change Contract** allows the user to apply a different contract to the request unit.

**Transfer Unit** is a quick way to move stock to other locations or to a bin or change to a usable/unusable part.

**Transfer Bin** allows to move all stock within the location and bin id of the unit in the repair center to another place, location or bin id. This location is then stamped on the part need.

**RTV**, Return To Vendor, creates a part need to send the unit to an authorized service provider or supplier. If "do not return" is not checked then it will create a purchase order to allow the unit to be received back into the Repair Center.

**Apply Warranty** will update the update part usage and non-part usages to bill an OEM.

**Exchange** changes the product/serial assigned to the request unit.

There are application parameters that are significant to repair completion.

**Freeze\_request\_status** to prevent changes to requests after they have been changed to a certain status

**Freeze\_task\_status** to prevent changes to tasks after they have been changed to a certain status

Set **parts\_used\_usage\_part\_line\_code** to the part line code to use on part usage records that are created when a part need records part used option is selected.

**Set\_check\_for\_billing\_on\_request\_status** is to set the check for billing indicator on a request when the request is closed or completed.

## Repair Completion

### Part And Labor/Expense Usage

#### Part Usage

- What was used performing a service
- Manual and automatic creation
- Decrement inventory

#### Labor and Expenses

- Time and expenses used performing a service
- Time and expenses not associated to a request
- Line codes determines billing



A **part usage** is an indication that a part was used during service. The part line code determines processing information such as how the part is billed. In general, you enter part usage for each part that was used. If the part was obtained using a part need, there is an option to indicate that the part need also indicates part usage. If you use a part need to sell a part, part usage is automatically created when the part is shipped to the customer. If you delete part usage, all related inventory transactions are reversed.

A **non-part usage** is usually an indication that time was spent performing the service. The line code determines processing information such as how the time is billed. In general, you enter non-part usage for each time block, for example, travel or labor. You can also enter non-part usage for miscellaneous charges, expenses, and freight. Time used is entered in two ways. First, for time spent specifically on requests, the time is entered as non-part usage on that request. Second, for employees who do not perform work that can be billed on a request, for example your office staff, time is entered using Time and Expenses screens.

Part and non-part line codes will be discussed in the *IFS FSM Application Administration* course.

## Repair Completion

### Usages: A Reminder

- Completion of a Repair will often result in one or more Usage records being generated:

PART USAGE	NON-PART USAGE
Records usage of aPart from Stock	Indicates time was spent on the Task, and includes:
Can be priced from pricing rule or manually	<ul style="list-style-type: none"><li>Labor</li><li>Miscellaneous Charges</li><li>Expenses</li><li>Freight</li></ul>
Part line code determines billing rule	Line code determines billing
Price can be zero (not to be re-billed to customer)	Time can be booked directly to the Request (field workers) or via Time & Expense screens for office-based staff – separate line items



A Part Usage is what was used performing service on the part. A **part usage** is an indication that a part was used during service. Prices and costs can be applied to part usages via the Part Pricing rules found under the Financials menu. You can also enter a price manually, for example when a pricing rule is not set up or when you want to override the price that is automatically applied. If you enter a price manually, it is never automatically repriced unless a business rule is set up to reprice or you delete the bill price.

Currency conversion is used when amounts are entered in a currency other than corporate currency including costs and prices. Currency conversion occurs any time an item is priced or a cost is calculated. For example, if you derive a price using pricing rules when part usage is entered, the price is converted at that time. Only when the part usage is repriced will the currency conversion be recalculated.

The part line code determines processing information such as how the part is billed. In general, you enter part usage for each part that was used. If the part was obtained using a part need, there is an option to indicate that the part need also indicates part usage. If you use a part need to sell a part, part usage is automatically created when the part is shipped to the customer. If you delete part usage, all related inventory transactions are reversed. You must define the **part pricing** before you enter part usage. If a pricing error occurs when entering usage because the price is out of date or there is an error with the exchange rate, the billing price will be \$0.00.

Part usages can **allow zero sell prices**.

If the technician needs to purchase a part in the field to finish a job, the "**Allow Sell Modify**" function will allow him to enter a cost on the usage.

A **non-part usage** is usually an indication that time was spent performing the service.

The line code determines processing information such as how the time is billed. In general, you enter non-part usage for each time block, for example, travel or labor. You can also enter non-part usage for miscellaneous charges, expenses, and freight. Time used is entered in two ways. First, for time spent specifically on requests, the

time is entered as non-part usage on that request. Second, for employees who do not perform work that can be billed on a request, for example your office staff, time is entered using Time and Expenses screens. Each different type of labor is specified on a separate line

## Repair Completion

### Quality Codes

- **Quality Code** can be used to record the symptom, problem and resolution associated with a Repair. This is important for quality control and continuous improvement.
- Quality Codes can be associated with:
  - Model
  - Part
  - Product Family
  - Product Name

Model ID	Symptom	Problem	Resolution
	Dark Copy	Faulty Exposure Lamp Thermo Fuse	Adjusted Exposure

TIP: You'll only see the Quality Codes assigned to the relevant part/model when viewing the item in the Repair Center



Quality codes are used for repair. They are a way of recording the symptom, problem and resolution. Quality codes can be visible depending on the following: Model, Part, Product Family, Product Name. When quality codes are assigned to part/model, etc. then they will be visible when that part/model is in the repair center screen. The selection becomes specific to the part/model/product family/product name.

## Repair Completion

### Repair Completion

The screenshot shows the Repair Center interface for repair tag 14426, 4110. The main area displays various details like Repair Tag, Serial #, Product ID, Part ID, and Description. On the right, the 'Task Status' section is highlighted with a purple oval, showing Task ID 4110, Task Status Open, Task Type Break Fix, Owner (empty), Team AVENGERS, Duration 60, and Failure Returns 1. Below this, the 'Swap Unit' and 'Ready to Ship' options are circled in purple. The 'Transfer Unit/Bin' button is also circled in purple. The bottom right corner shows the IFS logo.

There are many functions within repair completion. Depending on your processes, listed are some of the more significant functions:

The most significant field on the Repair Center screen from a procedural perspective is the **task status**. Changing of the task status to a value that completes or closes the repair task cause policy and business rules, based in part upon application parameters, to complete or close the corresponding RMA.

If you have a repair-and-return unit that cannot be repaired, you can choose to swap it instead. By selecting the **Swap Unit** option, a part need is created for a usable unit to be sent to your customer. You can then dispose of the unrepairable unit as usual for your organization.

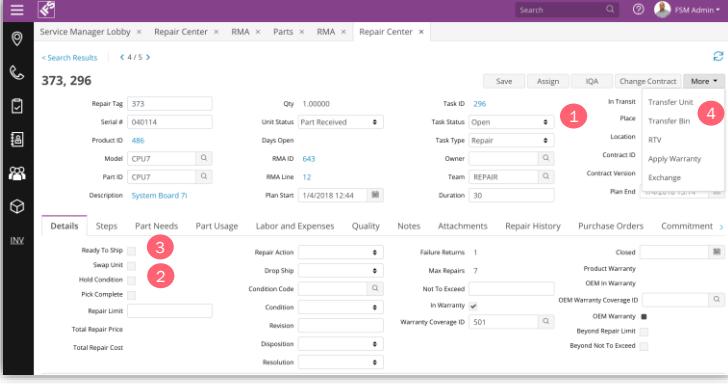
If you have a repair-and-return unit to be repaired, by selecting the **Ready to Ship** option, a part need is created for the usable unit to be sent to your customer.

Once you have repaired unit and it is ready to ship, the **Transfer Unit/Bin** buttons allows you to transfer the unit to the correct location or bin. This location is then stamped on the part need.

## Repair Completion

### Repair Completion

- Completing a Repair properly is important for quality management, customer service and internal auditing.



The screenshot shows the Service Manager Repair Center interface. At the top, there's a search bar and navigation links for 'Repair Tag' (373), 'Serial #', 'Product ID', 'Model', 'Part ID', 'Description', 'Qty' (1.00000), 'Unit Status' (Part Received), 'Task ID' (296), 'Task Status' (Open), 'Task Type' (Repair), 'RMA ID' (643), 'RMA Line' (12), 'Plan Start' (1/4/2018 12:44), 'Duration' (30), 'Owner', 'Team' (REPAIR), 'Place', 'Location' (RTV), 'Contract ID', 'Contract Version' (Exchange), 'Plan End', and 'Attachments'. Below this is a table with columns: Details, Steps, Part Needs, Part Usage, Labor and Expenses, Quality, Notes, Attachments, Repair History, Purchase Orders, and Commitment. The 'Details' row contains fields for 'Ready To Ship' (checkbox), 'Swap Unit' (checkbox), 'Hold Condition' (checkbox), 'PICK Complete' (checkbox), 'Repair Limit' (text input), 'Total Repair Price' (text input), and 'Total Repair Cost' (text input). The 'Part Needs' section has fields for 'Repair Action' (dropdown), 'Failure Returns' (1), 'Drop Ship' (checkbox), 'Max Repairs' (7), 'Condition Code' (dropdown), 'Not To Exceed' (checkbox), 'Product Warranty' (checkbox), 'OEM In Warranty' (checkbox), 'Condition' (dropdown), 'Revision' (text input), 'Disposition' (dropdown), 'Warranty Coverage ID' (dropdown), 'OEM Warranty' (checkbox), 'Beyond Repair Limit' (checkbox), and 'Resolution' (dropdown). A sidebar on the left shows icons for 'INX', 'Repair Tag' (373, 296), 'Serial #', 'Product ID', 'Model', 'Part ID', 'Description', 'Qty' (1.00000), 'Unit Status' (Part Received), 'Task ID' (296), 'Task Status' (Open), 'Task Type' (Repair), 'RMA ID' (643), 'RMA Line' (12), 'Plan Start' (1/4/2018 12:44), 'Duration' (30), 'Owner', 'Team' (REPAIR), 'Place', 'Location' (RTV), 'Contract ID', 'Contract Version' (Exchange), 'Plan End', and 'Attachments'. The bottom right corner of the screenshot features the IFS logo.

**1**  
Task Status – important for processing. Changing the status to one that closes the Task invokes policy and business rules to complete/close the associated RMA

**2**  
Swap Unit – ticking the checkbox creates a Part Need for a usable unit to be sent to the customer if the unit cannot be repaired

IFS

**3**  
Ready to Ship– ticking the checkbox creates a Part Need for a usable unit to be sent to the customer for a Repair & Return

**4**  
Transfer Unit / Bin – moves the unit to the correct Location or Bin.

There are many functions within repair completion. Depending on your processes, listed are some of the more significant functions:

The most significant field on the Repair Center screen from a procedural perspective is the **task status**. Changing of the task status to a value that completes or closes the repair task cause policy and business rules, based in part upon application parameters, to complete or close the corresponding RMA.

If you have a repair-and-return unit that cannot be repaired, you can choose to swap it instead. By selecting the **Swap Unit** option, a part need is created for a usable unit to be sent to your customer. You can then dispose of the unrepairable unit as usual for your organization.

If you have a repair-and-return unit to be repaired, by selecting the **Ready to Ship** option, a part need is created for the usable unit to be sent to your customer.

Once you have repaired unit and it is ready to ship, the **Transfer Unit/Bin** buttons allows you to transfer the unit to the correct location or bin. This location is then stamped on the part need.



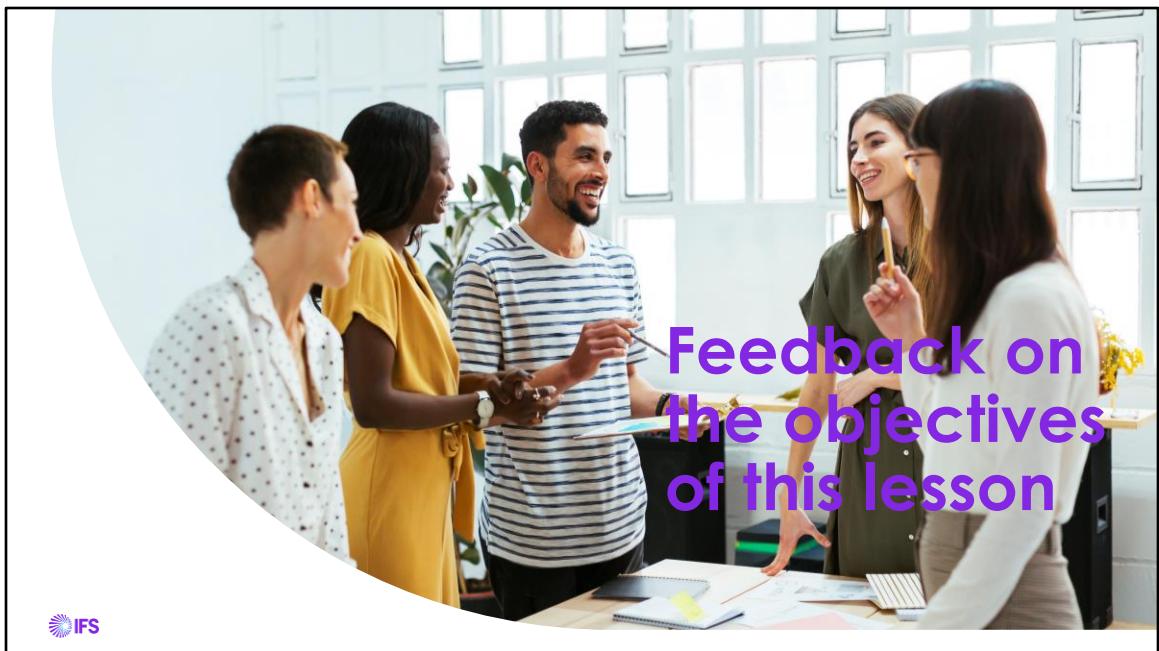
Go to Repairs, Repair Center  
Search for the RMA  
Add part and labor and expenses  
Show quality codes  
Point out Task status and Swap unit  
Select Ready to Ship and Transfer unit  
Show part needs, pick unit and ship it  
Show the RMA as completed

## Practice & Learn

### Repair Completion

- Go to Repairs, Repair Center. Search for your RMA
- Add part usage, labor and quality codes
- Select Ready to Ship and click Transfer Unit button
- To Location = SHIP, Select To Usable option, Save
- Click Part Needs tab
- Click Print Picks button
- Expand the Part Need and click the Shipment hyperlink
- Post shipment
- Go to RMA to see that it is completed





IFS

By the end of this lesson, you should:

Understand the Repair Completion functions

How to allocate Parts and Labor/Expenses to a Repair

How to record quality information related to a Repair

# Repair Review



## 4. Inventory & Logistics



## Inventory

### Learning Outcomes



By the end of this lesson, you should:

- Understand basic Inventory management processes
- Understand Stock control and parts management
- Be able to configure basic inventory management in FSM

## Inventory

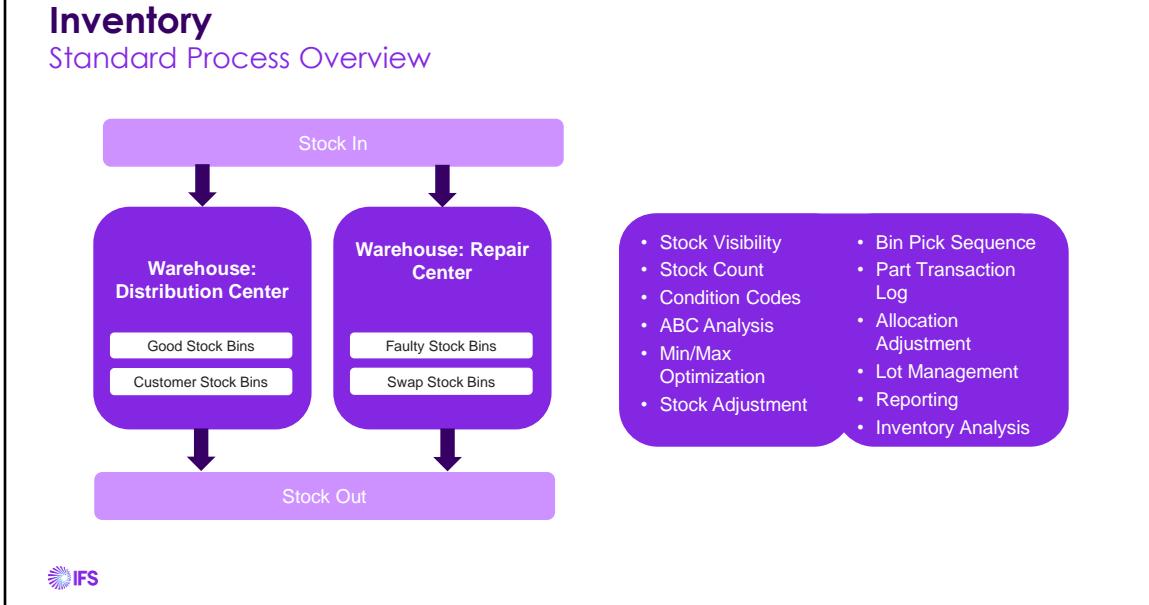
### Inventory Management Process

**Inventory Management** is the process of acquiring and storing non-capital assets (raw materials or finished goods) to fulfill business activities.

- In Field Service, this primarily relates to the management of spare parts and components for the completion of service delivery

Having the *right parts*, in the *right quantities*, in the *right place* at the *right time*





Inventory is the management of your parts and stock. Movement of the parts and stock from one Place/Location to another is Logistics, which we will cover in the next section of the training.

Inventory management sits in the center of the process, and includes all aspects required to ensure the right stock is available in the right quantities at the right time (right place aspect is the responsibility of Logistics)

Aspects of inventory management that are of interest are stock control (counting, replenishment, adjustments, allocation of stock to Tasks/Requests etc) and reporting and analysis

## Inventory

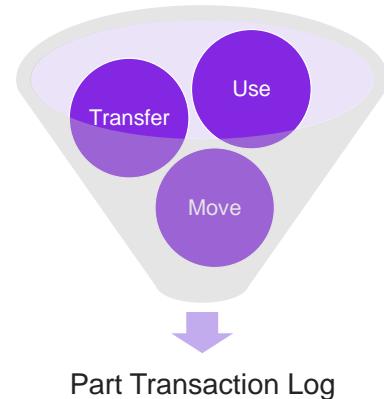
### Part Transaction Log

When a Part is used, transferred, ordered or moved,

FSM creates a **Transaction Log**.

- Activity Date
- Person ID
- Adjustment reason
- Serial ID
- Transaction Type
- Source ID/Type – identifies the activity that caused the part transaction, e.g., stock count ID, Request ID

**TIP:** Transaction Logs are created for internal purposes, ie for research, reporting and audit, with the aim of more effective inventory management



Every time you use, transfer, order or move a part, FSM creates a transaction log (a.k.a., part transaction log, part tranlog). Part transactions are logged for internal purposes and for you to use for research purposes. In addition to other information, you can see the activity date, the ID of the person who created the transaction, the adjustment reason if it is associated to a stock adjustment, and each serial ID and transaction type involved in the transaction. For example, you can verify the variances that were posted during a stock count.

**Source ID** identifies the source activity that caused the part transaction. This will be the stock count run ID, the shipment ID, the receiving ID or the request ID.

**Source Type** identifies the type of source activity that caused the part transaction. Used with Source ID. For example, the source type for a stock count run ID is "PC" (physical count). The source type for a stock adjustment is "ID" (online screen).

Transactions to be logged:

- On-hand quantity changed
- In-transit quantity changed
- Part Cost Change performed using the Logistics Manager screen

Part transfers are logged as two transactions; in-transit transfers are logged as four transactions; and, a shipment or receipt is logged as one transaction.

Use **Global Sequence** and **Part Transactn ID** to help troubleshoot integrations.

**Company Unit Cost** and **Company Defective Cost** represent the unit cost and defective cost of the transaction, respectively, in company currency.

Note that there is no purging allowed from this table.

## Inventory

### Stock Adjustment Overview

- To adjust Stock quantities outside of normal count period, or to move/adjust Stock quantities without using the shipping/receipt process, you can process an **Adjustment**

The screenshots show the 'Miscellaneous Adjustments' screen in the Service Manager Lobby. Both screens have fields for Part ID (COROMAX), From Place (201), and From Condition Code (NOCONDITION). The left screen shows a general adjustment with a quantity of 201. The right screen shows a specific adjustment with a quantity of 5.00. In the right screen, the 'Transfer Unsuitable To' section is highlighted with a red box, showing fields for To Place (202) and To Condition Code (NOCONDITION).

**TIP:** The move/transfer Stock 'To' fields will only appear if you select a valid Adjustment Reason, ie Scrap suggests disposal of Stock so no relevant 'To' options



Every time you use, transfer, order or move a part, FSM creates a transaction log (a.k.a., part transaction log, part tranlog). Part transactions are logged for internal purposes and for you to use for research purposes. In addition to other information, you can see the activity date, the ID of the person who created the transaction, the adjustment reason if it is associated to a stock adjustment, and each serial ID and transaction type involved in the transaction. For example, you can verify the variances that were posted during a stock count.

**Source ID** identifies the source activity that caused the part transaction. This will be the stock count run ID, the shipment ID, the receiving ID or the request ID.

**Source Type** identifies the type of source activity that caused the part transaction. Used with Source ID. For example, the source type for a stock count run ID is "PC" (physical count). The source type for a stock adjustment is "ID" (online screen).

Transactions to be logged:

- On-hand quantity changed
- In-transit quantity changed
- Part Cost Change performed using the Logistics Manager screen

Part transfers are logged as two transactions; in-transit transfers are logged as four transactions; and, a shipment or receipt is logged as one transaction.

Use **Global Sequence** and **Part Transactn ID** to help troubleshoot integrations.

**Company Unit Cost** and **Company Defective Cost** represent the unit cost and defective cost of the transaction, respectively, in company currency.

Note that there is no purging allowed from this table.

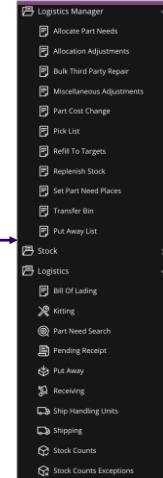
## Inventory

### Other Processes

Inventory Process	Description
Allocation	Reserves Stock for a Part Need – required to consume a Part
Stock Counts	Counting of physical stock in the inventory and comparing it to FSM records
Replenishment	Method of creating a Part Need. Need to specify the appropriate maximum and minimum quantities
Refill to Target	Examines Stock not committed and automatically creates Purchase Orders to add Stock and maintain calculated maximums
Min/Max Analysis	Re-evaluation of minimum and maximum Part levels. Provides a recommendation for changes
Stock ABC Analysis	Classifies Stock by usage or value for the purposes of analysis
Purchasing	The process for procuring new Parts from third-party suppliers



TIP: In FSM, these processes can be found in various parts of the Inventory >> Logistics Manager or Inventory >> Logistics menus



Every time you use, transfer, order or move a part, FSM creates a transaction log (a.k.a., part transaction log, part tranlog). Part transactions are logged for internal purposes and for you to use for research purposes. In addition to other information, you can see the activity date, the ID of the person who created the transaction, the adjustment reason if it is associated to a stock adjustment, and each serial ID and transaction type involved in the transaction. For example, you can verify the variances that were posted during a stock count.

**Source ID** identifies the source activity that caused the part transaction. This will be the stock count run ID, the shipment ID, the receiving ID or the request ID.

**Source Type** identifies the type of source activity that caused the part transaction. Used with Source ID. For example, the source type for a stock count run ID is "PC" (physical count). The source type for a stock adjustment is "ID" (online screen).

Transactions to be logged:

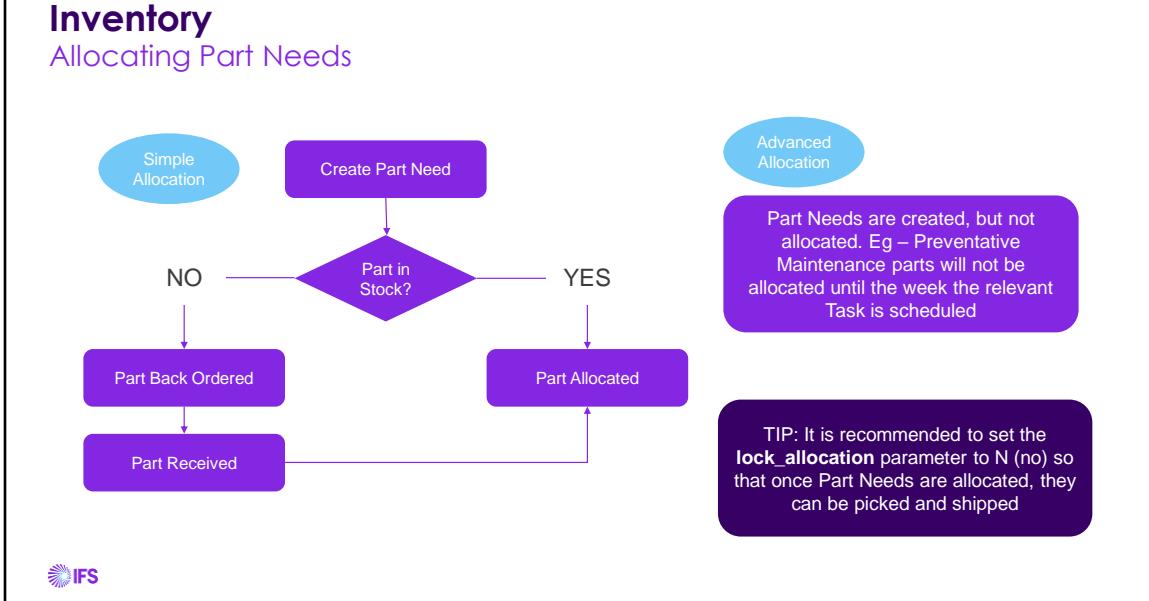
- On-hand quantity changed
- In-transit quantity changed
- Part Cost Change performed using the Logistics Manager screen

Part transfers are logged as two transactions; in-transit transfers are logged as four transactions; and, a shipment or receipt is logged as one transaction.

Use **Global Sequence** and **Part Transactn ID** to help troubleshoot integrations.

**Company Unit Cost** and **Company Defective Cost** represent the unit cost and defective cost of the transaction, respectively, in company currency.

Note that there is no purging allowed from this table.



Allocation reserves stock for a part need. After a part need is allocated, it can then be picked and shipped. The type of allocation you perform is determined by the **allocate\_needs\_upon\_insert** application parameter. When Y (yes), simple allocation is performed when the part need is created. When N (no), you must perform advanced allocation.

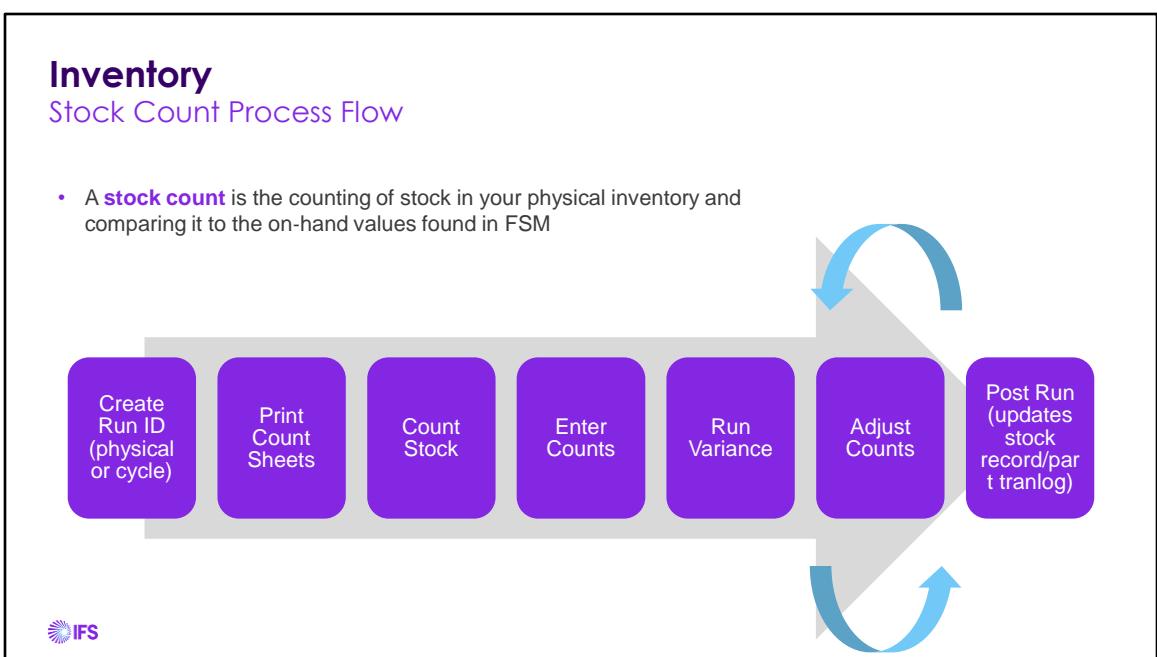
Using **simple allocation**, as soon as a part need is created, it is immediately allocated. If stock is not available, then the part need is backordered. When stock becomes available, backorders are automatically allocated by earliest date needed.

Using **advanced allocation**, part needs are created but are not allocated. For example, when you create preventative maintenance requests with part needs, the request might be scheduled six months in advance, but you do not want to allocate the part needs until the week of the preventative maintenance.

There are application parameters that affect allocations:

**Lock\_allocation** to force stock allocations, reallocations, and deallocations to process in serial, one-at-a-time order, set this value to Y (yes). We recommend you set this value to N (no).

Once part needs are allocated, they can be picked and shipped.



A **stock count** is the counting of stock in your physical inventory and comparing it to the on-hand values found in FSM. You can perform the following types of stock counts:

- A **physical count** is the count of certain items without time period restrictions, for example the yearly inventory. It will count all stock records based on criteria entered. It updates Last Activity Date on Stock record.
- A **cycle count** is the count of stock records whose cycle count date falls on or before the cutoff date specified in “Count Cutoff Date” field. It only will count based on Cycle Count Period and Last Activity Date on Stock record. Note that the “Last Activity Date” on the stock record is also updated with a Physical Count so it may throw your cycle counts off if you do both physical and cycle counts.
- An **ABC count** is a count of items that are either most valuable or used most often. Uses ABC Codes from Part record. You should perform an ABC analysis first. This will be discussed in a later lesson.

Note that the only difference between the three types is how the data is gathered for the run.

**Stock Count Generation** screen is a filter screen. The more data you enter, the more the criteria is restricted. In addition, you can restrict by part and/or bin and/or lot.

Once the stock count run sheets have been generated, you can print them for distribution.

The Stock Count reports can be found under the File>Reports menu: Stock Count Errors, Stock Count Exception, Stock Count Sheets, Stock Count Variance Details, Stock Count Variance Summary.

You do not need to enter all the counts at one time. You can record your counts as they are completed, repeating the process as often as necessary until all the stock

counts for the selected run have been recorded. If a part has been recorded in the location on the count sheet but not in the run on-line, the part can be added to the run. Note: This process is time sensitive. It uses the count times and transaction times to reconcile any variation between the expected quantities and counted quantities. The **variance** is defined as the difference between the number of items IFS FSM has calculated as on hand and the number of items you actually counted. FSM tracks the number of items on hand based on date and time, so that the count is accurate. After the counts are entered, clicking the Variance button on the Stock Count screen calculates the variances.

Then **post** the stock counts. When you post the stock counts, it adjusts the on-hand quantities as of the date and time of the count by the amount of the variance. This accounts for any transactions you have performed since the count.

## Inventory

### ABC Stock Analysis Overview

- ABC Stock Analysis classifies stock by Usage or Value (Cost) and provides an indication of which high volume/high value stock should be closely monitored and which can have a lower priority, less frequent counting cycle
- Provides increased flexibility, including when managing customer stock
- Part records are assigned ABC value according to percentages you specify and duration

**TIP:** You must have a cost on the Part record to classify stock by Value



Stock ABC Analysis classifies stock by **usage** or **value** (cost). The stock is assigned an ABC code of A, B, or C based on identified percentages. ABC analysis allows:

- All parts, regardless of whether stock currently exists
- All stock, as before
- Stock at the location and bin level; if stock is analyzed in multiple locations and bins, different ABC values may be assigned to each bin

Why do you want to do Stock ABC Analysis? Benefits include increased flexibility, for example when you perform warranty repair for multiple companies and need to manage stock owned by each company. ABC coding calculates the percentage of part usage based on the quantity used or the extended cost of that use and falls within the time period you selected. It categorizes the parts based on the percentage levels you define, sorts that usage in descending order, largest usage to smallest and assigns the appropriate code. You can use the codes to determine cycle counts. This provides a guideline so you can closely monitor your high volume, high cost stock while minimizing your efforts on low volume, low cost stock. You could, for example, cycle count the A category weekly, the B category monthly, and the C category quarterly.

On the part record, the stock is assigned an ABC code of A, B, or C, according to percentages you specify and number of months included in the analysis. You must have a cost on the part record if you are classifying stock by

value. Usage is determined by part line codes with the “Count As Usage” option set, or any stock adjustment with an adjustment reason with the “Count As Usage” option set. This will be seen on the Part Tranlog in the field “Count As Usage”.

The ABC Stock Analysis report can be found under the **File>Reports menu: Stock ABC Analysis**.



Go to Inventory >> Logistics

Create Stock Adjustment – show how stock levels have changed

Go to Inventory >> Logistics Manager

Create Part Need

Show Simple Allocation process and stock level being decremented

Show Stock Count and ABC Analysis reports



By the end of this lesson, should:

- Understand basic Inventory management processes
- Understand Stock control and parts management
- Be able to configure basic inventory management in FSM

# Logistics



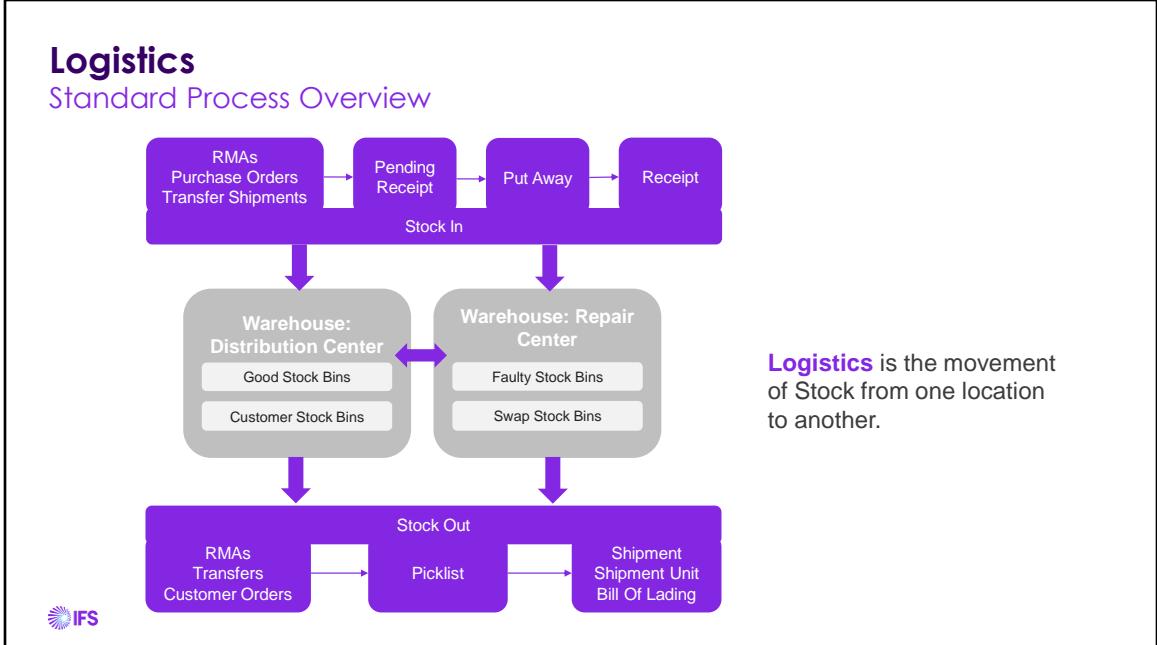
## logistics

### Learning Outcomes



By the end of this lesson, you should:

- Understand standard Logistic processes
- Understand Stock movement
- Be able to configure basic Logistics processes in FSM



Logistics is the movement of stock from one location to another. Some examples of transferring stock are from warehouse to warehouse, Repair Center to Repair Center, Repair Center to Vendor, warehouse location to another location within the same warehouse, or Supplier to warehouse.

Associated with Inventory are shipping, receiving and the Logistics Manager module which allows for movement of stock between internal and external locations as well allowing for stock replenishment to stocking locations.

## Logistics

### Types Of Stock Movement

Logistics Process	Description
Pick Lists / Put Away	Enable the physical collection of parts for shipping. Completed via the Pick List Generation screen, or via the Request, RMA or Task. Put Away is the reverse for goods received.
Bill of Lading	Collection of shipments being sent together, recording individual shipments, shipment handling units or a combination
Shipment / Receipt	The dispatching and receiving of the goods
Part Disposition	Disposal or removal of a Part (often hazardous or expensive) that needs to be accounted for
Repair Center Transfers	Moves items within the Repair Center
3 <sup>rd</sup> Party Repair	Creates Requests and Purchase Orders to send items to a third party
Transfer a Bin	Moves the Bin and its contents to another Location or to another Bin
Lot Control	Enables tracking of each item to its group of origin



As illustrated in the previous slide, logistics is movement of stock. Many of the movements are found under the menu item Inventory, Logistics, Logistics Manager.

All movements of stock are recorded in **Part Transactions log**. They are logged for internal purposes and for you to use in research purposes.

**Pick Lists** enable you to physically collect parts to be shipped when creating shipment records for allocated part needs. Picking is done either on the Pick List Generation screen or on the Request, RMA or Task via the “Print Picks” button.

Once the items are collected and ready to ship, **Shipping** can be performed. A **Bill of Lading** is a collection of shipments being sent together same carrier / same conveyance. Bill of lading can record individual shipments, shipment handling units, or a combination of both.

**Receiving** accepts items into inventory that were sent on an RMA, transferred in-transit, or purchased on a purchase order.

**Part Disposition** is normally performed during service when you dispose or remove a part that must be accounted for. Typically these parts are bio-hazardous or expensive.

There are times that you need to move stock or adjust quantities when you do not need to use the receiving or shipping processes. This is done through **Stock Adjustments**.

**Repair Center Transfers** moves items within the repair center.

**3<sup>rd</sup> Party Repair** creates requests and purchase orders to send items to your third-party repair center or vendor. Another stock movement is to **Transfer a bin** and its contents from one location to another or you can transfer the contents of a bin to another bin.

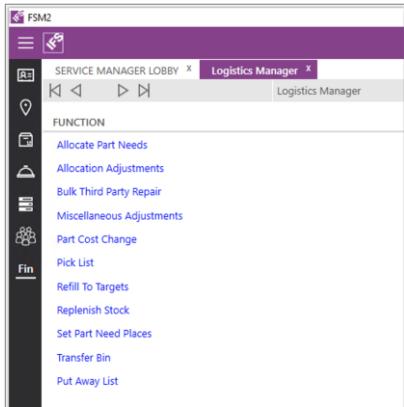
**Put Away** is conceptually similar to picking, but in reverse. A list of items to put away is generated with locations and bins.

**Lot Control** is a supply chain concept used to ensure that every piece of inventory can be tracked to its group of origin. Lots are specific batches of a part that was received, is currently stored, or was shipped from your warehouse. Lots are normally assigned a unique number (lot id).

We will look at various examples of stock movement over the next few slides. We will discuss logistics in greater detail in the *IFS FSM Logistics* course.

## Logistics

### Logistics Manager



The Logistics Manager menu provides access to the screens needed to manage the movement, ordering and tracking of parts in different locations.

Commonly used screens are:

- **Allocate Part Needs**
- **Allocation Adjustment**
- **Pick List**
- **Refill To Targets**
- **Replenish Stock**



- Allocate Part Needs – allocates a Part Needs to a Request, thereby creating a requirement within the system for a Part that is matched with the relevant Request/Task
- Allocation Adjustment – adjustments to the allocation of parts
- Pick List – covered on next slide
- Refill To Targets – sets the target quantities which will trigger the ordering of new parts
- Replenish Stock – facilitates the movement of parts from one location to another where there is a need

## Logistics

### Pick List Generation

- Pick Lists identify Parts to be picked from inventory, with their associated Location and Shipping location. There are 2 methods:



The screenshot shows the 'Service Manager Lobby' interface with a 'Pick List' tab selected. The main area is titled 'Pick List' and contains a form titled 'Pick List Information'. The form includes fields for RequestRMA ID, Task ID, Promote Date (set to 21/5/2019), Need Type, Urgency, From Place, To Location, Bin Zone, Customer Place ID, To Place, Product Name, Condition Code, Commodity Code, Returns Reason, Global Name, Run Options (Print Only), Handle Partials (Do Not Allow Partials), and a checkbox for 'Include Requests On Hold'. At the bottom right are 'Clear', 'Submit', and 'Template' buttons.



Pick lists identify parts that need to be picked from inventory to fulfill part needs as well as where the parts are located, and where they need to be shipped. Pick list generation generates the shipment records that enables you to physically collect parts to be shipped. The part need status is updated to show pick list have been generated. Pick list generation is an asynchronous process.

#### Picking can be done two ways.

**Print Picks** is found on the Part Needs record. This method picks all the parts on the request and allows all partial quantities on the pick list. Once the pick list is generated, a Pick List report is created, the part need status is updated to "PickListGenerated" and there is a Shipment ID hyperlink on the part need.

**Pick List Generation** is found under Logistics Manager. This method picks all the parts based on the criteria selected and has three choices for allowing partials: Do Not Allow Partials, Allow In-Stock Partials, Allow All Partials. Normally this method is used by the Shipping department and run several times a day. Once the pick list is generated, a Pick List report is created, the part need status is updated to "PickListGenerated" and there is a Shipment ID hyperlink on the part need.

For picking, you can choose how many records as the threshold between running interactively (foreground) versus running in the background.

**Async\_threshold\_inventory\_picking** identifies the number of part needs to pick that causes the picking process to be run asynchronously instead of interactively. Value is any positive integer.

Note that if you do need to make a change to the part need in a "PickListGenerated" or "Shipped" status, you will need to delete the shipment to revert the part need back to "Entered" status.

## Logistics

### Shipping Screen

- Shipping of Parts can be done directly to the customer/vendor, or to a Person or Warehouse

**Shipment Header:**

**Shipment Detail:**

**Shipment Units:**

**Serial Entry** (1)

**Serial Entry tab** allows quick entry of multiple units using default information from the serial number

**TIP:** To undo a shipment you can Unpost, which reverses the stock transaction and puts the Part Need back to 'PickListGenerated' status, or you can delete the shipment and the Part Need is set to 'Entered'

The Shipping screen is used to ship parts out of the application. These parts can be sent direct to the customer or vendor. Or, sent intransit to your technician or another warehouse and they would need to record that they received the part.

Using the Serial Entry tab of the Shipping screen, you can easily enter multiple items and they will automatically be matched up with the appropriate lines.

For shipping, you can choose how many records as the threshold between running interactively (foreground) versus running in the background.

Note that there are times that you may have shipped the incorrect serial or unit and need to unpost the shipment. Unposting the shipment reverses the stock transaction and puts the part need in 'PickListGenerated' status again. If you delete the shipment, the part need is set to 'Entered' status whereby you can run the picklist generation process again.

The **serial entry** tab is used to quickly enter multiple units quickly. Information on the Lines tab is updated as each unit is entered. Serial numbers entered are matched with receiving details and receiving units are created. If a serial number cannot be found, an error is recorded on the line. Clicking the **Process** button or posting the receipt processes the entered serialized items.

There are application parameters that are significant to shipping:

**Async\_threshold\_shipment\_post** identifies the number of shipment units to post that causes the posting process to be run asynchronously instead of interactively. Value is any positive integer.

**Max\_lines\_per\_shipment** to limit the number of shipment lines that appear on a shipment, set this value to a positive integer value.

## Logistics Receiving

1 Received (date)  
 2 Receive to Place  
 3 Posted  
 4 Post / Unpost button: updates inventory and financial records

5 Actual Cost  
 6 Quantity Rejected  
 7 Receive Short  
 8 Usable  
 9 Serial Entry tab

The Receiving screen is used to receive parts into the application. There are fields on the receiving header screen that are significant.

**Receiving** identifies the date and time that the items were received.

**Place ID to Receive** identifies the place that received the received items

**Posted** indicates whether inventory is adjusted. N = No, P = Partial, Y = Yes (Full).

**Post/Unpost button** updates both inventory and financial records. Posting a receipt will cause inventory to increment and update the part transaction log. Unposting will reverse the transaction. The part transaction log will be updated with the reversal.

The **receiving line** contains information significant information for the receipt.

**Actual Cost** is the actual cost of the part received. It will be used to update the average cost.

**Quantity rejected** will place the outstanding purchase orders and in-transit quantity back into the on-hand quantity of the shipping location and keep the line open waiting for the remainder to be received.

**Receive short** will place the outstanding purchase orders and in-transit quantity back into the on-hand quantity of the shipping location and close the line. The quantity ordered remains unchanged.

**Usable** is used to indicate the usability of the part. By default, for example, purchase orders are received usable. Repair center receipts are received unusable.

The **serial entry** tab is used to quickly enter multiple units. Information on the Lines tab is updated as each unit is entered. Serial numbers entered are matched with receiving details and receiving units are created. If a serial number cannot be found, an error is recorded on the line. Clicking the **Process** button or posting the receipt processes the entered serialized items.

## Logistics

### Media Carousel

Shipping

Receiving

Repair Center screen



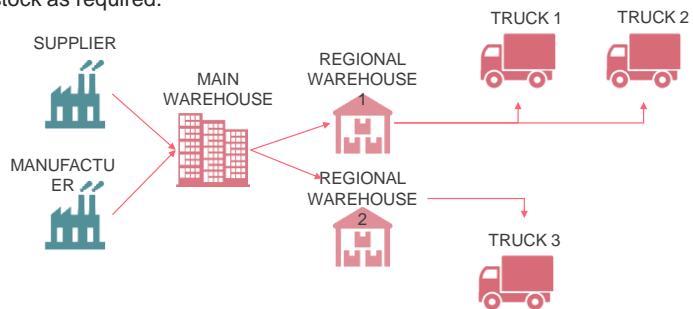
The media carousel, images from your image library, is visible on the shipping and receiving screens as well as on the Repair Center screen. The formats that are allowed are .jpg, .png, .wmv and .gif. A use of the media carousel is to help your receiving personnel receive the correct parts into inventory by showing them a variety of angles of the part.

## Logistics

### Replenishment & Refill Pipeline

- **Replenishment** is the process of moving stock from one location to another location, via Requests or Part Needs, based on minimum and maximum quantities shown on the stock record and outstanding backorders.
- **Refills** is the process of bringing parts in from an outside source to refill stock quantities. Refilling goes to the top-level Warehouse. The 'Refill to Target' feature looks at non-committed stock and automatically creates Purchase Order to increase stock as required.

The stock pipeline may be simple or extensive; just-in-time or with longer lead times, depending on the business need.



**Replenishments** is the process of moving stock from one location to another location. Replenishments create requests / part needs to transfer stock from one location to another location. This is based on minimum and maximum quantities on stock record and outstanding backorders. **Refills** is the process of bringing parts in from an outside source such as a distributor or vendor to refill stock quantities. The stocking places that you are refilling will be your top level warehouse(s). The Refill to Target process examines the stock that is not committed and automatically creates purchase orders to increase stock to the maximums calculated.

You need to define your stock “pipeline”, that is, you need to determine who supplies stock to whom. Depending on your service operations, the pipeline may be extensive or simple. In an extensive pipeline, the parts may flow from your suppliers to national warehouses to regional warehouses to branch warehouses to service truck. In a simple pipeline, the parts may flow from the supplier to your warehouse to your truck. The frequency with which you replenish stock will depend on your volume of part usage and the quantity of on-hand parts you want to maintain.

## Logistics

### Purchasing Process

- The financial processes required to complete the stock replenishment process are **Purchase Requisition** and **Purchase Order**.

#### PURCHASE REQUISITION

Optional process, depending on business requirement

Notifies buying team to source the parts included on the requisition

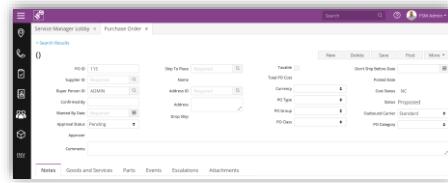
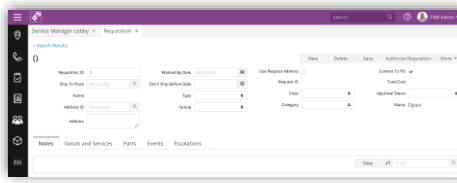
Provides additional approval level

#### PURCHASE ORDER

Usually, mandatory process

Communicate the Parts requirement to the supplier

Created using Refill to Targets or manually



FSM allows you to create a purchase requisition and/or a purchase order.

The **purchase requisition** is not a mandatory process but will be an additional step that can be followed. As part of the purchasing process within businesses there can be a team of buyers who decide where parts or services will be sourced from externally due to them knowing which supplier is the best to use for every situation along with taking the cost/pricing into account. A purchase requisition will notify the buyers to source the parts needed for them to add the supplier for each part and then generate the purchase orders.

**Purchase orders** are used to obtain parts from suppliers. They are either created using the refill to targets function, as described below, or you can create them manually. Purchase order lines can be specified with its own currency. Specified currencies will be used to find and use cost records with that currency when determining the cost of the item on that line. If no match exists, cost is

determined by conversion of the corporate currency to the purchase order currency. After purchase orders are created using refill to targets, you review them, make any necessary changes, and post them. You can mix goods and services and parts on the same purchase order.

Refill To Target and Bulk third party processes allow the user to generate purchase orders or purchase requisitions.



Go to the warehouse Place record. Show Bins & Serials and Bins & Lots.  
Show how to create a new bin.  
Go to Stock. Search for the Place and Location above.  
Show a stock adjustment in to a useable location.  
Go to a request. Create two part needs – one that a quantity and one that is backordered. Pick the part need on the Pick List Generation screen but show that it could be done on the request from the Print Picks button.  
Show the stock record that it was allocated.  
Ship the part. Show the stock record was decremented.  
Go to purchasing. Create a purchase requisition and purchase order for the place and location and part above. Post it.  
Go to stock record and show the on order quantity  
Receive it. Show the on order quantity has been removed and the on hand has been incremented.

## Practice & Learn

### Logistics

- Go to Inventory, Stock
- Add a new stock record for your part
  - Place ID = MX Repair; Location = SHIP
- Go to Inventory, Logistics, Logistics Manager, Miscellaneous Adjustments
  - Adjustment Reason will be Receipt
  - Your part, quantity 1
  - To Place = MX Repair; Location = Ship
  - Create 3 serial IDs, click Submit
- Go back to stock record to review
- Create a purchase requisition and a purchase order
- Receive the purchase order



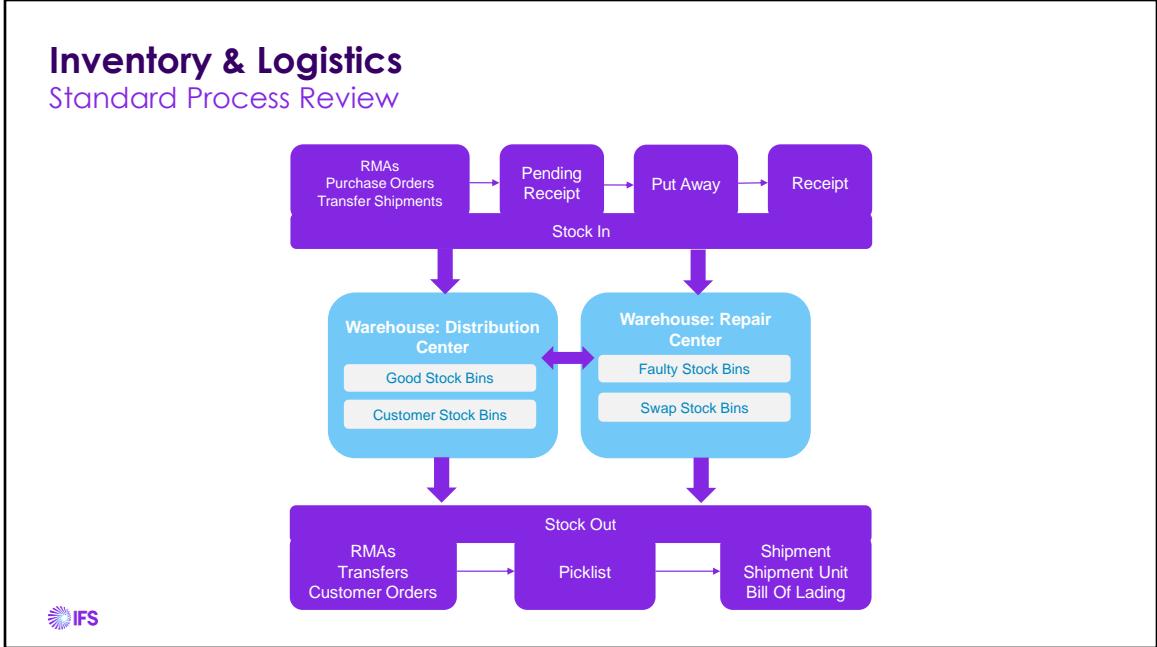
You will be adding stock to your stock record



By the end of this lesson, you should:  
Understand standard Logistic processes  
Understand Stock movement  
Be able to configure basic Logistics processes in FSM

# Inventory & Logistics Review





Inventory is the management of your parts and stock. Movement of the parts and stock from one Place/Location to another is Logistics, which we will cover in the next section of the training.

Inventory management sits in the center of the process, and includes all aspects required to ensure the right stock is available in the right quantities at the right time (right place aspect is the responsibility of Logistics)

Aspects of inventory management that are of interest are stock control (counting, replenishment, adjustments, allocation of stock to Tasks/Requests etc) and reporting and analysis

## Agenda

- 01 Introduction
- 02 Contracts Overview
- 03 Contract Creation And Data Setup
- 04 PM Contracts
- 05 Pricing, invoicing and billing



# 5. Contracts And Financial Management



# Contracts Introduction



5.

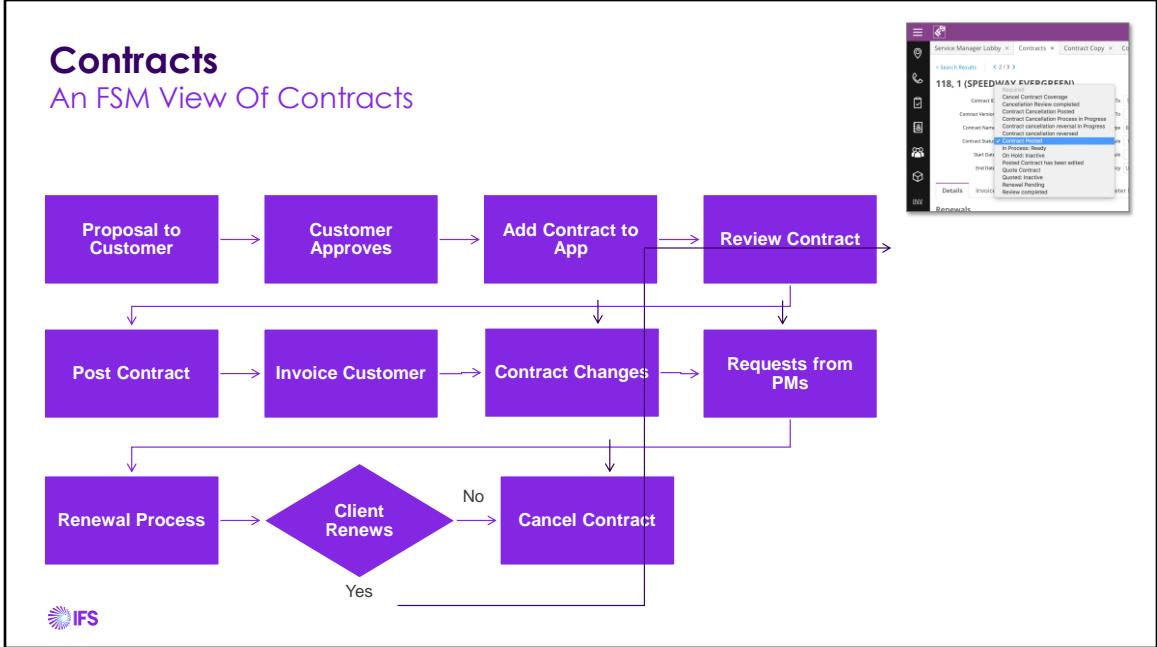
## Contracts

### Learning Outcomes



By the end of this lesson, you should:

- Understand the process flow for Contracts
- Understand the various contract types available in FSM
- Understand basic Contract setup



Contracts are set up for SLAs, billing, specify items covered, specify meter plans, and specify preventative maintenance plans.

The slide shows a standard contract process flow. Reflected in FSM by the Contract Status field

## Contracts

### Contract Types In FSM



#### STANDARD CONTRACT

- Has a start and end date.
- Generally renewed before the end date.



#### EVERGREEN CONTRACT

- Has a start date but not end date. You specify the number of open bill periods.



#### SEASONAL CONTRACT

- Does not renew automatically as it may be in effect for only part of the year, e.g., a lawn-mowing contract.

Any of these Contract Types can be used to create:

#### PREVENTATIVE MAINTENANCE CONTRACT

- Specifies maintenance schedule
- Automatically creates Requests & Tasks

#### METER CONTRACT

#### BENEFIT PLAN

- Allows benefits up to a certain value (parts or labor) to be provided
- Part Usage or Non-Part



You can create three variety of contracts:

**Standard** contracts have a start date and an end date. They are generally renewed before the end date and become effective the day after the end date.

**Evergreen** contracts have a start date but no end date because they do not expire and are therefore not renewed. You specify the number of open bill periods.

**Seasonal** contracts do not renew the day after the previous contract ends. For example, you might create a contract to service lawn care equipment over the course of a northern growing season, from April to October. Therefore, the contract might be effective from April 1 to October 31. In addition, there is a need to allow for PMs to create a PM Schedule outside of the term of coverage, in order to accommodate business processes as inspections prior, or shutdown procedures after the Contract term has expired.

There are two (2) choices for calculating seasonal Contracts: dynamically calculating based on current dates and static month and day restarts. We will discuss the set up of each in the next slides.

**Preventative Maintenance** and **Meter** contracts can be created from a standard, evergreen or seasonal contract. PM contracts specify PM schedules. After PM generation, requests and tasks are automatically created. Meter contracts are used to define how to price the metered items. We will discuss PM contracts in a later lesson. We will discuss meters and meter contracts in another course.

A **benefit** can be for part or labor and expenses (usage) or a volume of activity (number of requests opened in a given time period). A benefit Contract allows a benefit to be applied before or after the threshold. You can also specify the period in which the usage is counted. A **benefit Contract** can be a standard, evergreen or seasonal Contract. For example, benefit Contracts can include two hours of telephone support per month or \$2000.00 of parts per year and charge full price for the remaining. Benefit Contracts are set up using Benefit Plans. FSM has two benefit plans – Part Benefit Plans and Non Part Benefit Plans. Once set up, these plans are then associated to the Contract type which in turn is applied to the Contract.

The next few slides explain how to set up Part and Non-Part Benefit Plans.

You can set up benefit plans for part usage. You can set up benefit plans for non-part usage.

Or, you can set up benefit plans based on combined part usage and non-part usage. The result of bundling parts and labor into the same benefit plan allows for easier management of plan. You can set up the following types of benefit plans:

Combined usage—sum of part and non-part quantities or amounts

Request volume—the number of requests within a period

Task volume—the number of tasks within a period

Project volume—the number of projects within a period

## Basic Data Required

### Person – Significant Fields And Tabs

The screenshot shows the 'Contract personnel' record in the IFS system. At the top, there are three tabs: 'Contract Posting Group' (selected), 'Approvals', and 'Role's tab'. Below these tabs, the record details are displayed.

**Contract Posting Group:**

- Work Phone: 262-555-8560
- Mobile Phone: 262-511-9971
- Email: eng01@mx.com
- Job Title: Field Engineer
- Calendar: STD

**Approvals:**

- Person Status: Active
- Request Post Grp: 02
- Type: Field Technician
- Category: Level 12
- FSM License Type: NAMED

**Role's tab:**

- Employee: (dropdown)
- Language: English
- Currency: U.S. Dollar
- Contract Post Grp: 02
- Manager
- Person Class
- Person Group
- Alt Approver
- Approval Limit
- Approval Level
- Style Name

**Other Fields:**

- Attachments, Printers, Mobile, Attributes, Social Media, Communication History, Skills, Calendar Exception, Roles, Teams
- Mobile User, Dispatchable, Editing Resource, SMS Carrier, Start Date, End Date, Alt Email, Home Phone
- URL, Latitude, Longitude, Geocode ID, Travels With Resource ID, Initial Screen, Initial Lobby ID, GL COGS

**IFS Logo:**

A Person is an individual who can log into FSM to maintain Contracts. There are some significant fields on the Person record that can affect Contracts.

**Contract Post Grp(ou)** is a default that is assigned to a new Contract created by this person. It is usually used for billing and can be used for classification and reporting purposes.

**Alt Approver** determines the Contract personnel who can approve in place of the approver when using simple approvals.

**Approval Limit** determines the maximum dollar amount the Contract personnel can post for a Contract, purchase order, or quote, as specified using the ENABLE\_APPROVALS application parameter. This limit applies to simple approvals only.

**Approver** determines the person who can approve a Contract, purchase order, or quote whose monetary value is higher than the approval limit when using simple approvals.

There are some significant tabs on the Person record that can affect Contracts.

**Roles** are used to identify the menus, screens and functions that a Contract personnel cannot access. You do not necessarily want your Contracts personnel to have Inventory functions.

## Basic Data Required

### Person – Technician Significant Fields And Tabs

# Technicians

- Dispatchable
- Calendar
- Skills tab
- Teams tab

The screenshot shows the IFS application interface for managing technicians. At the top, there's a navigation bar with links like 'Home', 'Log In', 'Help', and 'Logout'. Below that is a search bar with placeholder text 'Search...'. The main content area has a title 'Technicians' on the left. To the right of the title are several tabs: 'General' (selected), 'Address', 'Phone', 'Email', 'Fax', 'Mobile', 'SMS', 'Social Media', 'Communication History', 'Skills' (circled in purple), 'Calendar Exception', 'Roles', and 'Teams' (also circled in purple). On the left side, there's a sidebar with sections for 'Attachments', 'Printers', 'Mobile', 'Attributes', and 'Social Media'. The main content area contains various data fields and dropdown menus. At the bottom right, there's a 'Manager' section with fields for 'Person Class', 'Person Group', 'Next Approver', 'Approval Limit', 'Approval Level', and 'Skype Name'. The bottom of the page features a footer with the IFS logo and copyright information.

A Person is an individual who is assigned to perform the Contract services.

There are some significant fields on the Person record that can affect Contracts.

**Dispatchable** determines whether the technician can be assigned tasks. This option will be discussed in the PM Generation lesson.

**Calendar** defines the work calendar for a technician. This option will be discussed in the PM Generation lesson. There are some significant tabs on the Person record that can affect Contracts.

**Skills** are the certified skills that a technician has. These can be used to assign the person to a scheduled task. This option will be discussed in the PM Generation lesson.

**Work Calendar Exception** works with the Calendar fields on the Person record and used to determine scheduling tasks. This option will be discussed in the PM Generation lesson.

**Teams** are used to determine scheduling tasks. This option will be discussed in the PM Generation lesson.



IFS

Show the contract flow from creation of contract to posting, modifying and invoicing

# Contract Setup



## Contract Setup

### Learning Outcomes



By the end of this lesson, you should:

- Understand Entitlements
- Understand Benefits
- Understand Invoicing Rules
- Understand Contract Type

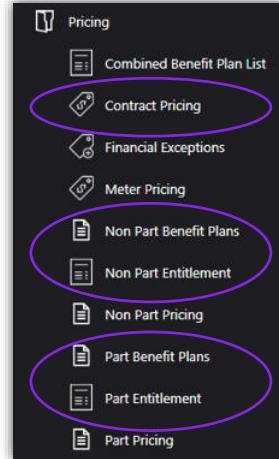
## Contract Setup

### Pricing

Entitlements

Benefit Plans

Contract Pricing



The setup for entitlements and benefit plans is found under the Financials, Pricing menu.

**Entitlement** contracts are used when the customer wants to have products or services **covered for a specific price** with adjustments and exceptions. This includes exceptions for both part and labor coverage.

For example, you can discount all parts by 10 percent. Entitlement rules enable you to apply adjustments to pricing based on contract information. Multiple rules enable you to create complex entitlement structures by specifying adjustments based on coverage rules. You can set up rules to perform multiple adjustments. Pricing adjustments that are assigned are then used during invoicing and billing.

**Benefit plan** contracts are similar to insurance policies where **you have a deductible**. When you reach the deductible, you will be covered at a certain percentage (including 100%). Or it could be vice versa, you don't pay up to a certain amount (threshold). Once you reach the amount, you must begin to pay. In other words, it is a price adjustment based on usage.

Examples of use:

2 hours of support a month

2 emergency visits a month

\$2000 worth of parts free per year

For example, you can waive the labor charge for the first two field service requests and charge full price for the remaining.

**Contract pricing** set up the rule name and search order on this table. Optionally, you can set up a price template which will default certain pre-set information. For example, you want to price based on Contract type and model.

**Contract period pricing** is used to set up the parameters for pricing. You can have as many or as few of parameters as you need. Based on the example, you will need to set up parameters for contr\_type and model\_id. You can also use the Map List ID to map to parameters on other non-financial tables. Financial mapping will be discussed in the *IFS FSM Financials* course.

## Contract Setup

### Invoice Rules

Defines  
Parameters  
for Invoicing

Day of the month to bill

Frequency of billing (monthly, quarterly, yearly)

Specifies period start and end points for billing

Becomes the bill schedule on the contract

Invoice Rule Template ID	783
Bill Period Type	Annual
Sched Start Day	1
Sched Start Mth	1
Sched Start Point	Contract Start Date
Open Bill Schedules	

Description	Annual
Sched Ref Point	Release Periods
Release Prd Type	Release Direction
Build Schedules	<input checked="" type="checkbox"/>
Release DOM	<input type="checkbox"/>
Build Meter Schedules	<input checked="" type="checkbox"/>
	Backbill
	<input type="checkbox"/>
	Use Annual Prd



**Invoice rules** define the parameters used when invoicing for contracted parts or services such as what day of the month to bill, frequency of billing, at what point of the contract the billing will be calculated (i.e., contract start date, contract end date). You can set up templates which will default the values when you create the contract or you can manually set up invoice rules on each contract. Invoice rule templates are found under the Financials, Admin menu.

When the contract is created, bill schedules are also created. Two bill schedules can be specified: one for billing the contract and associated lines and one for billing meter plans. You can bill contracts and meter plans using different schedules. Using an invoice rule template, you specify the period, start point, and end point for the bill schedule. After the bill schedule is created, you can make any adjustments required. If you set a manual price in the contract header, that price is used to calculate the unadjusted billing price for each period in the bill schedule. The first or last bill period may be a higher price when the manual price cannot be divided evenly.

## Contract Setup

### Contract Type

Response times for call-back and arrival on site

Types of services covered

Benefit Plans

Coverage for field service, repair, or both

Evergreen coverage

BASIC		Contract Type		Description		Response Code		Coverage Code		Fs Coverage		Rc Coverage		Active		Cov Day Begin			
Contract Type	BASIC	Description	BASIC COVERAGE	Response Code	3 DAY	Coverage Code	M-F 8 HRS/Day	Part Cov Code	Billable Parts	Corp Offdays Covd	Locked	Corp Offdays Covd	Posting Group	Contr Line Type	VAT Code	Sequence	Type On RNU	Cov Day End	Day Numbers End
Non Part Cov Code	Labor Billable	Part Benefit Plan	ALLOWANCE														Status	Message ID	Invoice Rule Template ID



The **Contract type** table defines the terms and conditions that apply to the contract that the customer agreed to (e.g., response time to returning call to customer and arriving on site, days and hours of coverage, what parts and labor covered). Contracts can apply to both service requests and repair requests. The Contract Type table is found under Financials, Admin.

Below are examples of coverage that is set up on the Contract Type table.

#### Basic Coverage

Monday – Friday/ 8 am – 5 pm

2 hour response time

8 hour arrival time

Parts and labor are billable

#### Silver Coverage

Monday – Friday/ 8 am – 5 pm

2 hour response time

4 hour arrival time

Parts and labor cover 50%

#### Gold Coverage

Monday – Friday/ 8 am – 5 pm

30 min response time

1 hour arrival time

Parts and labor covered 100%



IFS

Show the contract pricing, benefit and entitlements set up screens

Show the invoice rule template

Show the how to set up the contract type table

## Practice & Learn

### Contract Setup

- Go to Financials, Admin, Invoice Rule Template
- Create an invoice rule
- Go to Financials, Admin, Contract Type
- Create a coverage for Platinum support





By the end of this lesson, you should:  
Understand Entitlements  
Understand Benefits  
Understand Invoicing Rules  
Understand Contract Type

# Contract Creation



## Contract Creation

### Learning Outcomes



By the end of this lesson, you should:

- Understand what is on the Contract header
- Know how to create a Contract header
- Understand what is on Contract Lines
- Know how to create Contract Lines

## Contract Creation

### Contract Header Fields

The screenshot shows the Service Manager Lobby interface with the 'Contracts' module selected. A new contract record is being created for 'SPEEDWAY EVERGREEN'. The following fields are highlighted with numbered callouts:

- 1. Contract ID:** 118 (highlighted in red)
- 2. Contract Status:** In Process: Ready (highlighted in red)
- 3. Start Date / End Date:** Shows duration of contract coverage (highlighted in red)
- 4. Contract Type:** BASIC COVERAGE (highlighted in red)
- 5. Posting Group:** 01 (highlighted in red)

Below the interface, five purple callout boxes provide detailed descriptions for each highlighted field:

- 1. CONTRACT ID** – Unique identifier; system generated but can be changed before first save.
- 2. CONTRACT STATUS** – Defaults to In Process: Ready. Updates occur both manually and automatically.
- 3. START DATE / END DATE** Shows duration of contract coverage
- 4. CONTRACT TYPE** Defines terms and conditions of the contract. Will default to Contract Lines
- 5. POSTING GROUP** Defaults from the Person logged in

Contract headers contains information that applies to the entire contract as well as defaults for the contract lines. You can choose to cover individual products, therefore you must have Product records set up for each product to be covered.

You can choose to cover all product of a model, therefore you must have Model records set up for each product to be covered.

You can choose to cover all products at a place, therefore you must have Place records set up and specify the place for each product to be covered. There are many fields on the Contract header. Depending on the type of Contract you are creating, certain fields will need to be populated. In this lesson, we are creating a standard Contract. We will discuss the other fields in later lessons when we create other types of Contracts.

**Contract ID** is the unique identifier of the Contract. This is system generated and can be changed before the first save.

Upon creation of the Contract, the **Contract Version** value is 1. The field will be incremented upon renewal of the Contract.

**Contract Name** is an optional field and can be used to describe the Contract.

Upon creation of the Contract, the **Contract Status** default is In Process: Ready. As the Contract moves through its lifecycle, the status will change. Some changes are manual changes. Some changes are performed by the application after certain processes.

Upon creation of the Contract, **Posting Group** defaults from the person logged in. If you specify a place ID to bill, the default posting group of the Contract is then overridden with the posting group of the Place record, if specified. User defined code used to group Contracts for reporting, Contract Renewal, Contract PM Request Generation and/or Bill Generation.

**Start Date/End Date** identifies the term of coverage for the Contract. It is considered to begin at the start of business on this date and end at the end of business on this date.

**Contract Invoice Rule** is the invoice rule template.

**Place ID Bill To** is the place ID to bill. The option "Billing Place" on the place record must be selected.

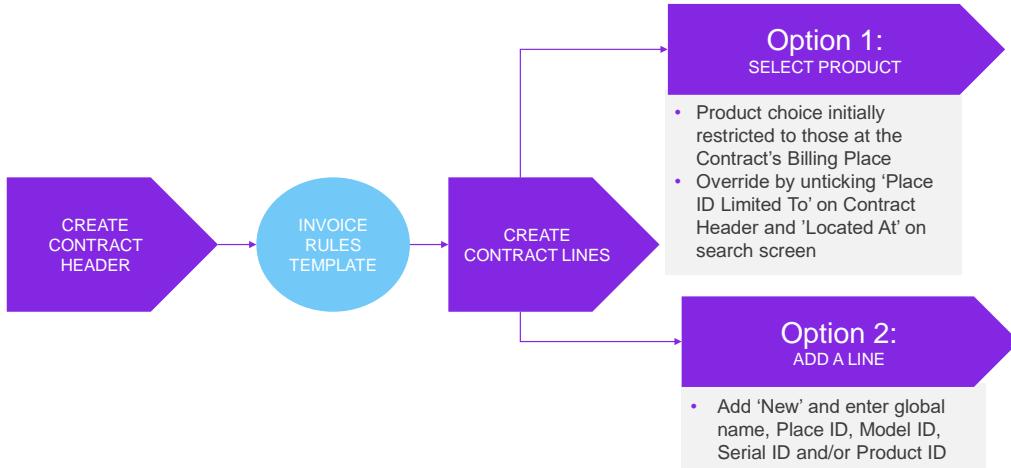
**Place ID Limit To** (optional) will limit the products to a specific service location (Product Located At).

**Contract Type** will define the terms and conditions of the Contract. This information will default to the Contract lines.

Upon selection of the Place ID Bill To, the **Currency** will populate from the place record.

## Contract Creation

### Contract Lines



The Contract creation process begins with the creation of the header. Invoice rules templates are associated with the header and carried down to the lines. Optionally, you can manually create invoice rules to carry down to the lines. Contract line are created either by selecting the product or manually creating the line.

There are 2 ways to create Contract lines – selecting the product or adding a new line.

If you create the line via “**Select Product**”, initially you are restricted to selecting products at the Billing Place on the Contract. If the field “Place ID Limited To” on the header is not populated, you can clear the “Located At” field on the search screen to select any product at any place. If the field “Place ID Limited To” on the header is populated, you are restricted to only products at that place.

If you do not have an invoice rule template on the header, you must select an invoice rule every time you select or add a Contract line.

If you create a line via “**New**”, depending on the line type you select, you will be required to enter a global name, place ID, model ID, serial ID and/or product ID. Again, if you do not have an invoice rule template on the header, you must select an invoice rule every time you select or add a Contract line.

The **Detail** tab stores information from the Contract header including defaults from the Contract type. This information can be modified.

## Contract Creation

### Contract Line Fields

The screenshot shows the IFS Service Manager interface with the following details:

- Header:** Service Manager Lobby > Contracts > Invoice
- Contract Details:** Contract ID: 118, Sequence: 21, Line Status: Contract Posted, Line Type: Product Coverage, Contract Type: BASIC COVERAGE.
- Line Item Fields:** Global Name, Place ID: S100, Model ID: VIVID 5, Serial ID: 89810223, Product ID: 10177, Qty Covered: 1, Include Children, Meter Inv Rule.
- Right Panel Fields:** Coverage Start: 30/04/2017, Coverage Eff: 30/04/2017, Coverage End, Adjust Pct, Bill Total Price: 600.00, Manual Price, Pricing Source: Period Pricing Successful, Estimated Cost.
- Buttons:** Delete, Save, Regen Bill Sched, Post Contract.

**Annotations:**

- 1 CONTRACT TYPE – Defaults from Contract Header**
- 2 INVOICE RULE – From Invoice Rule Template or a manually created invoice rule (if Contract Invoice Rule)**
- 3 COVERAGE EFF 'Effective Date' used for initial table-pricing; used to schedule PMs. Cannot be before Coverage Start Date**

**POST CONTRACT BUTTON**  
The final step in Contract creation.  
After Posting the Contract no longer appears; it makes the Contract Active or Live, eligible for invoicing and Requests and Repairs

These are some of the more significant fields used within Contract line creation:

**Contract Type** defaults from the header and can be changed.

**Invoice Rule** selection of the value is either from the Invoice Rule Template or a manually created invoice rule as long as the Invoice Rule exists as a Contract Invoice rule.

**Coverage** is a general term that applies to the benefits and entitlements you provide to your customer in exchange for a periodic fee. The Coverage Effective Date is used for the initial table-pricing to identify the list price in effect and is then set as the Priced On Date - otherwise "coverage start" and "coverage end" simply define the length of the term.

**Coverage Start** identifies the start of the coverage for items on this Contract line. It is considered to be the start of business that day and cannot be earlier than the start date specified on the header. This value is used when calculating the bill schedule. Defaults from the header; can be changed, but cannot be before the Coverage Start date.

**Coverage End** identifies the end of coverage for items on this Contract line. It is considered to be the end of business that day and cannot be later than the end date specified on the header. Defaults from the header; can be changed, but cannot be after the end date of the Contract.

**Coverage Effective date** affects a few different areas. It is used to drive which effective date to look for in Contract pricing. It can be used to determine when to schedule PMs. It is used in Contract selection to determine if the Contract is active or future. This date cannot be before the Coverage Start date. The value identifies the effective date of coverage for items on this Contract line. It is used in the initial table-pricing of the line to derive the list price. This value is used when determining the application of entitlements. It is not used in bill schedule calculations.

The final step in contract creation is posting the contract. The **Post Contract** button is used to post the contract; after the contract is posted, it no longer appears. It makes the contract active or live, eligible for invoicing and visible in Request and Repair screens.

## Review And Post Contract



### Post Contract Button

- Reviews Contract for system errors
- Makes the Contract active
- Eligible for invoicing



Once you have created the header and the Contract lines, you are ready to review and post the Contract.

**Post Contract** button is used to review and post the Contract. Posting the Contract make it active and eligible for invoicing.

After the Contract is posted, the button no longer appears on the screen.

## Contract Creation

### Contract Visibility

Visible in Request  
Visible in Repair screens

M570QA (MKEPDE40) - Contract Selection					
Place ID	A100	Model ID	Product ID		
Active Contracts					
ID	VER	TYPE	START DATE	END DATE	COVG TYPE
103290	1	BASIC PLUS	5/3/2017	5/3/2018	PLACE
103290	1	BASIC PLUS	5/3/2017	5/3/2018	PLACE



After the Contract is posted, it is visible in request and repair screens. Depending on application parameters, expired and future Contracts can also be seen in request and repair screens.

The Contract Selection screen on the Request screen uses the following application parameters to display Contracts:

**Contract\_types\_to\_exclude** identifies Contract types for which corresponding Contracts do not appear in the Contract Selection screen. Values are defined on the Contract Type screen.

**Display\_expired\_contracts** determines whether expired, posted Contracts appear on the Contract Selection screen.

**Display\_future\_contracts** determines whether future, posted Contracts appear on the Contract Selection screen.

**Display\_active\_contracts** determines whether active, posted Contracts appear on the Contract Selection screen.



Show the creation of contract header

Point out the tabs

Show both ways to add a contract line

- a. Select the product
- b. Add a new line

Post the contract

## Practice & Learn

### Contract Creation

- Go to Financials, Contracts. Create a contract header with your Place ID
- Add the Platinum contract type
- Select a product for the contract line
- Manually add a product to the contract line
- Post the contract
- Go to the Services, Request and add a new request for your place
- Add the product on your contract to the request
- The contract window should appear for you to select the contract





By the end of this lesson, you should:

Understand what is on the Contract header

Know how to create a Contract header

Understand what is on Contract Lines

Know how to create Contract Lines

# Contract Management



## Contract Management

### Learning Outcomes



By the end of this lesson, you should:

- Understand how to modify contracts
- Understand how to copy contracts
- Understand how to cancel contracts
- Understand how to renew contracts

## Contract Management

### Contract Management

Modifications

Copied Contracts

Renewed Contracts

Cancelled Contracts



Once a contract has been posted and live, the customer inevitably will want changes. They may want to add or remove product and services on the contract. They may want to have a similar contract drawn up for another division. They may want to renew their contract for another term. Or, they may want to simply cancel their existing contract. All these situations can be handled within the Contracts module.

## Contract Management

### Changes Pending Option

#### Modifications include

- Change bill schedules
- Add Contract lines
- Change coverage dates
- Change Contract type
- Cancel Contract lines



#### Reprice the Contract with business rules

- Contract repricing
- Non-Part usage repricing
- Part usage repricing
- Part need repricing
- Non-Part need repricing

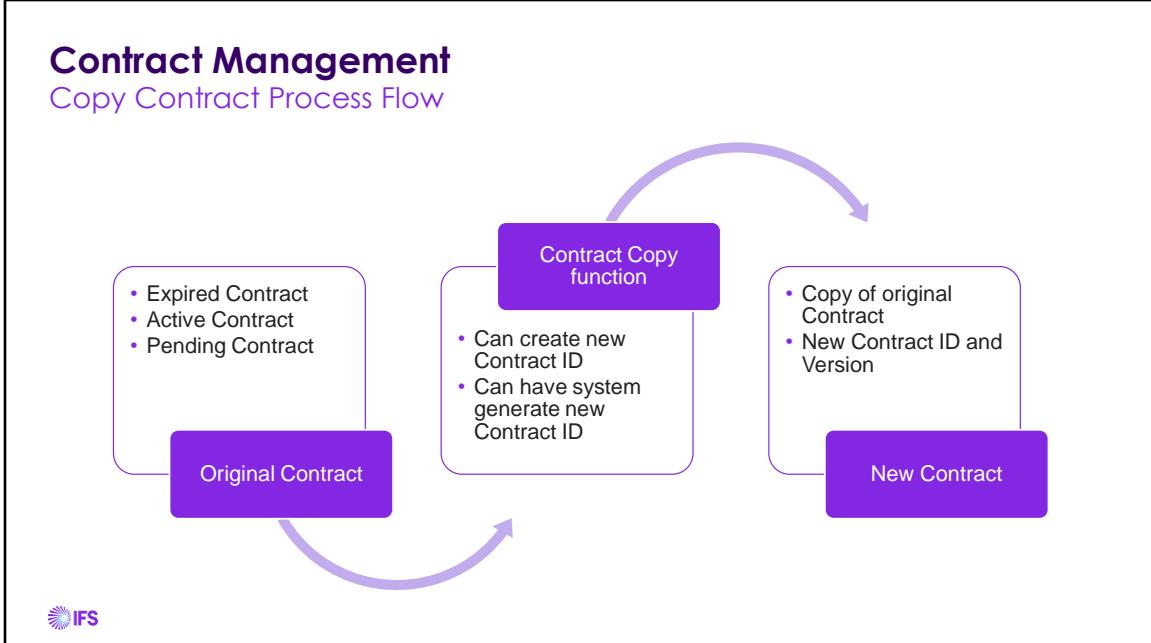


A **modification** to the contract would include adding contract lines, cancelling contract lines, changing coverage dates, changing bill schedules or changing the contract type. Any time a change has occurred, the "Changes Pending" option is automatically selected giving you a visual indicator that changes are in progress. Once you have posted the contract to make the changes active, the option will not be selected.

**Changes to Contracts that are not posted are indicated by the "Changes Pending" option.** A Contract will not create vouchers/Invoices for this Contract if this box is checked. When you post the Contract with your changes, this option is cleared. When you change the Contract type, coverage start date, or coverage end date on the Contract header, any lines with corresponding values are also changed. Changes are processed asynchronously and appear in the Run Log. If you want to put a Contract on hold, you can set the Contract status to On Hold: Inactive. Benefits and entitlements still apply, but invoices are not created and no billing occurs. Any of these changes can affect Contract pricing and we recommend you set up repricing rules to reprice the Contract after changes are saved. You must post the Contract.

Business rules affecting changes to Contracts:

**Contract Repricing** determines whether Contracts are repriced. Rules are evaluated when updating a Contract line and evaluation stops after the first match



Copying a contract is found under Contracts Manager, Contract Copy.

Sometimes there is a need to have a Contract copied from either an active, pending or expired Contract. This process does not RENEW the Contract. It simply makes a copy of the existing Contract with a new Contract ID and version. You have the choice to reprice it, rebuild the bill schedules and pm schedules, and even include expired or canceled lines.

## Contract Management

### Cancelling Entire Contract And Contract Lines

Process to Cancel  
Entire Contract

- Enter Canceled On Date
- Change Contract Status = Cancel
- Post Contract

Process to Cancel  
Individual Line

- Enter Canceled On Date
- Change Line Status = Cancel
- Post Contract



The recommended way to cancel an **individual Contract line** is to enter Canceled On Date, then select Line Status = Cancel. Post Contract

The recommended way to cancel a **Contract header** (thus filtering to the lines) is to

1. Enter Canceled On Date on Contract header
2. Change Contract status = Cancel
3. Post Contract

Note, if you leave the "Canceled On Date" null, the Contract cancels fully. The cancellation will then be based on the coverage dates rather than the canceled on date.

The bill schedules are automatically adjusted. If you have "Backbill" set on the Invoicing Rule, you will automatically get credits. Also, if you were to reverse the cancellation of the Contract, the bill schedules are automatically adjusted.

The other way is to change the end dates of the Contracts. It is much more difficult to reverse the cancellation as you will need to adjust the Contract header and line dates.

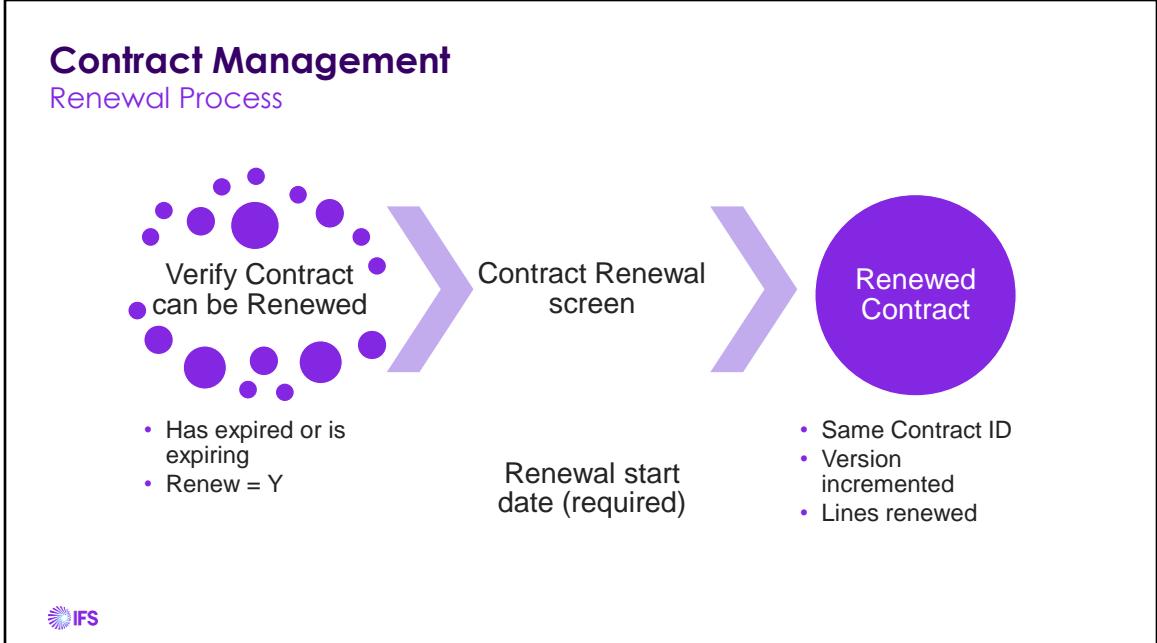
Except for several application parameters, there is no difference in **cancelling PM Contracts**.

There are application parameters to apply to situations where a request PM generated is canceled.

**Cancel\_pm\_schedule\_instead\_of\_delete** is set to Y (yes) if you want the preventative maintenance schedule set to canceled status instead of deleted when the coverage length is changed.

**Cancel\_pm\_set\_request\_to** is the status to set on a preventative maintenance request when it is automatically canceled because the value of **cancel\_pm\_schedule\_instead\_of\_delete** is Y (yes). Values are defined on the req\_status code table.

**Cancel\_task\_pm\_status** is the status to assign to a related preventative maintenance schedule when a task is canceled. Values are CANCEL, COMPLETE, and blank (null). When the value is blank (null), the preventative maintenance schedule entry status is set to Ready.



Once a contract reaches its end date, it expires. To avoid expiration, the contract must go through a renewal process prior to the end date. When you **renew** a contract, you create a new contract with the same contract ID and an incremented version number. Information on the Details tab of the Contract screen control all other aspects of contract renewal.

The process for renewal is found under the Financials, Contract Manager menu.

1. Verify the Contract can be renewed. The Renew option = Y on the Contract line and Contract header and the Contract has or is about to expire.
2. Go to Financials, Contract Manager, Contract Renewal. **Renewal Start Date** is required. The other fields are optional. The Contract will be picked up if the date is on or after the **Up for Renewal On** field on the Contract header.
3. The Contract is created with same Contract ID and an incremented Contract version.



Modify the contract. Post it.

Show the version does not change.

Copy the contract and change the dates to the past. Post it.

Show the version does not change.

Cancel a line on the contract.

Renew that contract to show the version change.

Create a request for the place and the product and show the contracts appearing in the contract window.

## Practice & Learn

### Contract Management

- Go to your contract and make modifications to the contract
- Add a new contract line
- Modify the price on the original line
- Post the contract
- Cancel a line on the contract
- Copy your contract and Post
- Go to the Services, Request and add a new request for your place
- Add the product on your contract to the request
- The contract window should appear for you to select the contract





By the end of this lesson, you should :  
Understand how to modify contracts  
Understand how to copy contracts  
Understand how to cancel contracts  
Understand how to renew contracts

# PM Contracts



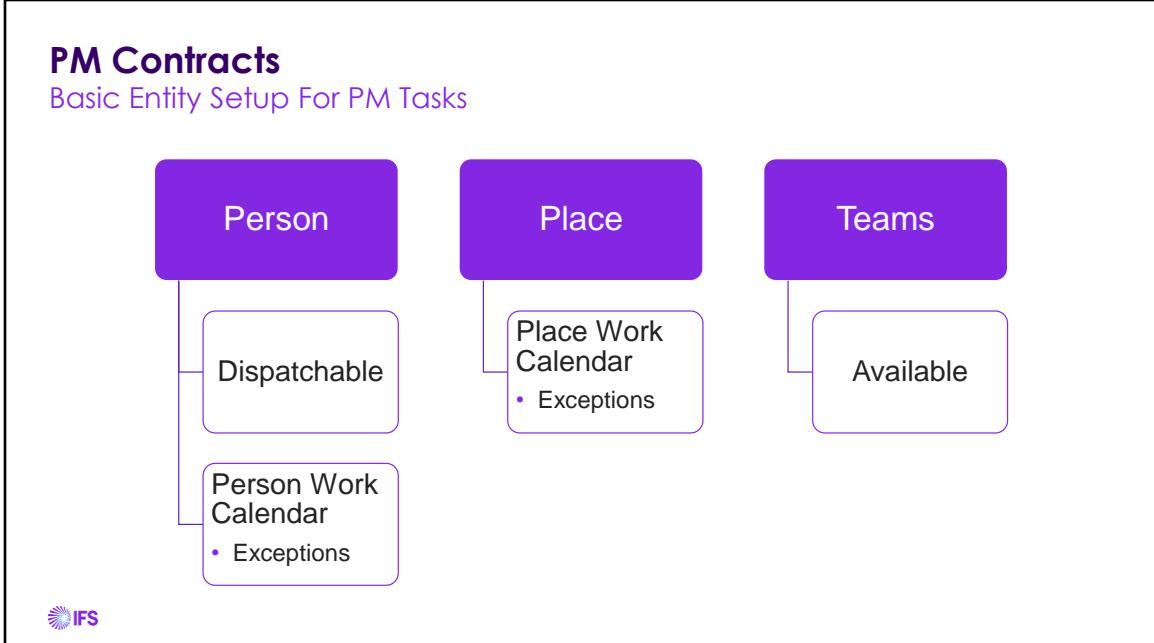
## PM Contracts

### Learning Outcomes



By the end of this lesson, you should:

- Be able to define Preventative Maintenance
- Know how to create simple PM Contracts



Preventative maintenance is the creation of a schedule on a contract to perform tasks, and the creation of requests and tasks to track completion of the maintenance. Preventative maintenance is created based on a contract. Schedules are created based on rules you set up. You determine the interval between schedules, whether they occur based on interval, meter readings, or time since last completion. Canceling or closing a task also counts as completion. You also specify request and task templates to be used when creating the requests and tasks. If a contract ends and preventative maintenance is not allowed out of coverage, new preventative maintenance schedules based on task completion are not created. If a newer version of the contract exists, for example it has been renewed, the next preventative maintenance schedule's date is adjusted based on the task completion date. Requests are created for products that require preventative maintenance. Based on the type of contract coverage and application parameters, tasks can be created for each product. Requests can be consolidated based on criteria you specify during generation of requests and tasks, known as autogen.

Requests are created for products that require preventative maintenance. Based on the type of Contract coverage and application parameters, tasks can be created for each product. Requests can be consolidated based on criteria you specify during generation of requests and tasks, known as autogen.

**Request Templates** are used to define certain fields on the request when the PMs are generated. This is an optional table.

**Task Templates** are used to define certain fields on the task when the PMs are generated. This is an optional table.

Both request and task templates can be applied on the Contract PM schedule or they can be applied when the requests and tasks are automatically generated. Request and Task templates are discussed in detail in the *IFS FSM Services* course.

Person, Place and Teams have fields that should be setup for tasks to be created and assigned.

**Dispatchable** option on the person determines whether the person can be assigned tasks.

**Calendar** defines the work calendar for a person. If there are exceptions, those will also be taken into consideration upon assigning the task. The calendar and exceptions on the place record is also taken into consideration when determining assignment.

**Available** indicates whether the team is available. If the team is not available, the team will not be considered for assignment.

## PM Contracts

### Types Of PM Schedules

Built on a recurring basis, based on length of coverage term

Based on task completion

Based on meter readings

Based on length of time or meter usage



You can create four types of preventative maintenance schedules:

A preventative maintenance schedule built on a recurring basis based on the length of the coverage term is the standard FSM preventative maintenance schedule. The following three options are other types that you can create.

When you create a preventative maintenance schedule based on task completion, the first preventative maintenance request is created when the bill schedule is generated. When the task in the preventative maintenance request is completed, the next preventative maintenance request is automatically created.

When you create a preventative maintenance schedule based on meter readings, a preventative maintenance request is created when the meter reading exceeds the threshold you specify. When a meter reading that counts as usage is entered and it exceeds the specified threshold, a preventative maintenance request is automatically created.

When you create a preventative maintenance schedule based on length of time or meter usage, a preventative maintenance request is created when the length of time is met or the meter threshold is met, whichever comes first. When either the time period is reached or a meter reading exceeds the threshold, a preventative maintenance request is automatically created.

Meter Contracts will be discussed in another course – *IFS FSM Special Courses*.

## PM Contracts

Example – Monthly PMs

### Contract Dates

- Start Date: 1/1/20
- End Date: 12/31/20

### PM Schedule Rule

- PM\_Schedule\_Rule: MONTHLY
- PM\_Schedule\_Period\_Type: MONTHLY
- PM\_Schedule\_Start\_Point: START (build from Contract Start Date)

### PM Schedule\_Period\_Type

- PM\_Schedule\_Period\_Type: MONTHLY
- PM\_Schedule\_Start\_Point: START
- Period\_type: MO
- Period\_factor: 1

### PM\_Schedule\_Planned Work Date

PROMISED START*	STATUS*
1/1/2020	Schedule is ready to be Autogenned.
2/1/2020	Schedule is ready to be Autogenned.
3/1/2020	Schedule is ready to be Autogenned.
4/1/2020	Schedule is ready to be Autogenned.
5/1/2020	Schedule is ready to be Autogenned.
6/1/2020	Schedule is ready to be Autogenned.
7/1/2020	Schedule is ready to be Autogenned.
8/1/2020	Schedule is ready to be Autogenned.
9/1/2020	Schedule is ready to be Autogenned.
10/1/2020	Schedule is ready to be Autogenned.
11/1/2020	Schedule is ready to be Autogenned.
12/1/2020	Schedule is ready to be Autogenned.



Now that you understand the individual tables required for the setup of the PM schedules. Let's look at several examples of PMs. In this example, the Contract is a year in length. It's PM Schedule Period Type indicates its period length is 1 month(period\_type \* period\_factor). It will build its periods from the start date of the Contract header.

PM\_Schedule\_Planned Work Date will be as seen in the screenshot.

## PM Contracts

### Contract Management

```

graph LR
    A[Header  
• Contract Type  
• Place ID to Bill  
• Start/End Date] --> B[Contract Line  
• Line Type  
• Contract Type]
    B --> C[PM Schedule  
• Schedule Type  
• Schedule Rule]
    C --> D[Contract PM Request Generation  
• Request creation  
• Task Creation]
    D --> E[Complete Task  
• Contract schedule gets updated]
  
```

**Contract Details:**

Contract ID	101208	Sched Type	Schedules are built on a recurring basis, based on																																				
Contract Version	1	Sched Rule	WEEKLY																																				
PM Sequence	21	Meter Usage Cutoff																																					
Contract Seq	101	Request Template: INSTALL																																					
Product Meter Column Value		Task Template	BASIC																																				
		Taskset ID																																					
		Product Meter Column Name																																					
Description <b>PM Schedules</b> <table border="1"> <thead> <tr> <th>PROMISED START*</th> <th>STATUS*</th> <th>REQUEST ID</th> <th>TASK ID</th> <th>TASK CREATED</th> <th>TASK COMPLETED</th> </tr> </thead> <tbody> <tr> <td>1/30/2016</td> <td>■ Task has been autogenerated from Schedule.</td> <td>421</td> <td>261</td> <td>3/16/2016 12:00 AM</td> <td></td> </tr> <tr> <td>2/6/2016</td> <td>■ Task has been autogenerated from Schedule.</td> <td>1853</td> <td>514</td> <td>3/16/2016 12:00 AM</td> <td></td> </tr> <tr> <td>2/13/2016</td> <td>■ Task has been autogenerated from Schedule.</td> <td>1854</td> <td>519</td> <td>3/16/2016 12:00 AM</td> <td></td> </tr> <tr> <td>2/20/2016</td> <td>■ Task has been autogenerated from Schedule.</td> <td>1855</td> <td>525</td> <td>3/16/2016 12:00 AM</td> <td></td> </tr> <tr> <td>2/27/2016</td> <td>■ Task has been autogenerated from Schedule.</td> <td>1856</td> <td>531</td> <td>3/16/2016 12:00 AM</td> <td></td> </tr> </tbody> </table>				PROMISED START*	STATUS*	REQUEST ID	TASK ID	TASK CREATED	TASK COMPLETED	1/30/2016	■ Task has been autogenerated from Schedule.	421	261	3/16/2016 12:00 AM		2/6/2016	■ Task has been autogenerated from Schedule.	1853	514	3/16/2016 12:00 AM		2/13/2016	■ Task has been autogenerated from Schedule.	1854	519	3/16/2016 12:00 AM		2/20/2016	■ Task has been autogenerated from Schedule.	1855	525	3/16/2016 12:00 AM		2/27/2016	■ Task has been autogenerated from Schedule.	1856	531	3/16/2016 12:00 AM	
PROMISED START*	STATUS*	REQUEST ID	TASK ID	TASK CREATED	TASK COMPLETED																																		
1/30/2016	■ Task has been autogenerated from Schedule.	421	261	3/16/2016 12:00 AM																																			
2/6/2016	■ Task has been autogenerated from Schedule.	1853	514	3/16/2016 12:00 AM																																			
2/13/2016	■ Task has been autogenerated from Schedule.	1854	519	3/16/2016 12:00 AM																																			
2/20/2016	■ Task has been autogenerated from Schedule.	1855	525	3/16/2016 12:00 AM																																			
2/27/2016	■ Task has been autogenerated from Schedule.	1856	531	3/16/2016 12:00 AM																																			

**IFS**

Once a contract has been posted and live, the customer inevitably will want changes. They may want to add or remove product and services on the contract. They may want to have a similar contract drawn up for another division. They may want to renew their contract for another term. Or, they may want to simply cancel their existing contract. All these situations can be handled within the Contracts module.

A **modification** to the contract would include adding contract lines, cancelling contract lines, changing coverage dates, changing bill schedules or changing the contract type. Any time a change has occurred, the “Changes Pending” option is automatically selected giving you a visual indicator that changes are in progress. Once you have posted the contract to make the changes active, the option will not be selected.

Sometimes there is a need to have a contract **copied** from either an active or expired contract. This process does not **RENEW** the contract. It simply makes a copy of the existing contract. You have the choice to reprice it, rebuild the bill schedules and pm schedules, and even include expired or cancelled lines.

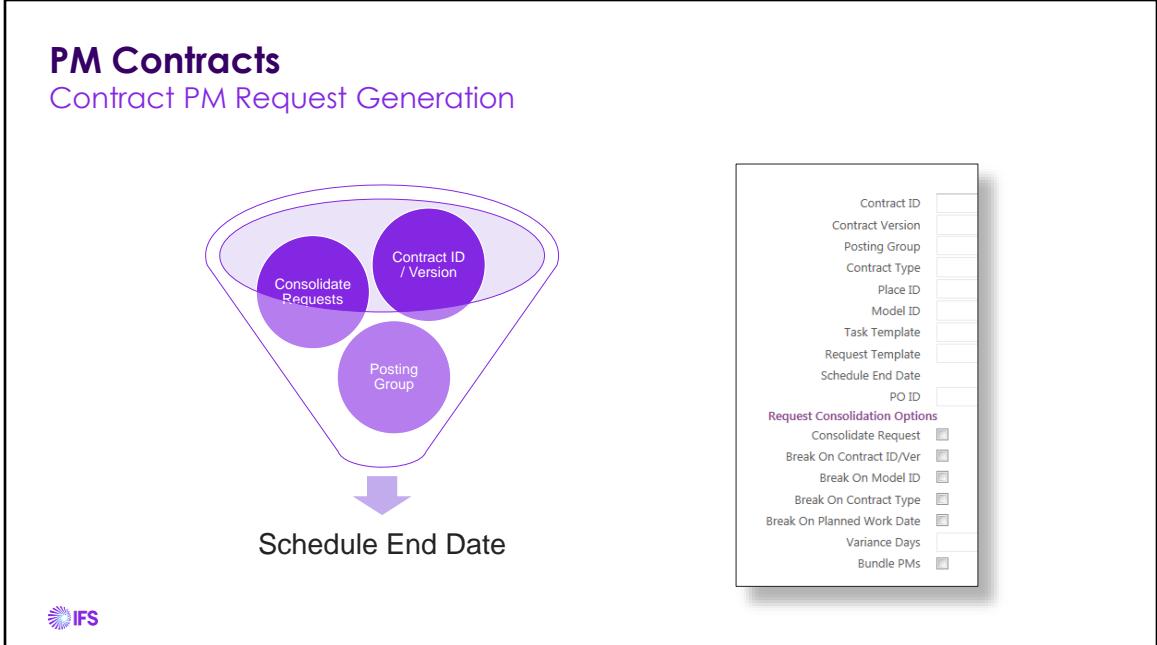
Once a contract reaches its end date, it expires. To avoid expiration, the contract must go through a renewal process prior to the end date. When you **renew** a contract, you create a new contract with the same contract ID and an incremented version number. Information on the Details tab of the Contract screen control all other aspects of contract renewal.

While a contract is active, the customer may no longer want a particular product on a contract or perhaps does not want a contract at all. In either case, the line or the contract can be **cancelled**. Any charges that have not been invoiced may be prorated.

There are several ways to cancel a contract:

Change contract or line status = Cancel

Change end date on contract header or the line



**Contract PM Request Generation**, under Contracts Manager, is used to generate preventative maintenance requests and tasks based on the information in preventative maintenance schedule entries. This reduces your need to manually open requests to meet your Contracted obligations. On a regular basis, for example weekly or monthly, generate preventative maintenance requests and tasks.

**Schedule End Date** looks at tasks scheduled on or before the date selected. This is a required field.

All the rest of the fields on the Contract PM Request Generation screen are optional filtering criteria. For example, you can filter your criteria based on **Contract ID/Version** or by **posting group**.

By default, one request with one or more tasks are created for each schedule record. You can choose to consolidate to as few requests as possible. Selecting the **Consolidate Request** option consolidates based on place. When **Bundle PMs** is set, one task is created for all preventative maintenance tasks on the same day using the same task template. This way you consolidate PM requests that are scheduled within a specified number of days thus reducing the number of service calls required.

**Variance Days** is used to specify the number of days variance that causes the requests to be consolidated as long as the planned work dates for the PM requests fall within the specified number of days.

This is one of the more significant business rules used within PM Schedule creation.

**Create Contract Preventative Maintenance for Contract Line** is used to automatically create preventative maintenance schedules when creating Contract lines.

These are some of the more significant application parameters used within PM Contract creation.

**Apply\_expired\_contract\_at\_autogen** is set to Y (yes) if you want to consider preventative maintenance schedules on expired Contracts when creating preventative maintenance requests.

**Default\_role\_type\_for\_autogen\_request\_contacts** is set to the role type used to assign the place contact to requests during preventative maintenance request generation. Values are defined on the role\_type code table.

**Apply\_future\_contract\_at\_autogen** is set to Y (yes) if you want to consider preventative maintenance schedules on future Contracts when creating preventative maintenance requests.

Task completion is discussed in *IFS FSM Services* course. Once the technician services the product on the Contract, he will complete the task by updating the task status to "Complete". If the business rules are set up to automatically complete the request, the request gets completed. This in turn will update the Contract PM

Schedule with the completed date of the task.



Use the contract that copied in the previous demo

Add a PM schedule

Go to Contract PM Request Generation to create the requests from the contract

Show the request and task created. Show the request and task on the PM schedule

Complete the task. Show the update to the PM schedule

## Practice & Learn

### PM Contracts

- Select your contract
- Add a PM Schedule to the contract
- Post contract
- Go to Financials, Admin, Contract Manager, Contract PM Request Generation
- Enter your contract ID and version
- Enter a date in the future but before your contract ends
- Go to your contract to see the request and task created





Lesson objectives:

- Be able to define Preventative Maintenance
- Know how to create simple PM Contracts

# Financials



# Pricing



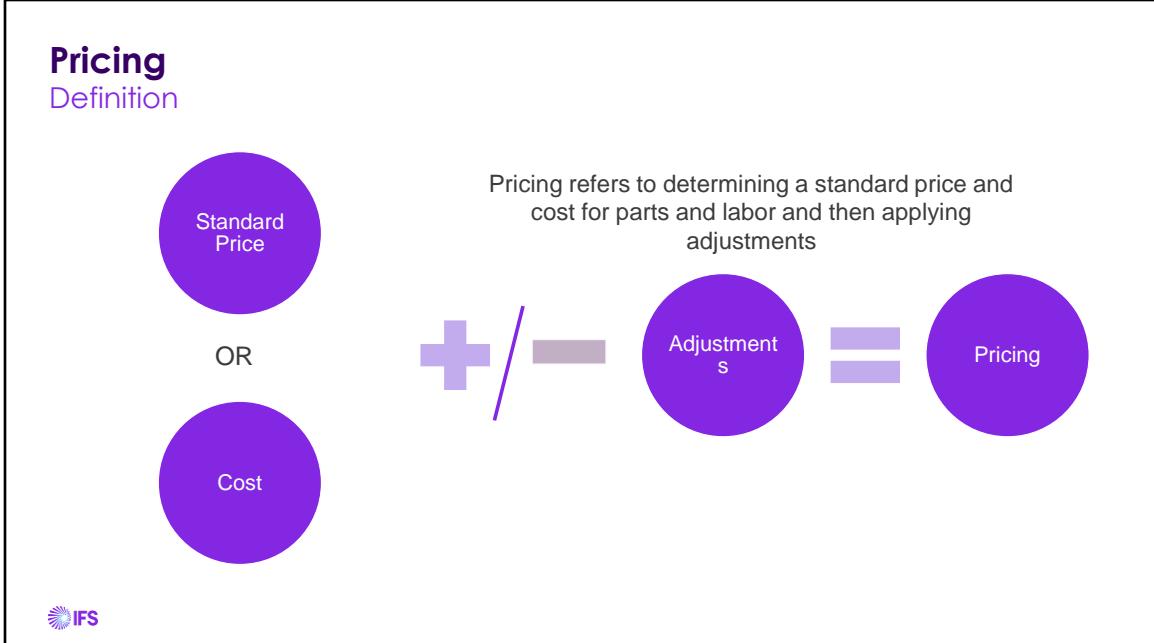
## Pricing

### Learning Outcomes



By the end of this lesson, you will:

- Understand Pricing
- Have viewed how Costing works
- Understand Currency conversion



Pricing occurs when any need or usage is entered, and when a business rule causes repricing. When entered on the record, pricing is automatically applied to part usage, non-part usage, part need, quote line, contract and contract line, purchase order detail line, and meter.

Pricing rules enable you to specify costs, prices, and price adjustments for contracts, parts, and non-parts (labor and expense).

Records that are affected by specific pricing rules:

**Part pricing** Part usage, part need, quote part, request line price

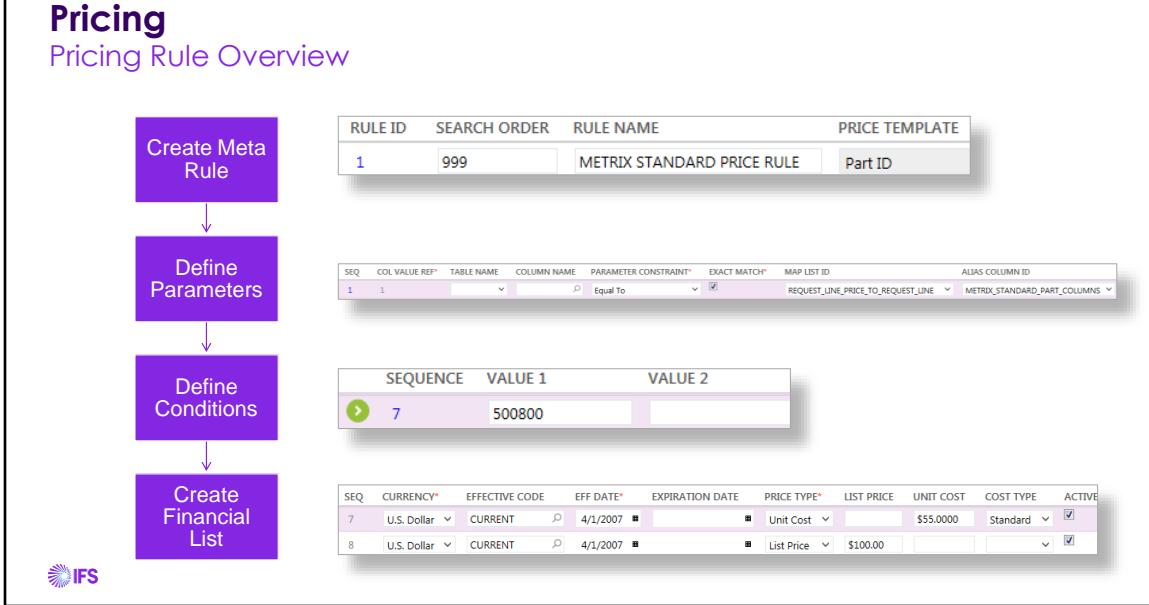
**Non-part pricing** Non-part usage, non-part need, quote non-part, request line price

**Contract pricing** Entitlement and benefit rules on Contract lines

**Financial Exceptions** Excludes certain parts from pricing, entitlements, and benefits

**Special charges** Part need, part usage, non-part usage, quotes, voucher detail, special charges, meter pricing

Cost is also automatically applied to part usage, non-part usage, and part need. If business rules are set up for repricing, changing information on those records will cause automatic repricing. Cost is what you pay to your suppliers for parts, goods, and services and internal costs for labor and expenses. Cost can be applied to part needs, part usage, non-part usage, purchase detail, and other part transactions. Cost is a part of pricing though you could use pricing entirely without cost, if you choose. The cost is what you pay to your suppliers for parts, goods, and services and internal costs for labor and expenses. Cost can be applied to part needs, part usage, non-part usage, purchase detail, and other part transactions.



Let's take a look at pricing rules. Part and non-part pricing rules are set up very similar. You drill into each of the individual tables via the hyperlink.

**Create meta rule** is to set up the rule name and search order. Optionally, you can set up a price template which will default certain pre-set information. Based on our scenario, for part pricing, we will use the default standard rule. Do NOT delete this rule!! This is the fallback rule. For non-part pricing, we will use the Line Code Only rule.

**Define parameters** is used to assign the table/column(s) to reference and to assign constraints. You can have a maximum of 10 parameters per rule. Based on our scenario, for part pricing, we will have an exact match to request\_line\_price\_to\_request\_line. For non-part pricing, we will have the parameters equal to line\_code on non\_part\_usage. You can also use the Map List ID and Alias Column ID to map to parameters on other non-financial tables which is discussed later in this lesson.

**Define conditions** is used to assign the values to the related parameters. Multi-value is comma delimited. Based on our scenario, for part pricing, in Value 1, we will add our part IDs. For non-part pricing, in Value 1, we will add the line\_code value from the line\_code code table (such as mileage, labor overtime, etc.)

**Create financial list** is used to add the monetary value (cost, price, or adjustment) to the rule. Based on our scenario, for either part pricing or non-part pricing, we will add the currency, effective date and either price type and list price OR unit cost and cost type. If you schedule your prices or costs in the future, you can do it on this table.

## Rules

### Financial Pricing Rule Overview

Financials >> Pricing >> Part Pricing

The diagram consists of four purple diamond shapes arranged vertically. From top to bottom, they are labeled: 'Create Rule', 'Define Parameters', 'Define Conditions', and 'Create Financial List'. Each diamond has a line pointing towards the right, indicating a flow from one step to the next. In the bottom left corner of the diagram area, there is a small IFS logo.

RULE ID	SEARCH ORDER	RULE NAME	PRICE TEMPLATE
1	999	METRIX STANDARD PRICE RULE	Part ID
2	998		

Part Pricing Parameters					
SEQ	COL VALUE REF*	TABLE NAME	COLUMN NAME	PARAMETER CONSTRAINT*	EXACT MATCH*
1	1			Equal To	<input checked="" type="checkbox"/>

Part Pricing Conditions						
SEQUENCE	VALUE 1	VALUE 2	VALUE 3	VALUE 4	VALUE 5	VALUE 6
50	HD250					

Part Pricing List							
SEQ	CURRENCY*	EFFECTIVE CODE	EFF DATE*	EXPIRATION DATE	PRICE TYPE*	LIST PRICE	UNIT COST
95	U.S. Dollar	Current	1/1/2014		List Price	\$82.00	
100	U.S. Dollar	Current	1/1/2014		Unit Cost	\$32.2200	Standard

An example of financial rules is you need to send a tech to the customer for a billable repair of a broken part. You can set up part pricing rules for the prices and costs based on part ID used and labor prices (non-part pricing rules) based on the line code.

In this example, we are setting up part pricing rules for the prices and costs based on the part ID used. Set up is similar for non-part pricing.

You drill into each of the individual tables via the hyperlink.

**Create meta rule** is to set up the rule name and search order. Optionally, you can set up a price template which will default certain pre-set information. Based on our scenario, for part pricing, we will use the default standard rule. Do NOT delete this rule!! This is the fallback rule. For non-part pricing, we will use the Line Code Only rule.

**Define parameters** is used to assign the table/column(s) to reference and to assign constraints. You can have a maximum of 10 parameters per rule. Based on our scenario, for part pricing, we will have an exact match to request\_line\_price\_to\_request\_line. For non-part pricing, we will have the parameters equal to line\_code on non\_part\_usage. You can also use the Map List ID and Alias Column ID to map to parameters on other non-financial tables which is discussed later in this lesson.

**Define conditions** is used to assign the values to the related parameters. Multi-value is comma delimited. Based on our scenario, for part pricing, in Value 1, we will add our part IDs. For non-part pricing, in Value 1, we will add the line\_code value from the line\_code code table (such as mileage, labor overtime, etc.)

**Create financial list** is used to add the monetary value (cost, price, or adjustment) to the rule. Based on our scenario, for either part pricing or non-part pricing, we will add the currency, effective date and either price type and list price OR unit cost and cost type. If you schedule your prices or costs in the future, you can do it on this table.

## Rules

### Financial Pricing Rule Overview

Financials >> Pricing >> Part Pricing

The diagram consists of four purple chevron-shaped boxes arranged vertically. The top box is labeled "Create Rule". Below it, two boxes are stacked: the left one is labeled "Define Parameters" and the right one is labeled "Define Conditions". At the bottom is a single box labeled "Create Financial List".

**Create meta-Rule** is to set up the Rule name and order

RULE ID	SEARCH ORDER	RULE NAME	PRICE TEMPLATE
1	999	METRIX STANDARD PRICE RULE	Part ID

**Define Parameters**

SEQ	COL VALUE IDP	TABLE NAME	COLUMN NAME	PARAMETER CONSTRAINT
1	1			Equal To

**Define Conditions**

SEQUENCE	VALUE 1	VALUE 2	VALUE 3	VALUE 4	VALUE 5	VALUE 6	EXCEPTION GROUP ID
1	H0200						

**Create Financial List**

SEQ	CURRENCY	EFFECTIVE CODE	EFT DATE	EXPIRATION DATE	PRICE TYPE	LIST PRICE	UNIT COST	COST TYPE	ADJUST
1	U.S. Dollar	CURRENT	07/01/2014		Lot Price	\$82.00	\$82.00		
2	U.S. Dollar	CURRENT	07/01/2014		Unit Price	\$82.00	\$82.00		

**IFS**

An example of financial rules is you need to send a tech to the customer for a billable repair of a broken part. You can set up part pricing rules for the prices and costs based on part ID used and labor prices (non-part pricing rules) based on the line code.

In this example, we are setting up part pricing rules for the prices and costs based on the part ID used. Set up is similar for non-part pricing.

You drill into each of the individual tables via the hyperlink.

**Create meta rule** is to set up the rule name and search order. Optionally, you can set up a price template which will default certain pre-set information. Based on our scenario, for part pricing, we will use the default standard rule. Do NOT delete this rule!! This is the fallback rule. For non-part pricing, we will use the Line Code Only rule.

**Define parameters** is used to assign the table/column(s) to reference and to assign constraints. You can have a maximum of 10 parameters per rule. Based on our scenario, for part pricing, we will have an exact match to request\_line\_price\_to\_request\_line. For non-part pricing, we will have the parameters equal to line\_code on non\_part\_usage. You can also use the Map List ID and Alias Column ID to map to parameters on other non-financial tables which is discussed later in this lesson.

**Define conditions** is used to assign the values to the related parameters. Multi-value is comma delimited. Based on our scenario, for part pricing, in Value 1, we will add our part IDs. For non-part pricing, in Value 1, we will add the line\_code value from the line\_code code table (such as mileage, labor overtime, etc.)

**Create financial list** is used to add the monetary value (cost, price, or adjustment) to the rule. Based on our scenario, for either part pricing or non-part pricing, we will add the currency, effective date and either price type and list price OR unit cost and cost type. If you schedule your prices or costs in the future, you can do it on this table.

## Rules

### Financial Pricing Rule Overview

Financials >> Pricing >> Part Pricing

```

graph TD
    A[Create Rule] --> B[Define Parameters]
    B --> C[Define Conditions]
    C --> D[Create Financial List]

```

**Create Rule**

RULE ID	SEARCH ORDER	RULE NAME	PRICE TEMPLATE
1	999	METRIX STANDARD PRICE RULE	Part ID

**Define Parameters**

SEQ	COL VALUE REF*	TABLE NAME	COLUMN NAME	PARAMETER CONSTRAINT*	EXACT MATCH*
1	1			Equal To	<input checked="" type="checkbox"/>

**Define Parameters** is used to assign the table/column to the reference and assign constraints

**Create Financial List**

SEQ	CURRENCY	EFFECTIVE CODE	EFF DATE	EXPIRATION DATE	PRICE TYPE	LIST PRICE	UNIT COST	COST TYPE	ACTIVE
101	U.S. Dollar	Current	01/2018	01/2019	List Price	\$100.00	\$100.00	Standard	<input checked="" type="checkbox"/>
102	U.S. Dollar	Current	01/2018	01/2019	Unit Cost				

**IFS**

An example of financial rules is you need to send a tech to the customer for a billable repair of a broken part. You can set up part pricing rules for the prices and costs based on part ID used and labor prices (non-part pricing rules) based on the line code.

In this example, we are setting up part pricing rules for the prices and costs based on the part ID used. Set up is similar for non-part pricing.

You drill into each of the individual tables via the hyperlink.

**Create meta rule** is to set up the rule name and search order. Optionally, you can set up a price template which will default certain pre-set information. Based on our scenario, for part pricing, we will use the default standard rule. Do NOT delete this rule!! This is the fallback rule. For non-part pricing, we will use the Line Code Only rule.

**Define parameters** is used to assign the table/column(s) to reference and to assign constraints. You can have a maximum of 10 parameters per rule. Based on our scenario, for part pricing, we will have an exact match to request\_line\_price\_to\_request\_line. For non-part pricing, we will have the parameters equal to line\_code on non\_part\_usage. You can also use the Map List ID and Alias Column ID to map to parameters on other non-financial tables which is discussed later in this lesson.

**Define conditions** is used to assign the values to the related parameters. Multi-value is comma delimited. Based on our scenario, for part pricing, in Value 1, we will add our part IDs. For non-part pricing, in Value 1, we will add the line\_code value from the line\_code code table (such as mileage, labor overtime, etc.)

**Create financial list** is used to add the monetary value (cost, price, or adjustment) to the rule. Based on our scenario, for either part pricing or non-part pricing, we will add the currency, effective date and either price type and list price OR unit cost and cost type. If you schedule your prices or costs in the future, you can do it on this table.

## Rules

### Financial Pricing Rule Overview

Financials >> Pricing >> Part Pricing

The diagram consists of four purple chevron-shaped boxes arranged vertically. From top to bottom, they are labeled: 'Create Rule', 'Define Parameters', 'Define Conditions', and 'Create Financial List'. The 'Create Rule' box is at the top, followed by 'Define Parameters', then 'Define Conditions', and finally 'Create Financial List' at the bottom.

**Create Rule**

RULE ID	SEARCH ORDER	RULE NAME	PRICE TEMPLATE
1	999	METRIX STANDARD PRICE RULE	Part ID
2	20	Customer Price Rule	

**Define Parameters**

SEQ	COL VALUE REF*	TABLE NAME	COLUMN NAME	PARAMETER CONSTRAINT*	EXACT MATCH*
1	1			Equal To	<input checked="" type="checkbox"/>

**Define Conditions**

SEQUENCE	VALUE 1	VALUE 2	VALUE 3	VALUE 4	VALUE 5	VALUE 6	EXCEPTION GROUP ID
56	H0250						

**Create Financial List**

**Define Conditions** is used to assign values to the Related parameters

SEQUENCE	DEFINITION CODE	DEF DATE	COMMISSION CODE	PRICE TYPE	LIST PRICE	UNIT COST	COST TYPE	ADJUSTMENT
10	U.S. Dollar	Current	10/2014	Unit Price	100.00	100.00	Standard	0

**IFS**

An example of financial rules is you need to send a tech to the customer for a billable repair of a broken part. You can set up part pricing rules for the prices and costs based on part ID used and labor prices (non-part pricing rules) based on the line code.

In this example, we are setting up part pricing rules for the prices and costs based on the part ID used. Set up is similar for non-part pricing.

You drill into each of the individual tables via the hyperlink.

**Create meta rule** is to set up the rule name and search order. Optionally, you can set up a price template which will default certain pre-set information. Based on our scenario, for part pricing, we will use the default standard rule. Do NOT delete this rule!! This is the fallback rule. For non-part pricing, we will use the Line Code Only rule.

**Define parameters** is used to assign the table/column(s) to reference and to assign constraints. You can have a maximum of 10 parameters per rule. Based on our scenario, for part pricing, we will have an exact match to request\_line\_price\_to\_request\_line. For non-part pricing, we will have the parameters equal to line\_code on non\_part\_usage. You can also use the Map List ID and Alias Column ID to map to parameters on other non-financial tables which is discussed later in this lesson.

**Define conditions** is used to assign the values to the related parameters. Multi-value is comma delimited. Based on our scenario, for part pricing, in Value 1, we will add our part IDs. For non-part pricing, in Value 1, we will add the line\_code value from the line\_code code table (such as mileage, labor overtime, etc.)

**Create financial list** is used to add the monetary value (cost, price, or adjustment) to the rule. Based on our scenario, for either part pricing or non-part pricing, we will add the currency, effective date and either price type and list price OR unit cost and cost type. If you schedule your prices or costs in the future, you can do it on this table.

## Rules

### Financial Pricing Rule Overview

Financials >> Pricing >> Part Pricing

**Create Rule**

RULE ID	SEARCH ORDER	RULE NAME	PRICE TEMPLATE
1	999	METRIX STANDARD PRICE RULE	Part ID

**Define Parameters**

Part Pricing Parameters					
SEQ	COL VALUE REF*	TABLE NAME	COLUMN NAME	PARAMETER CONSTRAINT*	EXACT MATCH*
1	1			Equal To	<input checked="" type="checkbox"/>

**Define Conditions**

Part Pricing Conditions					
SEQUENCE	VALUE 1	VALUE 2	VALUE 3	VALUE 4	VALUE 5
36	HD250				VALUE 6

**Create Financial List**

SEQ	CURRENCY*	EFFECTIVE CODE	EFF DATE*	EXPIRATION DATE	PRICE TYPE*	LIST PRICE	UNIT COST	COST TYPE	ACTIVE
99	U.S. Dollar	▼ CURRENT	□ 1/1/2014	■	Lot Price	▼ \$82.00			<input checked="" type="checkbox"/>
100	U.S. Dollar	▼ CURRENT	□ 1/1/2014	■	Unit Cost	▼ \$32.200	Standard		<input checked="" type="checkbox"/>

**Create Financial List** is used to assign monetary values

An example of financial rules is you need to send a tech to the customer for a billable repair of a broken part. You can set up part pricing rules for the prices and costs based on part ID used and labor prices (non-part pricing rules) based on the line code.

In this example, we are setting up part pricing rules for the prices and costs based on the part ID used. Set up is similar for non-part pricing.

You drill into each of the individual tables via the hyperlink.

**Create meta rule** is to set up the rule name and search order. Optionally, you can set up a price template which will default certain pre-set information. Based on our scenario, for part pricing, we will use the default standard rule. Do NOT delete this rule!! This is the fallback rule. For non-part pricing, we will use the Line Code Only rule.

**Define parameters** is used to assign the table/column(s) to reference and to assign constraints. You can have a maximum of 10 parameters per rule. Based on our scenario, for part pricing, we will have an exact match to request\_line\_price\_to\_request\_line. For non-part pricing, we will have the parameters equal to line\_code on non\_part\_usage. You can also use the Map List ID and Alias Column ID to map to parameters on other non-financial tables which is discussed later in this lesson.

**Define conditions** is used to assign the values to the related parameters. Multi-value is comma delimited. Based on our scenario, for part pricing, in Value 1, we will add our part IDs. For non-part pricing, in Value 1, we will add the line\_code value from the line\_code code table (such as mileage, labor overtime, etc.)

**Create financial list** is used to add the monetary value (cost, price, or adjustment) to the rule. Based on our scenario, for either part pricing or non-part pricing, we will add the currency, effective date and either price type and list price OR unit cost and cost type. If you schedule your prices or costs in the future, you can do it on this table.

## Pricing

### Pricing Types

#### List Price

- Determines the list price based on value entered
- Can be further adjusted based on additional rules

#### List Adjustment

- Adjusts the list price

#### Flat Rate Price

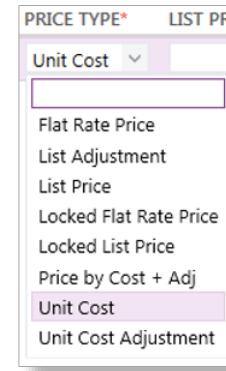
- Determines the list price based on value entered, regardless of quantity

#### Locked List Price / Locked Flat Rate Price

- Cannot be adjusted by rule or contract

#### Price by cost plus adjustment

- List price based on cost plus adjustment entered



When we create the financial lists on the business rules, we need to select a Price Type or a Cost Type.

There are other **price types** available:

**List price** determines the list price based on the value entered. This list price can be further adjusted based on additional rules.

**List Adjustment** causes the rule to adjust the list price based on the adjustment entered.

**Flat rate price** determines the list price based on the value entered, regardless of the quantity.

**Locked list price** determines the list price based on the value entered. This list price cannot be adjusted by rule or contract.

**Locked flat rate price** determines the list price based on the value entered, regardless of the quantity. This list price cannot be adjusted by rule or contract.

**Price by cost plus adjustment** determines the list price based on the cost entered plus the adjustment entered.

## Pricing

### Part Usage And Labor And Expenses

Part Usage

Labor and Expenses



A request, task or RMA will need to be created to create part or non-part usage. Normally the usages would be created from a mobile device in the field. However, they can also be created in the client. For our example, we will create the usages in the client. Similar to the part need, **part usage** must also have the part line code, part and quantity entered. The Person ID defaults to the logged in person and the Place ID / Location default from the Person's place relationship record. Note the unit price and bill cost are populated from the part pricing rule. The "Bill Status" field is "Idle". We will review that field again after invoicing.

The **labor and expenses (non-part usage)** must have line code and quantity. Again the Person ID defaults to the logged in person and the Work Date is today's date. Note, the "Bill Status" field is "Idle". The "Billing Currency" defaults from the place on the request. Note the unit price and bill cost are populated from the non-part pricing rule.

There are business rules that affect repricing part and non-part usage as long as the prices or costs were not manually entered.

## Labor And Expenses Pricing Details

Cost Source

Price Source

Adjustment Type

Pricing Details					
SEQUENCE	UNADJUSTED PRICE	ADJUSTMENT AMOUNT	ADJUSTED PRICE	ADJUSTMENT TYPE	PRICE RULE SEQUENCE
3717	\$80.000000	\$0.000000	\$80.000000	Unadjusted Price	2
3718	\$80.000000	(\$16.000000)	\$64.000000	Price Rule Adjustment	2

Cost Details					
SEQUENCE	UNADJUSTED COST	ADJUSTMENT AMOUNT	ADJUSTED COST	ADJUSTMENT TYPE	COST RULE SEQUENCE
2184	\$40.0000	\$0.000000	\$40.0000	Unadjusted Price	2



In our scenario, we will create a new request and task and manually add labor and expenses. The line code will be for billable labor and a quantity of 1. Let's now look more closely at the labor and expenses screen. Drilling into the details of the labor and expenses record, we see the price source is "TABLEPRICE". The cost source is "Table Cost". Under Pricing Details, there are 2 records: Unadjusted Price and Price Rule Adjustment. The "unadjusted price" is the original price. The "price rule adjustment" infers any adjustments for the record. Note the hyperlink by the Price Rule Sequence. That will take you back to the rule from which this pricing was derived. This is especially helpful if you are getting pricing that you were not expecting.

The Cost Details area is similar to the Pricing Details.

## Manually Adjusted Usages

### Table Priced vs. Manually Adjusted

The screenshot shows a detailed view of a task record (Task ID: 3089) with various configuration parameters. Below this, two tables are displayed:

Pricing Details		Cost Details						
SEQUENCE	UNADJUSTED PRICE	ADJUSTMENT AMOUNT	ADJUSTED PRICE	ADJUSTMENT TYPE	PRICE RULE SEQUENCE	PRICE LIST SEQUENCE	COST RULE SEQUENCE	COST LIST SEQUENCE
3717	\$80,000,000	\$0,000,000	\$80,000,000	Unadjusted Price	2	33		
3718	\$80,000,000	(\$16,000,000)	\$64,000,000	Price Rule Adjustment	2	633		
3719	\$64,000,000	(\$20,000,000)	\$44,000,000	Manual				
2184	\$40,000,000	\$0,000,000	\$40,000,000	Unadjusted Price	2	5		
2185	\$40,000,000	(\$7,000,000)	\$33,000,000	Manual				



Let's watch what happens when we adjust costs and prices.

If we adjust the bill cost, the **Cost Source** becomes "User Input Cost". There is a new entry under **Cost Details** with an Adjustment Type of "Manual". Note there is no cost rule sequence hyperlink.

If we adjust the unit price, the **Price Source** becomes "MANUALPRICE". There is a new entry under **Pricing Details** with an Adjustment Type of "Manual". Note there is no cost rule sequence hyperlink.

Complete the task and request in order to invoice.



By the end of this lesson, you will:

- Understand Pricing
- Have viewed how Costing works
- Understand Currency conversion



IFS

Go to Financial, Pricing and show the different types of pricing from the menu (Non Part and Part)

Go to Non Part Pricing and demonstrate how the screen is laid out and how to drill down

Go to Admin, Business Rules and show the different kinds of business rules from the menu

Go to Work Assignment and demonstrate how the screen is laid out and how to drill down

Set Watch All

Demonstrate on a request the Watch Log.

## Practice & Learn

### Rules

- Go to Task Select (Process 01)
- Practice drilling into the screens
- Set Watch All
- Go to an existing request. Make a change and Save the request. Review the Watch Log.
- Go to Financials, Pricing
- Select a pricing rule and practice using the hyperlinks to drill down



## Financials

### Learning Outcomes



By the end of this lesson, you will:

- Understand the Billing process
- Understand Vouchers
- Understand Invoices

# Entitlements And Benefit Plans



## Setup

Non-Part Pricing / Part Pricing

Non-Part Cov Codes / Part Cov Codes

Non-Part Entitlement / Part Entitlement

Contract Type with Coverage Codes



The setup for contract entitlements is the above. You must be very careful inputting the values because there is no screen validation.

## Contract Coverage

---

Overall Coverage

---

Non-part Coverage

---

Part Coverage



**Coverage codes** are user-defined codes that identify the types of coverage provided. For example, you may provide standard coverage, extended coverage, and billable coverage—you would define a coverage code for each. After you create your coverage codes, you use them and the time blocks to define the days and hours of coverage provided.

Coverage codes are comprised of both time blocks and coverage codes. Time blocks define the hours of coverage while coverage codes define the days of the week.

This currently has no functionality unless you use it in a business rule.

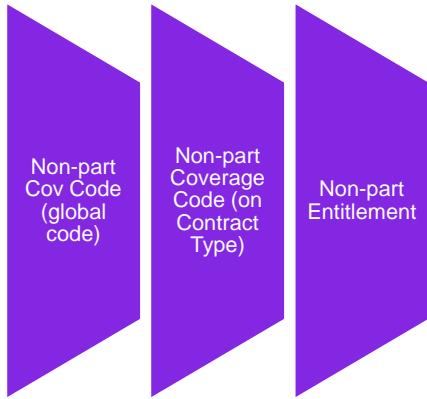
Contract coverage can be broken into 3 areas: Overall coverage, Non part coverage, Part coverage

**Overall coverage** consists of days and time of coverage.

**Non part coverage** consists of labor and expenses to be covered.

**Part coverage** consists of parts to be covered.

## Non-part And Part Coverage Codes



Part Cov Code (global code)

Part Coverage Code (on Contract Type)

Part Entitlement



Non-part (sometimes referred to as labor and expenses) coverage codes identify which services and/or expenses are covered when repairing a product in the field or at a repair center while covered under a contract. Part coverage codes are used to identify which parts are covered when they are used to repair a product in the field or at a repair center while covered under a contract. There are multiple coverage code rules that you can define. To create what will be covered (ex. billable labor) and to what extent (ex. with a 20% discount), the part and non part cov codes need to be attached to either part entitlement or non part entitlement as well as the Contract Type record.

## Entitlements Rules

Part Entitlement  
• Part Cov Code

Adjustments  
to the  
Pricing Rules

Non-Part Entitlement  
• Non-part Cov Code



You must have Part and Non-Part Pricing already set up which we have discussed in previous lessons. Part and Non-Part Entitlements are only adjustments to the pricing rules.

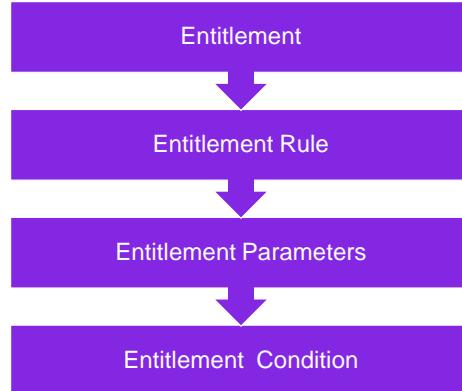
The Part Entitlement and Non-Part Entitlement rules are set up very similarly to the rules we have seen thus far. Part and Non-Part Entitlements use coverage codes to help define the adjustments. For example, you can have all labor coverage for certain customers. Or, you can have certain parts for certain customers covered.

Setting up the coverage codes is found under Global Code tables. The value of the **part coverage code** field identifies the entitlements for price adjustment you have assigned to parts for contracts of this type. Likewise, the value of the **non-part coverage code** field identifies the entitlements for price adjustment you have assigned to labor for contracts of this type.

Let's set up the rules.

Multiple rules enable you to create complex entitlement structures by specifying adjustments based on coverage rules. You can set up rules to perform multiple adjustments. Pricing adjustments that are assigned are then used during invoicing and billing. If you want to base entitlements on other information not normally available, such as information in a request, you can map this information using the information that is available, such as part need. Entitlement rules can have exceptions. In fact, not only can entitlement rules have exceptions, but also contract pricing, part and non-part financial rules, part and non-part benefit plans, special charges and meter pricing. When you specify exceptions, the rule is not matched when the criteria for the exception are fulfilled. We will look at financial exceptions later in this lesson.

## Entitlement Rule Overview



Entitlements allow you to define what your pcov\_code actually covers. You may only decide to cover only non-consumable parts. You also can define what your npcov\_code actually covers. You may only decide to only cover Labor and not Expenses. This flow applies to either part or non-part entitlements. You drill into each of the tables via the hyperlink. The example is for a non-part entitlement.

**Entitlement** defines the rule name and search order on this table. Optionally, you can set up a price template which will default certain pre-set information. For example, you want to price based on line code.

**Entitlement rule** is used to set up the parameters (e.g., tables and columns) for pricing. You can have as many or as few of parameters as you need. Based on the example, you will need to set up parameters for line code. In this case, the Line Code will be an exact match to what we specify on the parameter. You can also use the Map List ID to map to parameters on other non-financial tables. Financial mapping will be discussed in the *IFS FSM Financials* course.

**Entitlement parameter** is used to define the actual values to the parameters specified in the rule. Up to ten values can be specified for each rule. The values determine which table and column is used to create a cost, price, or adjustment. In our example, the line code must be "LB".

**Entitlement condition** is used to define the monetary value to the rule. Adjustments can be applied. In our example, whenever the line code "LB" is used there will be a 20% discount. Since the effective date is well in the past, the rule will be in effect.

## Part Entitlement Rule

In our example, we want to have the Aero customers to have a 20% discount on parts and the FSM customers to have a 50% discount on parts and 100% discount on labor.

For our part entitlement rules, we will need to set up two rules: one for Aero global-named customers and one for FSM global-named customers. Because we do not want to create a rule for every single place ID, we want to group the places using “Global Name”. Global Name is not a choice in the dropdown for table names. Now we will see some of the power of the financial rules.

Because Global Name is not a choice, we will instead use Column Name and input “Global\_Name”. If you expand the field and click the lookup icon, you will see the different table names associated to “global\_name”. The rule parameter needs to be an Exact Match equal to “PU\_OR\_PN\_OR\_REQ\_LINE\_PRICE\_TO\_PLACE\_VIA\_PLACE\_ID\_OF\_REQUEST” map list ID. Requests created from the customers on the contract will be looking for the Global Name of the place ID on the request. Whether we create part usages, part needs or RMA lines, pricing will be picked up. The Part Entitlement Conditions have Part Cov Code, a Global Code Table. Here we are listing which types of part usages have the discount. In our scenario, we want only billable parts to get the discount. Then, in Value 1, we need to state which Global Name gets the discount.

The Part Coverage List reflects the discount. For Aero customers, it will be a 20% discount. For FSM customers, it will be a 50% discount.

Now we need to create the Non-Part Entitlement rule for the FSM customers to get a 100% discount on labor.



IFS

Show the customers with Global Name “Areo” and “FSM”  
Create the Part Entitlement rules.

## Non-part Entitlement Rule

Non-Part Entitlement	Contract Type
≡	≡
Non-part Cov Code	Non-part Cov Code

**GOLD**

Contract Type	GOLD
Description	PREMIUM COVERAGE
Response Code	4HR
Coverage Code	M-F; 8 HRS/Day
Part Cov Code	Billable Parts
Non Part Cov Code	Labor Billable
Part Benefit Plan	
Non Part Benefit Plan	

Fs Coverage	<input checked="" type="checkbox"/>
Rc Coverage	<input checked="" type="checkbox"/>
Locked	<input type="checkbox"/>
Corp Offdays Coved	<input type="checkbox"/>
Posting Group	
Contr Line Type	
Combined Benefit Plan Name	



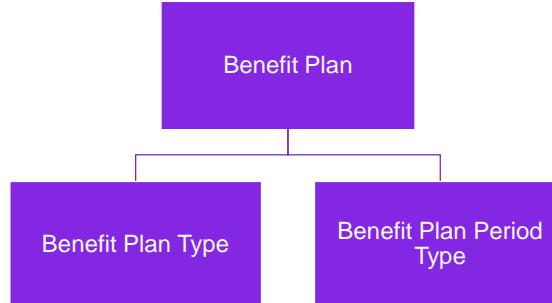
In our example, the FSM customers get 100% off of labor. We will use the non-part coverage code on the Non-Part Entitlement and link it to the Contract Type to be used on the contract. First , we will create Non-Part Entitlement off billable line code (Labor Billable) where the table name is “non\_part\_usage” and the column name is “line\_code”. This must be exactly equal to those values. The adjustment percent is 100. Next, we will create the Contract Type of “Gold” with a Non-Part Cov Code of “Labor Billable”. **This is the link.**



IFS

Create the Non-Part Entitlement rule and Contract Type  
Create a financial exception to the Non-Part Entitlement rule

## Benefit Plan Overview



A benefit is a price adjustment based on usage. On the benefit plan, you specify the threshold and the period and when that threshold is met, a price adjustment is applied. You can set up benefit plans for part usage. You can set up benefit plans for non-part usage. Or, you can set up benefit plans based on combined part usage and non-part usage.

There is some setup for benefit plans.

Benefit Plan List is made up of Contract Code Table **Benefit Plan Type** and the **Benefit Plan Period Type**. Benefit plan rules calculate the adjustment based off of a usage basis, compared to its usage threshold. The usage basis can be calculated in two different ways – on a ‘volume’ basis, or and actual ‘usage’ basis. A volume-based Benefit Plan calculates its usage threshold against a volume of activity pertaining to the Plan Source, while a usage-based Benefit Plan calculates its usage against an actual quantity or amount value, pertaining to an individual Part or Non Part Financial transaction. Examples of a plan would be that you cover one emergency trip per year, you will cover \$x amount of parts per quarter.

As opposed to the flat rate standard adjustment, which is always applied at all times, Benefit Plans calculate the adjustment based off of a usage basis, compared to its usage threshold. The usage basis can be calculated in two different ways – on a “volume” basis, or and “actual” usage basis.

A **volume-based** Benefit Plan calculates its usage threshold against a volume of activity pertaining to the Plan Source, while a **usage-based** Benefit Plan calculates its usage against an actual quality or amount value, pertaining to an individual Part or Non Part Financial transaction.

## Benefit Plan Type

The diagram illustrates four categories of Benefit Plan Type, each represented by a purple box:

- Allowance/Amt (Usage-Based only)**
- Allowance/Qty**
- Capped/Amt (Usage-Based Only)**
- Capped/Qty**

To the right of the categories is a screenshot of the **BENEFIT\_PLAN\_TYPE** table from a database. The table has columns for Benefit Plan Type\*, Active\*, Description, Message ID, Plan Source\*, and Plan Type\*. The data rows correspond to the categories listed above:

Benefit Plan Type*	Active*	Description	Message ID	Plan Source*	Plan Type*	
ALLOWANCE HOURS	<input checked="" type="checkbox"/>	Non Part Quantity Allowance	<input type="radio"/>	Non part Usage - Usage Based	<input type="radio"/>	Allowance Plan, Based On Quantity
ALLOWANCE PARTS	<input checked="" type="checkbox"/>	Part Quantity Allowance	<input type="radio"/>	Part Usage/Part Needs - Usage Based	<input type="radio"/>	Allowance Plan, Based On Quantity
ALLOWANCE PARTS AMT	<input checked="" type="checkbox"/>	Part Price Allowance	<input type="radio"/>	Part Usage/Part Needs - Usage Based	<input type="radio"/>	Allowance Plan, Based on Amount
CAPITATED HOURS	<input checked="" type="checkbox"/>	Non Part Quantity Cap	<input type="radio"/>	Non part Usage - Usage Based	<input type="radio"/>	Capped Plan, Based On Quantity
CAPITATED HOURS AMT	<input checked="" type="checkbox"/>	Non Part Price Cap	<input type="radio"/>	Non part Usage - Usage Based	<input type="radio"/>	Capped Plan, Based On Amount
CAPITATED PARTS	<input checked="" type="checkbox"/>	Part Quantity Cap	<input type="radio"/>	Part Usage/Part Needs - Usage Based	<input type="radio"/>	Capped Plan, Based On Quantity
CAPITATED PARTS AMT	<input checked="" type="checkbox"/>	Part Price Cap	<input type="radio"/>	Part Usage/Part Needs - Usage Based	<input type="radio"/>	Capped Plan, Based On Amount
COMBINED	<input checked="" type="checkbox"/>	Combined Allowance	<input type="radio"/>	Combined - Usage Based	<input type="radio"/>	Allowance Plan, Based on Amount
LABOR ALLOWANCE	<input checked="" type="checkbox"/>	Non Part Allowance Plan	<input type="radio"/>	Non part Usage - Usage Based	<input type="radio"/>	Allowance Plan, Based on Amount
QUALITY TEST	<input checked="" type="checkbox"/>	Combined Amount for QAT	<input type="radio"/>	Combined - Usage Based	<input type="radio"/>	Allowance Plan, Based on Amount
REQUEST VOLUME	<input checked="" type="checkbox"/>	Request Quantity Allowance	<input type="radio"/>	Request - Volume Based	<input type="radio"/>	Allowance Plan, Based On Quantity
REQUEST VOLUME COMBINED	<input checked="" type="checkbox"/>		<input type="radio"/>	Request - Volume Based - Combined	<input type="radio"/>	Allowance Plan, Based On Quantity

**IFS**

The Benefit Plan's **Plan Source** is derived from five possibilities stored with the **Plan\_Source** table.

**NONPART** of the plan threshold is calculated against the amount or quantity of a Non Part Financial Transaction

**PART** of the plan threshold is calculated against the amount or quantity of a Part Financial transaction.

**REQUEST** of the plan threshold is calculated against the number of Requests logged against the Benefit Plan List record being used.

**TASK** of the plan threshold is calculated against the number of Tasks logged against the Benefit Plan List record being used.

**PROJECT** of the plan threshold is calculated against the number of Projects logged against the Benefit Plan List record being used.

The Benefit Plan's **Plan Type** is derived from the four possibilities of the **Plan\_Type** table. The **Plan\_Source** table is an FSM Code table. You select the value on the Benefit Plan Type table under Contract Code tables.

**Allowance/Amt (Usage-Based only)** – Threshold is based on the amount field of a Part or Non Part Financial transaction. Anything prior to reaching the threshold limit is free. After the threshold limit has been reached, no adjustment is applied. Used with **plan\_source** of "Nonpart" or "Part".

**Allowance/Qty** – threshold is based on either the quantity field of a Part or Non Part Financial transaction or the Volume accumulation of a Volume-Based plan. Anything prior to reaching the threshold limit is free. After the threshold limit has been reached, no adjustment is applied.

**Capped/Amt (Usage-Based Only)** – Threshold is based on the amount field of a Part or Non Part Financial transaction. Anything prior to reaching the threshold yields no adjustment, though the transaction is logged against the threshold limit. After reaching the threshold limit, adjustment is applied. Used with **plan\_source** of "Nonpart" or "Part".

**Capped/Qty** – Threshold is based on either the quantity field of a Part or Non Part Financial transaction, or the Volume accumulation of a Volume-Based plan. Anything prior to reaching the threshold yields no adjustment, though the transaction is logged against the threshold limit. After reaching the threshold limit, adjustment is applied.

The **Shared** field indicates that all lines on a contract which use the same benefit plan will then draw against the same bucket or threshold. (Example: if you have 5 different product lines on the contract and they all have the same benefit plan attached, then each service visit per product would count against the bucket as opposed to only counting against itself).

## Benefit Plan Period Type

Period Factor

Period Type

Benefit Plan Period Type* Active* Description Extract Action Extract Group Periodic Plan Period Factor* Period Type*							
ANNUAL	<input checked="" type="checkbox"/>	Annual	Extract	▼	<input checked="" type="checkbox"/>	1	Yearly ▼
MONTHLY	<input checked="" type="checkbox"/>	Monthly	Extract	▼	<input checked="" type="checkbox"/>	1	Monthly ▼
QUARTERLY	<input checked="" type="checkbox"/>	Quarterly	Extract	▼	<input checked="" type="checkbox"/>	3	Monthly ▼



Typically, a benefit plan is effective until the threshold limit has been surpassed. The setup for this resides in the **Benefit\_Plan\_Period\_Type** table. To calculate how long a Benefit Plan is effective, the effective date of the Benefit Plan Financial List record is used as its starting point (application parameters default). It will then use 'Virtual Schedule' to determine if the Plan is no longer effective or in the case of a Periodic Plan, will calculate usage logged against the Benefit Plans threshold limit, within the Virtual Schedule's current period. As an example, by using a Periodic Monthly Plan, the threshold limit theoretically refreshes itself every month from the effective date of the Benefit Plan.

**Period Factor** is the numeric representation of periods that this Period Plan spans.

**Period Type** is the type of period - Yearly, Monthly, Weekly or Daily

If **Periodic Plan** option is set, it is periodic as it determines whether the plan is revolving, thus starting over calculating the Plan's threshold limit after the end of each calculated period. If the option is not set, it is non-periodic.

## Part/Non-part Benefit Plan

Benefit Plan

Benefit Plan Rule

Benefit Plan Parameters

Benefit Plan Condition

Benefit Plan Lists		Combined Benefit Plan Lists
SEQ	PLAN TYPE*	
1	Non Part Quantity Allowance	
	Non Part Allowance Plan	
	Non Part Price Cap	
	Non Part Quantity Allowance	
	Non Part Quantity Cap	
	Part Price Allowance	
	Part Price Cap	
	Part Quantity Allowance	
	Part Quantity Cap	
	Request Quantity Allowance	



On the benefit plan, you specify the threshold and the period and when that threshold is met, a price adjustment is applied. Multiple rules enable you to create complex benefits structures by specifying benefits based on rules. When evaluating rules, the first rule that matches the criteria is applied. Benefits are evaluated only when they appear on a related contract.

You drill into each of the tables via the hyperlink.

**Benefit plan** defines the rule name and search order on this table. Optionally, you can set up a price template which will default certain pre-set information. For example, you want to price based on line codes.

**Benefit plan rule** is used to define the parameters (e.g., tables and columns) for pricing. You can have as many or as few of parameters as you need. Based on the example, you will need to set up parameters for line codes. You can also use the Map List ID to map to parameters on other non-financial tables.

**Benefit plan parameter** is used to define the actual values to the parameters specified in the rule. Up to ten values can be specified for each rule. The values determine which table and column is used to create a cost, price, or adjustment. This is where you apply the Benefit Plan from the Benefit Plan code table.

**Benefit plan condition** defines the monetary value to the rule. Adjustments can be applied. This is where you apply the Plan Type from the Benefit Plan Type table and the Period Type from the Benefit Period Type table. To calculate how long a Benefit Plan is effective, the effective date of the Benefit Plan Financial List record is used as its starting point\*\*. It will then use a “Virtual Schedule” to determine if the Plan is no longer effective, or, in the case of a Periodic Plan, will calculate usage logged against the Benefit Plans threshold limit, within the Virtual Schedule’s current period.

As you create the Non-Part Benefit Plans and Part Benefit Plans, on the conditions screen, there is a tab to create Combined Benefit Plan Lists.

\*\*An Application Parameter (**benefit\_plan\_period\_start\_point**) determines what is used as the starting point for calculating if a benefit plan is effective. The possible values are:

**NULL** or **contract\_line\_effective** is the Effective Date of Contract Line.

**Contract\_line\_start** is the Start Date of Contract Line.

**Benefit\_plan\_effective** is the Effective Date of Benefit Plan List.

## Contract Type

### Contract Type

- Part Benefit Plan
- Non-Part Benefit Plan
- Combined Benefit Plan

Level Of Svc								
Contr Type	BASIC	Coverage Code	M-F; 8 HRS/Day	Non Part Cov Code	Labor Billable	Non Part Benefit Plan	ALLOWANCE	
Response Code	3 DAY	Part Cov Code	Billable Parts	Part Benefit Plan	ALLOWANCE	Combined Benefit Plan Name		



Part, Non Part and Combined Benefit Plans can then be applied to Contract Type. The Contract Type is applied to the contract header. The values default to the contract lines. You can add, modify or delete the benefit plan on the contract or contract line.

## Benefit Plan Tracking And Usage Calculation

### Benefit Plan Tab

101628, 1, 502								
Contract ID	101628	Global Name						
Contract Version	1	Place ID	MD-800					
Sequence	502	Model ID	AUTO-100					
Line Status	Contract Posted	Serial ID	595-531-01					
Line Type	Product Coverage	Product ID	111595					
Contract Type	TIME COMMITMENTS AND BENEFITS	Qty Covered	1					
Canceled On		Include Children	<input checked="" type="checkbox"/>					
Invoice Rule	00	Meter Inv Rule						
<a href="#">Summary</a>		<a href="#">Detail</a>	<a href="#">Period Price</a>					
<a href="#">Price Details</a>		<a href="#">Bill Schedules</a>	<a href="#">PMS</a>					
<a href="#">Benefit Plan</a>		<a href="#">Meter Plan</a>	<a href="#">Price Escalators</a>					
<a href="#">Part Price Agree</a>								
TRANS DATE	LIST SEQ	TRANS QTY	QTY APPLIED	ADJ AMT	AMT APPLIED	USAGE STATUS	PU ID	NPU ID
5/31/2016	3	3	3	-300	300	ACTIVE	690	
5/31/2016	1	6	6	-480	480	ACTIVE		785
6/16/2017	1	5.12	5.12	-409.60	409.60	ACTIVE		2784



Calculations against the plan threshold are found on the Benefit Plan tab on the contract line. It contains a recording of each transaction a contract's benefit plan has logged with a summation that will derive the total usage.

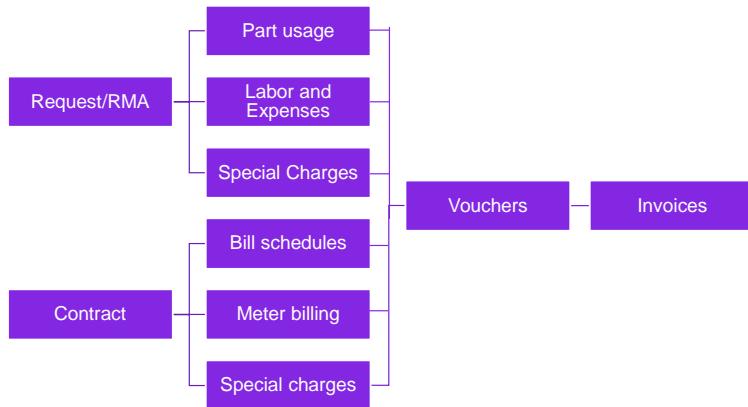
You can see part benefit plans, non part benefit plans or combined benefits.

# Invoicing And Billing



## Financials

### Request And Contract Billing Process



Billing refers to collecting billing information about the following and ultimately creating invoices that you can send to customers: Part usage, Non-part usage, Contract periodic billing, Meter billing, Special charges. Billing is a multiple-step process that enables you to review and validate information before invoices are final and sent to customers. Vouchers are created based on billing information. Voucher detail is reviewed and posted to invoices. As voucher detail is reviewed and posted, it is added to the appropriate invoice based on the place ID to bill or on consolidation and voucher grouping rules. The voucher detail is deleted from the voucher after it has been posted. Once all voucher detail is reviewed and posted, the voucher is deleted. Billing generation is an asynchronous process that may take some time to complete.

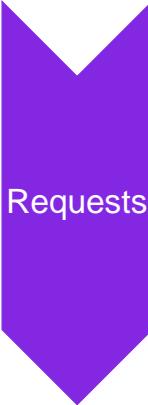
**Vouchers** contain detailed information about items to be billed, including the item ID, the price, and pricing details, which means the method used to calculate the final price. The voucher generation process performs validation. For example, it validates that the place ID to bill is a billing place. The status of the voucher detail indicates whether errors must be corrected before the voucher detail can be posted to an invoice.

**Invoices** are documents you can send your customers that detail the charges owed to you. As voucher details are validated, corrected, and posted, invoices are created.

In other courses, we will further discuss financials and how they pertain to that module.

## Eligibility For Extraction

### Eligibility For Extraction



- Usages
  - Idle status
  - No failed pricing
- Request
  - Place ID to Bill
  - Billing Allowed
  - Check for Billing

## Contracts

- Expected invoice date falls on or before the user billing date you entered on Billing Generation screen

For a request to be eligible for extraction, there must be usage in an “Idle” (unbilled) status and the request must have “billing allowed” and “check for billing” set. The “billing place” flag must be set on the Place ID to Bill.

For a contract to be eligible for extraction, the expected invoice date falls on or before the user billing date you entered on Billing Generation screen.

## Voucher Creation

### Voucher Creation

Extract to Vouchers

Include Non-Part Usage

Include Part Usage

Include Field Service

Group or Individual



When we invoice this time, we will only extract to vouchers for requests. Vouchers contain detailed information about items to be billed, including the item ID, the price, and pricing details, which means the method used to calculate the final price. One voucher contains all of the details for the items to be billed based on the billing generation criteria you specified. For example, you can choose to bill only part usage for a specified place. All of the part usage for that place then appears on the voucher. For each item to be billed, one voucher detail is created.

The voucher generation process performs validation. For example, it validates that the place ID to bill is a billing place. The status of the voucher detail indicates whether errors must be corrected before the voucher detail can be posted to an invoice.

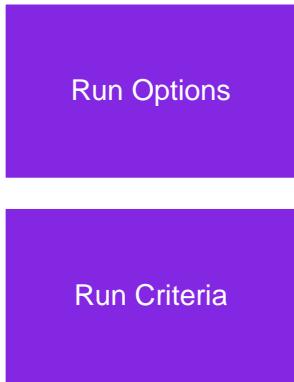
In our example, because there was part and non-part usage on the request, both fields must be set as well as indicating it was for field service.

You must select criteria or no vouchers are generated. We could voucher individual requests as we did in the previous example. You can specify multiple values when appropriate by separating the values with a vertical bar (|) without spaces. When billing generation is performed, each combination of values is tested and any record that matches is included.

However, if you have more than one request that you wish to voucher, you can group by request close date, bill to place, or posting group. You can also group by Voucher Grouping Rules.

## Financials

### Billing Generation Screen



The image shows a detailed view of the "Selection Criteria Option Run Options" section of the Billing Generation screen. This section includes several checkboxes and input fields:

Selection Criteria Option Run Options	
Extract To Vouchers	<input checked="" type="checkbox"/>
Post Vouchers To Invoices	<input checked="" type="checkbox"/>
<b>Extract Criteria</b>	
Include Part Usage	<input checked="" type="checkbox"/>
Include Non Part Usage	<input checked="" type="checkbox"/>
Include Contracts	<input type="checkbox"/>
Include Meters	<input type="checkbox"/>
Include Repair Center	<input type="checkbox"/>
Include Field Service	<input checked="" type="checkbox"/>
Request ID	67
Contract ID	
Contract Version	



#### We run billing on the Billing Generation screen.

The Billing Generation screen is a multi-purpose screen. It allows you to create only vouchers for you to review before you create invoices. It allows you to group vouchers or invoices for creation

The **Run Options** section has two options:

**Extract to Vouchers** determines whether vouchers are created.

**Post Vouchers to Invoices** determines whether vouchers are posted to invoices. To use this option, you must either select extract to vouchers or specify a voucher run ID.

Under the "Extract Criteria" section, it allows you to select what you want included on the voucher and invoice. It allows you to create a single voucher or invoice. It also allows you to create vouchers and invoices in one step. You can extract vouchers and post vouchers to invoices in one step. Or, you can perform the steps separately.

Note, billing generation is an asynchronous process that may take some time to complete.

## Financials

### Voucher Header Status

In Process (IP)

Hold (HO)

Reviewed

Reviewed with Errors



The Voucher screen is a temporary table used to view voucher detail, correct errors, and post voucher detail to invoices. After the vouchers have been created and reviewed, you can modify or delete them if necessary. When the vouchers are accurate, you post or invoice the vouchers thus creating the invoices. You can also create vouchers manually which we will discuss in a later lesson.

The voucher generation process performs validation. For example, it validates that the place ID to bill is a billing place. The status of the voucher detail indicates whether errors must be corrected before the voucher detail can be posted to an invoice. The value of the **voucher status** field identifies how vouchers are posted to invoices.

A voucher status of **IP (in process)** ready to be reviewed.

A voucher status of **HO (hold)** prevents posting of any voucher detail.

A voucher status of **Reviewed** allows the voucher to be posted to invoices.

A voucher status of **Reviewed with Errors** means one or more lines had an error. The errors would have to be fixed before the voucher could be posted to invoices.

Fields on the voucher header:

**Voucher Run ID** identifies the voucher run for this voucher. You use the voucher run ID to automatically post vouchers to invoices using billing generation.

**Voucher Type** identifies the type of voucher detail. Voucher detail is grouped by voucher type. In most cases, the voucher type is "Regular" meaning it is not for a credit or rebill or manually created.

**Voucher Status** identifies how vouchers are posted to invoices. A voucher status of Reviewed allows posting the voucher to an invoice. On the other hand, a voucher status of HO (hold) prevents posting of any voucher detail. If the voucher is in a HO (hold) status, then reason will be on the voucher details. Once you have corrected the problem, you change the voucher status to "Reviewed" and post to invoice.

There are several optional features when creating invoices from vouchers. The Voucher Grouping Rules screen (from the Financials, Admin menu) is used to group vouchers based on information on voucher detail lines. A grouping rule is one or more records with the same rule ID. The column grouping name is used to connect records together and voucher details that match appear on the same voucher. The Voucher Filter Rules screen (also from the Financials, Admin menu) create filtering rules for vouchers, which you can then specify when voucering. On this screen you specify your additional criteria for selecting or

filtering vouchers. You can also specify financial map lists to reference columns not on your primary table.

## Common Voucher Detail Error Statuses

OK, no detected errors

No pricing found

Invalid Person ID

Invalid Bill To Place



The most significant field on the Voucher Lines screen is the Error Status. If the error status is “OK”, the voucher line is ready to post to an invoice. If the error status is anything but “OK” you will need to resolve the discrepancy before posting to an invoice. There are quite a few possible error statuses. However, the most common error statuses are “IVBP” and “NPRC”.

The resolution for the IVBP (invalid billing place) status is to make sure the “Billing Place” flag is set on the request’s place ID to bill. Once it is set you can change the voucher status and post to invoice.

The resolution for the NPRC (no pricing found) status is to make sure there are valid pricing rules. Once you have valid rules, change the voucher status and post to invoice.

## Financials

### Posting From Vouchers

Create Voucher

Review Voucher

Post to Invoice

INVOICE DETAIL ID	INVOICE RUN ID	RELEASE DATE	QUANTITY	BILL TOTAL PRICE	CREATED BY	CREATED
7309	1177		1	\$100.00	WESTTRAVELER	3/9/2017 10:59 AM

Invoices are documents you can send your customers that detail the charges owed to you. There are several ways to post a voucher to invoice: the Billing Generation screen where you can post a batch of vouchers or an individual voucher or the Post to Invoice button on the Voucher screen. Normally this function is used if you have had to modify the voucher or have created a credit and rebill. However, you can use this function to post a voucher same as the Billing Generation screen. Once the invoice has been created, the voucher record is automatically deleted.

## Request Billing Status Updated

### After voucher created

- Usage billing status is updated

### After invoice created

- Usage billing status is updated
- On request, Check for Billing de-selected

Bill Cost	\$33.0000
Billing Currency	U.S. Dollar
Billing Status	REVIEWED
Created	7/18/2017 11:05 AM

Bill Cost	\$33.0000
Billing Currency	U.S. Dollar
Billing Status	POSTED
Created	7/18/2017 11:05 AM



When the voucher is created, the usage billing status becomes "REVIEWED". When the invoice is created, the usage billing status becomes "POSTED". This is especially useful to know where in the billing process that usage record is.

When the invoice is created, on the request the Check for Billing flag is de-selected. This makes sure that the request is no longer eligible for invoicing. In addition, for those times when you may have previously billed usage for this customer, those records that are not in "IDLE" status will not be eligible for vouchering.

## Invoicing Contracts

### To Create Voucher

- Bill schedule release date is on or before billing date entered on Billing Generation screen
- Contract posted
- Bill schedule billing status is IDLE

### After Invoice Created

- Bill schedule billing status updated
- Bill schedule invoice ID populated

Bill Schedules							
RELEASE DATE*	BILL PERIOD START*	BILL PERIOD END*	BILL PRICE*	SCHED TYPE*	BILLING STATUS	INVOICE ID	
1/1/2017	1/1/2017	1/31/2017	\$600.00	STANDARD	POSTED	2220	
2/1/2017	2/1/2017	2/28/2017	\$600.00	STANDARD	IDLE		
3/1/2017	3/1/2017	3/31/2017	\$600.00	STANDARD	IDLE		



The eligibility of contracts is different than requests.

A record qualifies if its bill schedule release date is on or before the user entering the billing date entered on the Billing Generation screen. The bill schedule records are created when you add a contract line, and can be regenerated thereafter by means of a business rule or by using the Regen Bill Schedules option.

First, IFS FMS uses the contract ID and version, along with the billing date, to query contract data that is eligible to be extracted.

The contract must be in a posted status, and its bill schedules in an IDLE state to qualify for billing.



IFS

Create billable charges (part and labor and expenses usages on request and contract lines on contracts).

Run the vouchering process on the Billing Generation screen.

Post the vouchers to invoices.

## Practice & Learn

### Financials

- Go to Financials, Billing, Billing Generation
- Select the following, then Submit
  - Extract to Vouchers
  - Include Non-Part Usage
  - Include Field Service
- Your request ID from previous exercise
- Go to Financials, Billing, Voucher and review your voucher
- Go to Billing Generation again and post the voucher to invoice
- Repeat for your contract





Lesson objectives:

- Understand the Billing process
- Understand Vouchers
- Understand Invoices

# Backbills, Rebills, Invoice Corrections



## Backbills, Rebills, Invoice Corrections

### Learning Outcomes



By the end of this lesson, students should have:

- Created a credit and rebill from changing contract coverages
- Created special vouchers
- Credited and rebilled an invoice
- Backed out an invoice

## Backbills, Rebills, Invoice Corrections

Regenerate Based On Changes

Rebill

Backbill



As we discussed earlier, changes to coverage dates or contract pricing affect bill schedules. Also, contract type changes can affect bill schedules. After you make these kinds of changes, you need to regenerate the bill schedule. If your invoice rule has its "Backbill" option set, previously-charged bill periods are credited and rebilled. If the "Backbill" option is not set, remaining bill periods are updated to charge the remaining amount, accounting for amounts already billed.

If you created a manual bill schedule and you regenerate, you erase that bill schedule. We recommend you manually update your bill schedule if it was originally created manually.

There are application parameters that are significant to rebills.

**Rebuild\_bill\_schedules\_for\_like\_periods** are if you want to credit and rebill bill schedules after regeneration, regardless of whether the price changed, set this value to Y (yes). When this parameter is N (no), a bill schedule of the same number of days and same amount is not credited and rebilled.

## Backbills, Rebills, Invoice Corrections

### Special Vouchers

Credit Memo

Debit Memo

Manual  
Voucher



There are times when you will want to create special types of vouchers.

**Credit memo** is generally created from backing out an invoice or a manual debit. This is normally done when the correcting an invoice which is discussed in the next slide.

**Debit memo** is generally created from backing out a manual credit. A voucher type of “Debit Memo” is generally created from backing out a manual credit from the invoice screen. This is normally done when the correcting an invoice which is discussed in the next slide.

You can also create **manual voucher** detail directly on the Voucher screen. This is when you need to create a credit memo or a debit memo that is not really related to any outstanding invoice. The voucher type will be “Manual”.

## Backbills, Rebills, Invoice Corrections

### Invoice Corrections

Your Customer has found an error with his Invoice and wants it corrected

Credit/Rebill

Delete

Copy Invoice

Backout Invoice



There are **two methods** to correct invoices:

**Backing out** an invoice creates a voucher with voucher detail that offsets, or reverses, each invoice detail. You back out the invoice when you do not need to create a new, replacement invoice. This is done on the Invoice screen with the “Backout Invoice” button. When the voucher is created, the **voucher type is “Credit Memo”**.

**Crediting and rebilling** an invoice creates a voucher with voucher detail that offsets, or reverses, each invoice detail. In addition, the billing status of each item, including part usage and non-part usage, is reset so that the request or RMA can be billed again during billing generation. You credit and rebill an invoice when you must correct information on usage, such as quantity or price. This is done on the Invoice screen with the “Credit/Rebill” button. When the voucher is created, the **voucher type is “Credit/Rebill Credit Memo”**.

If you delete an invoice, it also resets the billing status of each item on the invoice.



IFS

Create a credit and rebill from changing contract coverages

Create a manual voucher

Credit and rebilled an invoice

Back out an invoice

Back out a manually created invoice

## Practice & Learn

### Backbills, Rebills, Invoice Corrections

- Your customer wants to change the coverage dates on their monthly contract which has 4 periods already billed.
  - Rebill and backbill the contract.
- Your customer has received their contract invoice and has found that you have over-charged them and wants a credit equivalent to a billing period.
  - Credit their invoice.
- Your customer received their invoice and does not understand why you billed them 4 hours of labor when the tech was there only 2 hours.
  - Credit and rebill their invoice for the 2 hours.



# Contract & Financials Review



# FSM Core Processes – Review



**Use CORE processes in IFS to  
understand the building blocks of IFS  
field service management.**

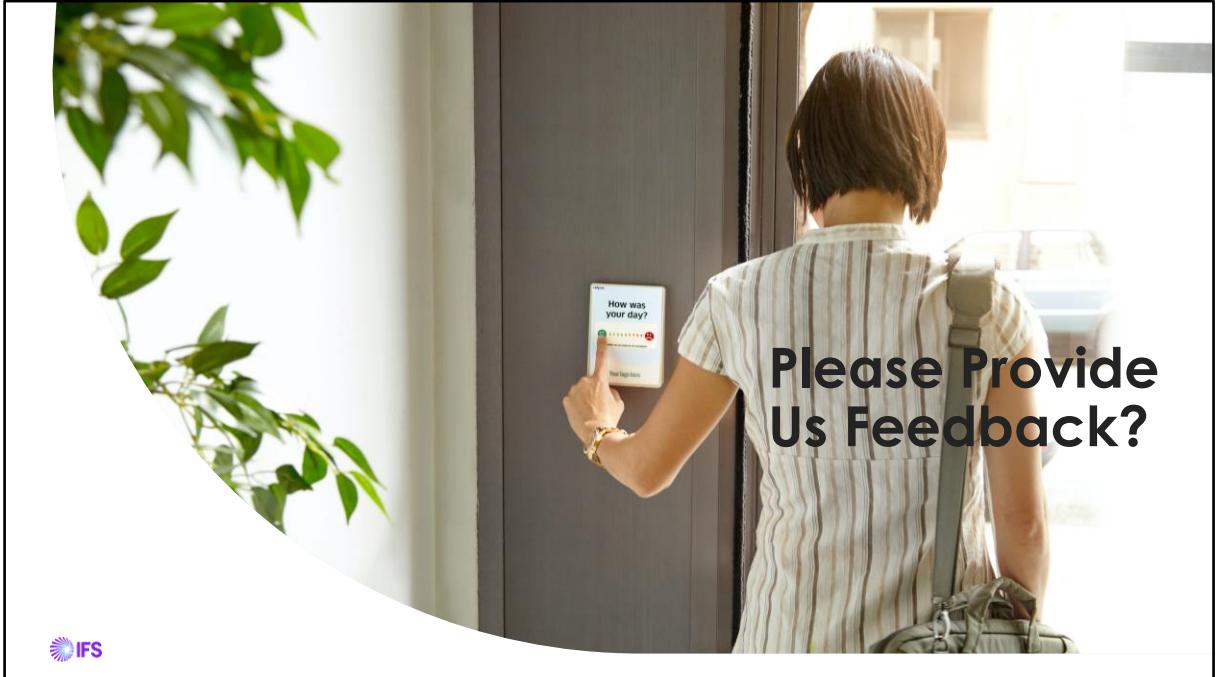




# Wrap-up



© IFS

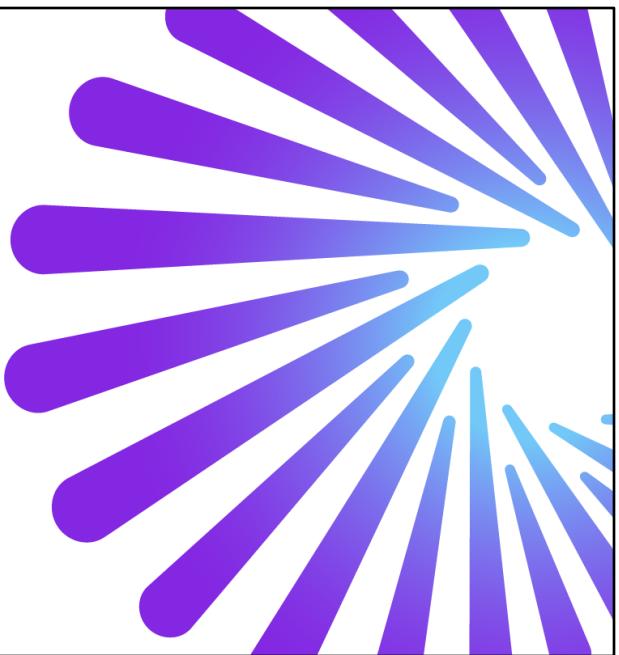


Please Provide  
Us Feedback?



# Thank you!

#MOMENTOFSERVICE





© COPYRIGHT© 2021 BY INDUSTRIAL AND FINANCIAL SYSTEMS, IFS AB (PUBL). ALL RIGHTS RESERVED. THIS MATERIAL AND ITS CONTENT IS PRODUCED BY THE IFS ACADEMY FOR AUTHORIZED TRAINING PURPOSES ONLY AND REMAINS THE INTELLECTUAL PROPERTY OF IFS. NEITHER THE MATERIAL OR ITS CONTENT MAY BE COPIED, REPRODUCED, OR DISTRIBUTED WITHOUT IFS' EXPRESS WRITTEN PERMISSION.

IFS DOES NOT WARRANT, EITHER EXPRESSLY OR IMPLIED, THE ACCURACY, TIMELINESS, OR APPROPRIATENESS OF THE INFORMATION CONTAINED IN THIS TRAINING MATERIAL AND DISCLAIMS ANY RESPONSIBILITY FOR CONTENT ERRORS, OMISSIONS, OR INFRINGING MATERIAL. IFS ALSO DISCLAIMS ANY RESPONSIBILITY ASSOCIATED WITH RELYING ON THE INFORMATION PROVIDED IN THIS DOCUMENT AND ANY AND ALL LIABILITY FOR ANY MATERIAL CONTAINED ON OTHER CHANNELS THAT MAY BE LINKED TO THE IFS TRAINING MATERIAL.

