FSM 6: Essentials

Basic Configurations And Mobile

IFS Academy

Welcome

- Timings
- Safety
- Ground rules
- Objectives

YOUR TRAINER

Name:

Contact number:

Email:

Agenda – Day 5

00 Introduction To Business Rules

01 Business Rule Creation And Navigation

02 Introduction To Mobile

03 Setup & Install

04 Sync Rules & App Params

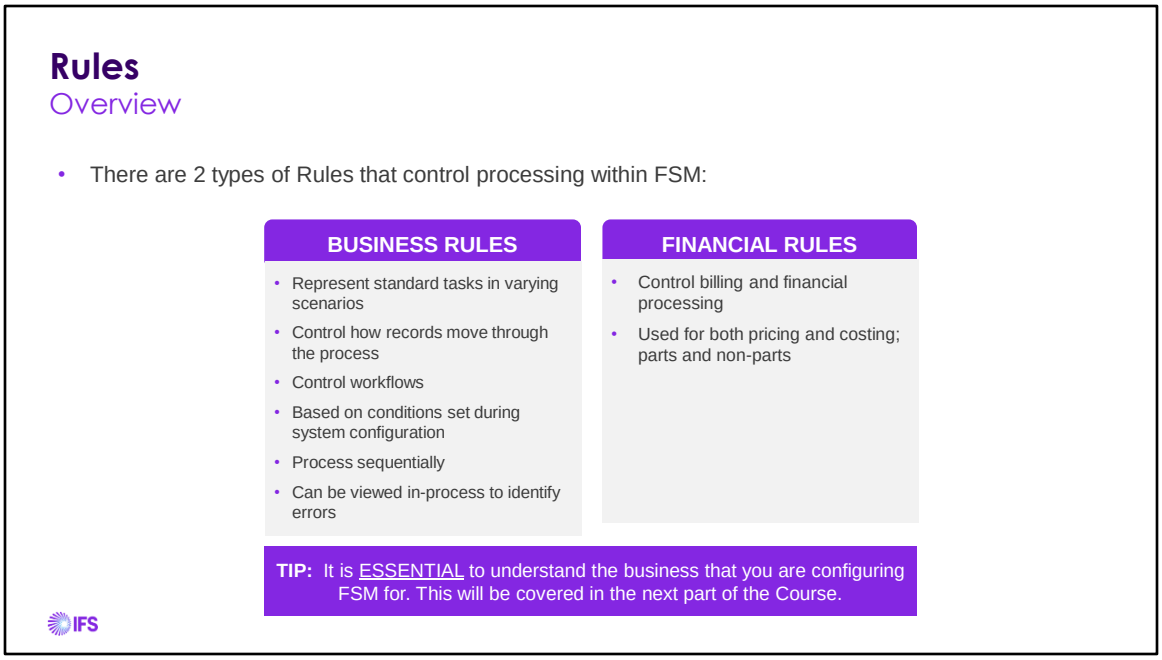
05 Walkthrough On Main Flows

1. Business Rules

Rules
Learning Outcomes

By the end of this lesson, you should:

- Understand the purpose and importance of rules
- Recognize the components of business rules
- Recognize the components of financial rules



First of all, **you need to understand your business** to create business rules or pricing rules.

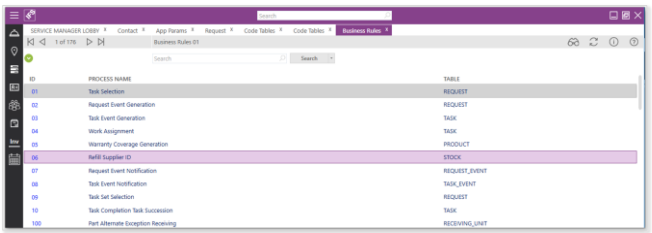
Let's take the following scenario. Your organization has a call center with many field technicians who services your equipment in the field. In order to create the business rules, you will first need to define your standard tasks. Begin by identifying the various service delivery scenarios performed by your organization. Next, identify the various activities necessary for each scenario. Note that an activity may appear in multiple scenarios or multiple times within a single scenario. For each activity, determine what business rule and pricing rule needs to be set up.

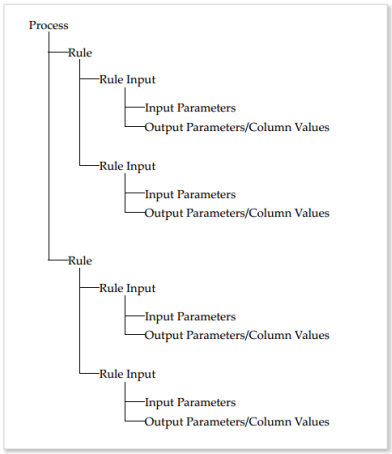
In other courses, such as *IFS FSM Services, IFS FSM Repair Center,* and *IFS FSM Financials*, we discuss different scenarios and potential rule set up.

Rules

Business Rule Components

- Both Baseline and Custom Business Rules follow the same structure
- Each Business Process can have multiple business rules
- Each rule is individually defined





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Both baseline and custom business rules follow the same structure. Business rules are applied to one, primary table. It uses built-in metadata to define relationships and may have very large number of input conditions. The output of values or processes are not constrained. A process trigger occurs due to a database change or explicit call. They are evaluated in one pass when invoked. If there are exceptions to the baseline business rules, then custom business rules must be explicitly coded.

Each of the Business Processes listed on the left can have multiple Business Rules. The Business Rules each have their own definition and Rule Input entries. The Rule Input entries are the fields that you want to use in the criteria that will determine whether or not to execute the Business Process. The Rule Input entries listed are for the selected Business Rule. Once you have defined the Business Rules for the Business Process, including their Rule Input entries, you will need to maintain the conditions for each of these rules. After saving the Business Rules, drill into each rule by clicking on the underlined, blue colored Rule ID, which is a hyperlink to the Rule Conditions screen.

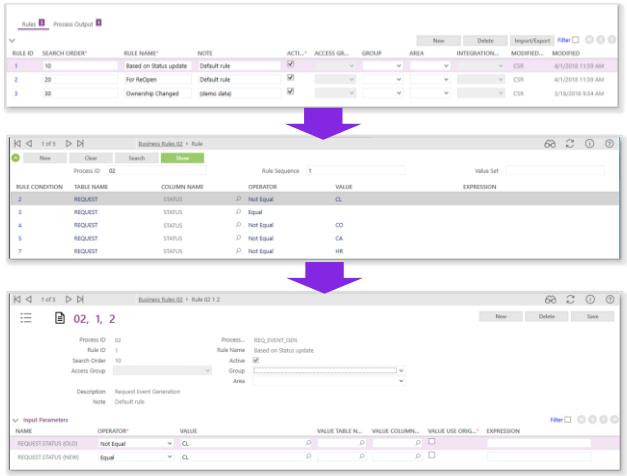
Rules define the map of inputs to an output, either a parameter or table columns. A process can have many rules. Rules are evaluated sequentially based on the search order you specify. Depending on the process, evaluation of rules either stops after the first match or after all of the rules are evaluated.

Rule Input are values on the database that you match to an output value, which is either a parameter for an action or column values on the database. Each process has an associated primary table and many processes also have related tables. You can specify any number of columns on these tables as rule inputs. When all values for each rule input match, the specified output value is used. When you specify input values that appear on code tables, for example information that appears on a drop-down list, you specify the code instead of the code description or associated message text. You can specify more than one input parameter that maps to the same output parameter. Specify each parameter separated by a comma (,) without spaces. For example, if you want to specify multiple state codes, you could specify CA,OR,WA,AZ.

Process performs an action. Most processes call an MPM to perform the action while some processes set a column value on a table. We supply multiple processes for you to use. You can also create your own processes using Studio.

Rules
Business Rule Components

- Within the Process there are Rules
  - Each Rule can have a search order
  - Each Rule can have multiple conditions
  - Each condition has an Input variable and dependent Output



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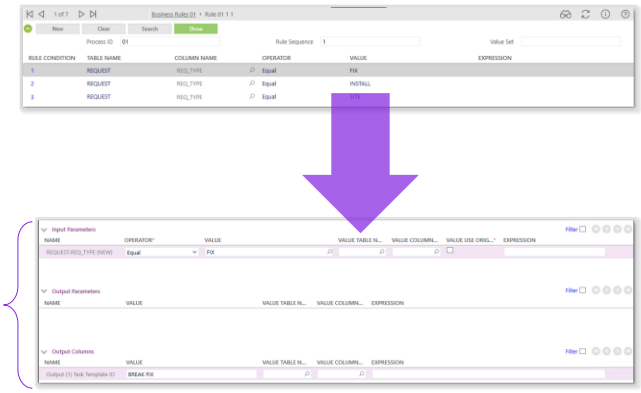
Rules
Business Rule Conditions

- **Rule Conditions** are the individual pairings of input parameters to outputs
  - either output parameters or table columns.
  - You can specify more than one input parameter that maps to the same output parameter.



Rule Conditions are the individual pairings of input parameters to outputs, either output parameters or table columns. The output parameters are specified by the process. Some processes output table column values and some processes do not require an output parameter. When you specify input values that appear on code tables, for example information that appears on a drop-down list, you specify the code instead of the code description or associated message text. You can specify more than one input parameter that maps to the same output parameter. Specify each parameter separated by a comma (,) without spaces. For example, if you want to specify multiple state codes, you could specify CA,OR,WA,AZ.

The Rules Condition screen is where you define the conditions upon which execution of the Business Process is contingent. Each condition corresponds to a specific set of criteria and is evaluated separately from every other condition. A condition is a logical set of comparisons between an Input Parameter (a field in the primary or related table record) and some value. Keep in mind that Business Rules and the related processing are all based on some change (transaction) being made to a record in the primary table for the Business Process. Hence, there is the concept of the record in process - the record being acted upon that triggers the Business Rule processing - which has an 'original' state, and the 'in process' or 'new' state that the transaction is in the process of committing when the Business Rules are being evaluated. When all the criteria for a condition evaluate to TRUE, the Business Process will execute using the values defined in Output Parameters and/or Output Columns. Remember that the Business Process will execute for All such conditions or just the first one that evaluates to TRUE, depending on how the Business Process 'Execution Type' was defined. In Studio, it is called 'Execution Type', but in the client, it is called 'Process Trigger'.

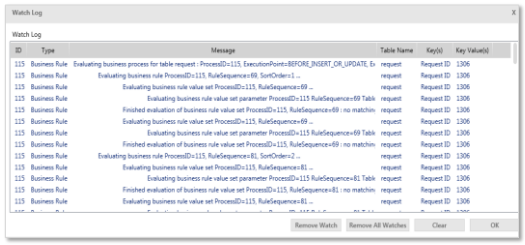
Each criteria defined for a condition is a logical comparison between a field on a table (primary, or related to the primary table) and some value. Each of these criteria will need to resolve to TRUE for the Business Process to execute on this condition.

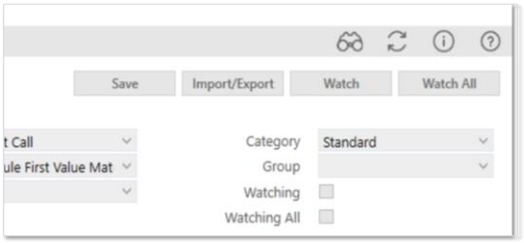
If the metadata has a lookup defined for the field identified in the Name field, the Value field will also be a lookup for Output Columns and Input Parameters.

Rules
Watching Business Rules

When testing a business rule, it can be watched, this is useful in determining if the rule is performing correctly or as expected

- You can Watch an individual rule
- Or Watch All





When a business rule is being evaluated or performing, you can watch it happen. This is helpful to decide whether the configuration is performing correctly along with helping narrow down and troubleshooting if it is not working as expected. When a business rule is evaluated or actually executed then it will log and prompt the logging information to the user. There is a watch and watch all feature meaning you can watch one rule or client script or watch all of them.

Rules

Business Rule Supported Operators

Operator	Description
( )	Parentheses change precedence—operations inside parentheses are performed before those outside the parentheses
*, /. %	Multiplication, division, remainder
+, –	Addition, subtraction
to days, to hours, to minutes, to seconds	Convert to days, convert to hours, convert to minutes, convert to seconds
<, <=, >, >=	Less than, less than or equal, greater than, greater than or equal
=, !=, <>, is null, is not null, like, not like	Equals, not equals, not equals alternate, is null, is not null, like, not like
AND	Logical and
OR	Logical or
?	Conditional operator

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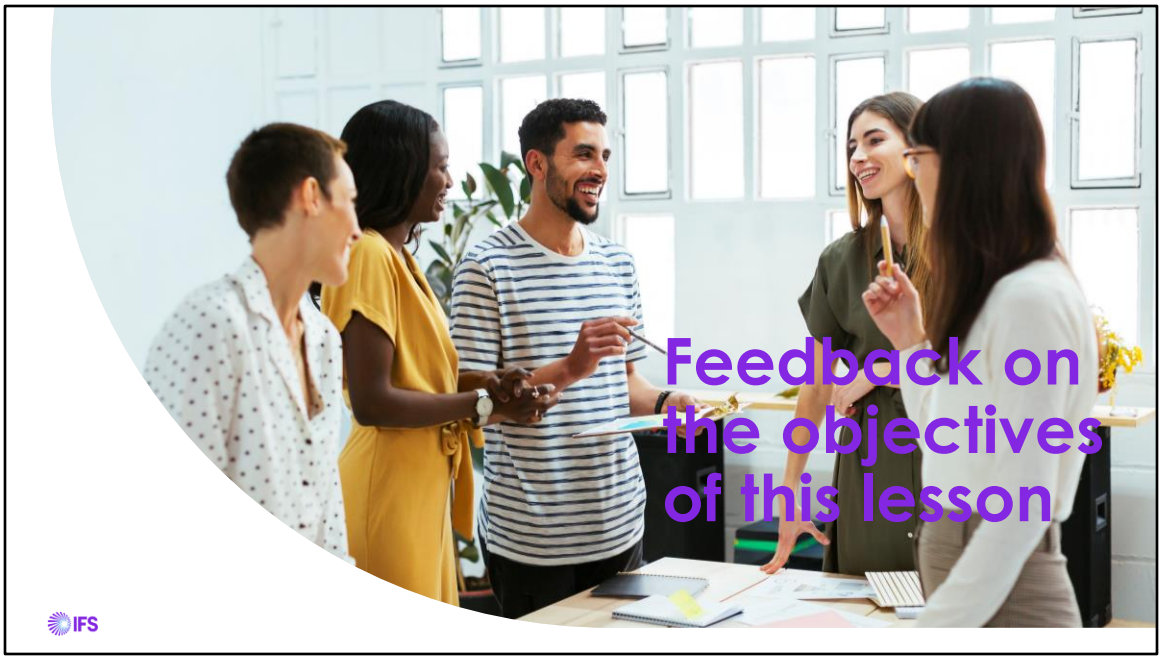
You can use an expression to represent a value in the rule condition.
You create expressions using operators and operands.
When evaluated, the expression returns a value that is used to evaluate the rule input. When defining the value to compare to, you can specify ONE of:
A literal value entered under 'Value'. This is a static value that you manually enter.
A table and column that will contain the value entered under 'Value Table' and 'Value Column'.
This is a *related* table and column that contains the value for comparison.
An expression that resolves to a value entered under 'Expression'.
An expression that resolves to a value of the same type (date, string, etc.) as the Rule Input Parameter. An example might be: request.user_def_num1 + request.user_def_num2. Another example might be: task.created_dttm > Now(). We will discuss in the next few slides the different expressions that can be used in the field.



By the end of this lesson, you will:

Be able to create a simple approval process

Have viewed simple escalations

Recognize the features of multi-level approvals


2. Mobile
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Mobile
Learning Outcomes

By the end of this lesson, you will:

- Understand the features of the FSM Mobile Client
- Setup a user in the FSM to use for Mobile access
- Appreciate the basic requirements for set up of the Mobile Client
- Understand how the data is synchronized and filtered to the device
- Explain how transactions are processed

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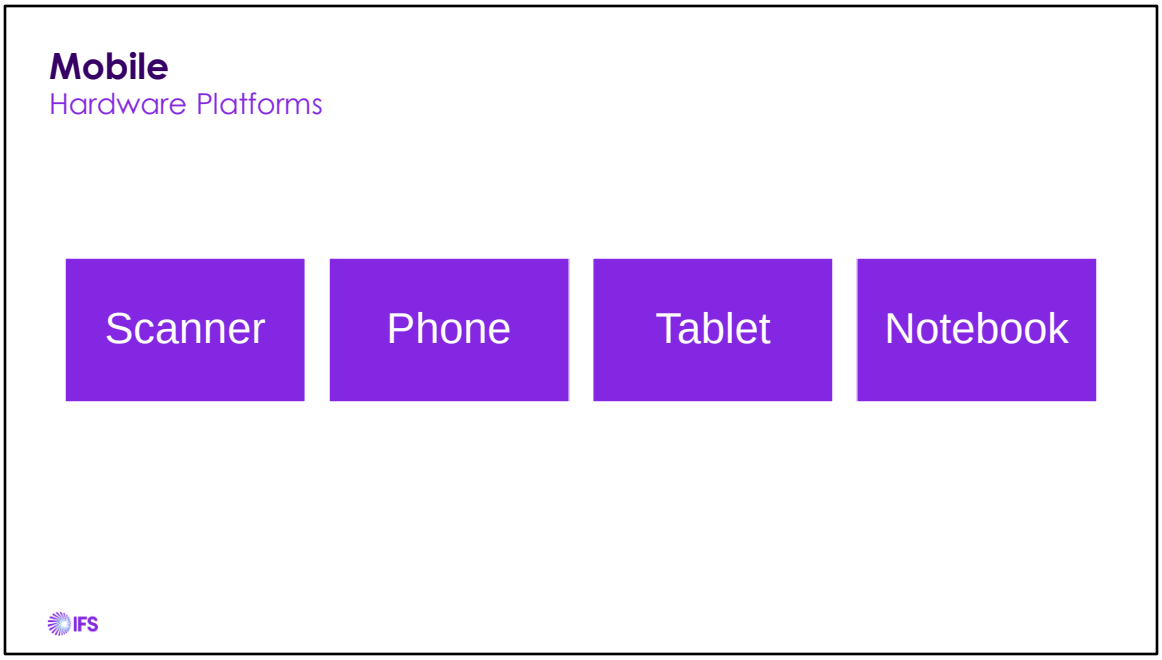


The FSM Mobile offerings can be run on scanners, phones, tablets and notebooks. The FSM Mobile can run on Android, iOS or Windows devices. FSM Mobile can stand alone or be integrated. Mobile can have online/off-line Connectivity via SQLITE Database

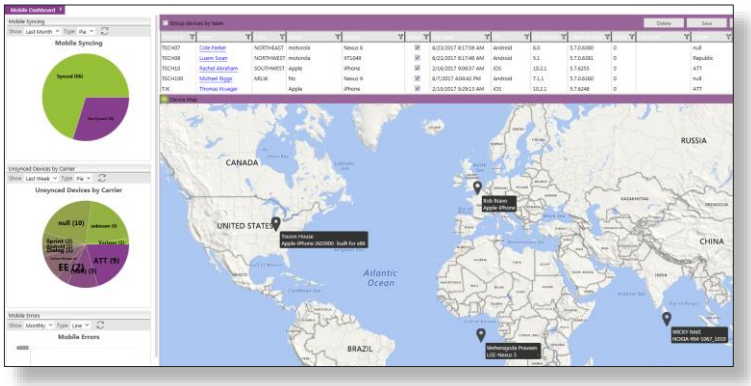
The Mobile offerings will be discussed in more detail in *IFS FMS Mobile* course.

Mobile
Features – Mobile Dashboard

Mobile Syncing

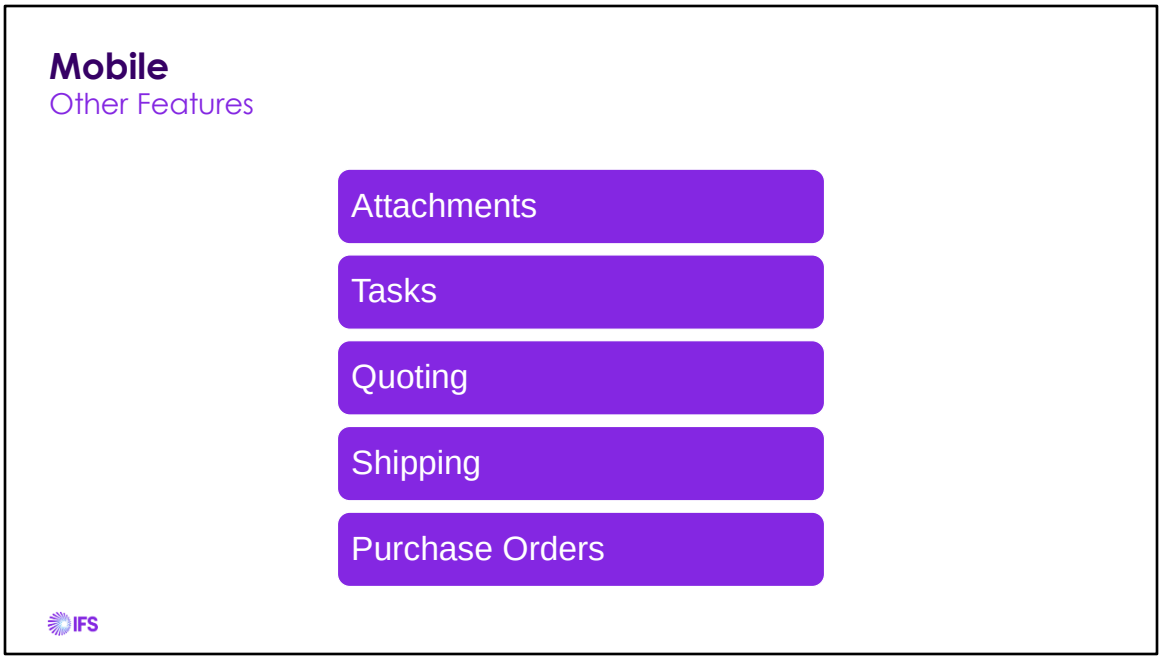
Unsynced Devices by Carrier

Mobile Errors



A feature within the client to monitor mobile users and their devices is the **Mobile Dashboard.** It can also be used for troubleshooting issues. Besides seeing what techs are logged in and when they last initialized, there is also a map displaying the location of your technicians. You can initialize devices from the dashboard so you can take the burden off your technicians from initializing when you have installed new software or changes.
The charts on the dashboard gives you a different representation of the data.
Mobile Syncing chart shows the number of devices synced and not synced.
Unsynced Devices by Carrier chart shows the number of devices not synced by carrier.
Mobile Errors chart shows the number of mobile errors in the specified time that occur as a result of transactions submitted by a device.

Once the data is downloaded onto the device, the technician can see the jobs, find directions, add parts, labor and expenses and even get the signature of the customer when the work in completed. One feature about Mobile is the ease of configurations. The FSM Mobile Designer enables you to configure FSM Mobile applications to match your organization's brand identity, terminology, and business practices. You can configure screens, menus, workflows, logos and icons. Designs and revisions are created on the client. A **design** is a collection of configured options that constitutes the entire user experience. You can create multiple designs and use the FSM Designs screen to assign designs to the appropriate users. If the user has the ability, via an application parameter, to "Designer" on the device, he can make changes to the design.



As a field service technician, I want to be able to upload an attachment within a shorter time as attachment uploading time can be very long due to the size of pictures taken by cameras which results in a delay in the task completion. I want to be able to have the system pre-define photo sizes for the mobile so that it can leverage the photo quality and attachment submission time.
Therefore, define picture size limits in FSM smart client to shorten upload times. This is configured by the parameter, **camera_photo_size**, where it identifies the largest picture size that can be uploaded.

As a field service engineer, I want to be able to download attachments only if they are relevant for my task so that it will help to reduce the sync time in the mobile and the data expenditures.
Attachments can be marked as "On Demand" attachments. When a task is assigned to a mobile user, "On Demand" attachments will not be automatically downloaded to the mobile. Technicians can download these attachments only when they make a request.

As a field service technician, I want to be able to re visit the customer and perform necessary services to completely fix the current problem so that it would be much

convenient if I can create an additional task for the same service request and assign it to myself. Therefore, schedule a follow-up task for a task the tech is completing. They can access the follow-up task screen from the debrief context menu and create a new task assigned under their name.
the tasks that are assigned to my team and a map showing the pooled task locations so that I would be able to accept the task assigned to my team in order to serve my customer in a timely manner by achieving SLAs. Field service technicians can easily view tasks assigned to their team, and allow them to accept one of the tasks as something they're working on, which will result in them being assigned that task.

As a service manager, I want to be able to have the task times to be updated automatically when a technician selects a task status from their mobile in the field so that it allows our organization to effectively manage resources and achieve service excellence. Tracking and monitoring the
As a field service technician, I want to be able to see task times based on status changes of the mobile technicians is done on the “STATUS BASED TIMES” business rule where columns on the task table can be configured to update automatically when a task status is selected.

As a Field Service Engineer, I want to be able to select service parts on my task so that part needs for those parts are created automatically. As a Call Taker, I want to be able to include all the serviceable part information when I’m creating a service request so that my mobile team members would be able to see them on their tasks. I want to be able to see all the part ids associated with the product on the request which are marked ‘Serviceable’ so that I would be able to select a serviceable part for a part need or a usage. The service BOM (Bill of Material) allows the mobile technician to select and retrieve BOMs if there are service parts associated to the request unit.

As a Field Service Engineer, I want to be able to easily create a quote from my mobile and let my customers know what it could cost to have other work done for them so that at the end of the quoting process I should be able to present them with a price. As a Customer, I want to be able to know from the field service personal working on my site about the cost to perform a specific work or to create a contract at the specified price so that this will assist me in deciding whether to accept this quotation for my future work. Use workflows to create new quotes or converted from other records.

As a field service technician, I want to be able to ship a de-installed part or to return unused inventory back to a warehouse so that it will give me more flexibility to manage my own stock by tracing the parts in the system. Technicians can ship items to other places within the system from the Shipping screen on the Home page. Also they can specify a shipment from the stock list screen.

As a field service technician, I want to be able to source part needs from the supplier so that it will help me to control the cost of the request/task and also to ensure the task completion on time. Technicians have the ability to create purchase orders and receive them.

Mobile Overview
Navigation

- Global Menu
- Context Menus
- Workflows
- Quick Jump Menu
- Hyperlinks

Mobile Overview
Feature Set

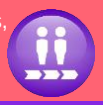
Job Creation
Scheduling and dispatch, parts ordering, file attachments, notes, etc.

Inventory
Parts ordering, searching, adjustments, receiving, swapping, etc.

Job Debrief
Job completion, signatures, surveys, notes, parts, labor, expenses, PCR codes, etc.

Customer Relations
Accounts, installed products, contracts, warranties, service history, location, etc.

Sales in Service
Opportunities, replace and renewals, service contracts, etc.



Miscellaneous
Time & Attendance, LBS and ETA, actions, collaboration, etc.

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Mobile Overview

Request And Task Creation

- Request
- Contact
- Product
- Part Needs
- Notes
- Task

Show the differences between personalization, configuration, customization and adminutesistration.

Personalization: Show how to change the UI Theme (under File, UI Themes)

Configuration: Show how to do a message translation of request_type

Customization: Show how to create a customized screen under the UI Designer and apply it to a role

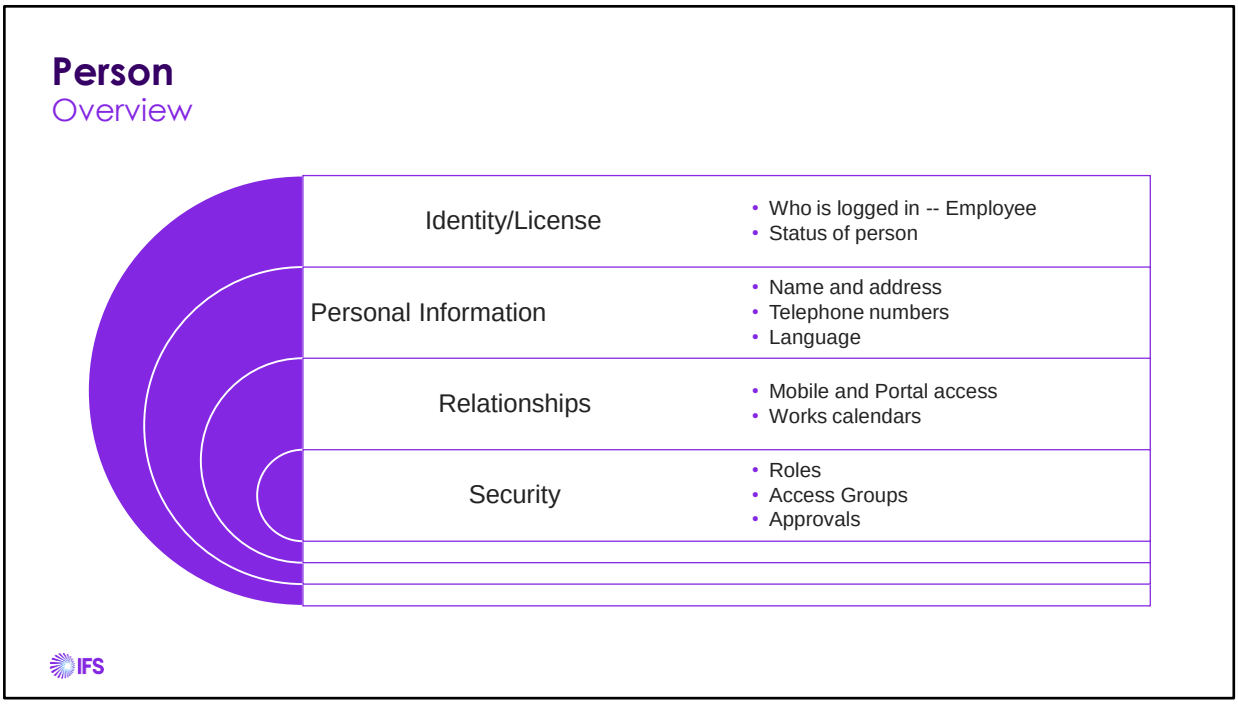
Adminutesistration: Show the Adminutes menu including the baseline business rules and application parameters

Setup & Install

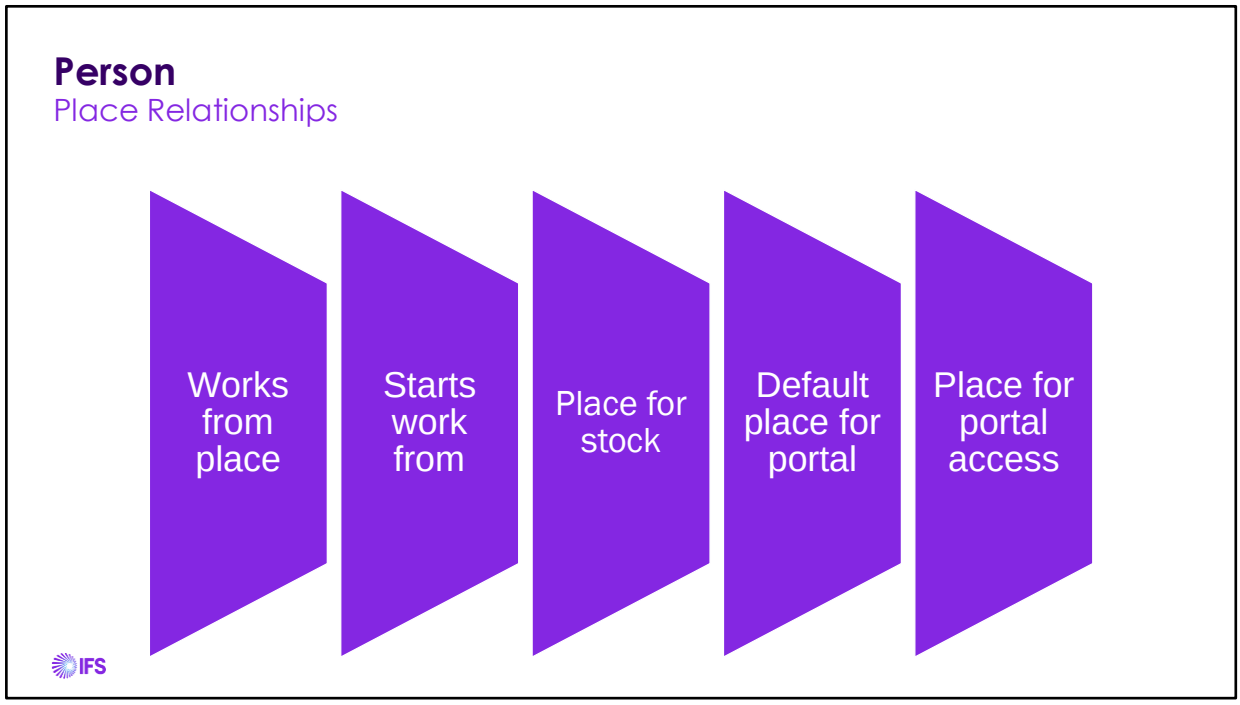
Setup & Install
Learning Outcomes

By the end of this lesson, students should have:

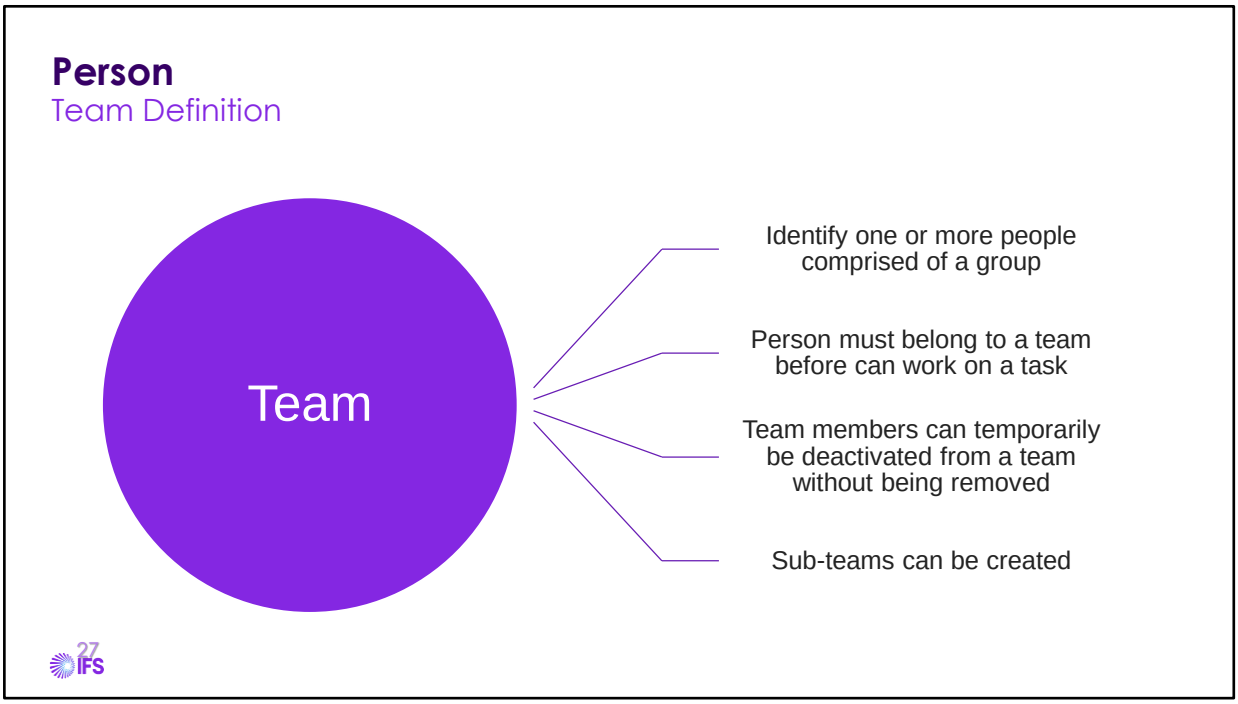
- Created a person (user) record and authorized it for mobile use
- Downloaded and installed the mobile client
- Activated the client for a user
- Understood the different ways the client can be deployed



The Person record can be broken into several areas.
Under the **Identity/License** category would be fields such as: **FMS License Type**, **Employee** and **Person Status**. If an employee leaves your company, set Employee = "N" and Person Status = "Inactive". The former employee can no longer log in but you will still have visibility of any work that had been done. The only time you should delete a person record is if you created it in error.
Under the **Personal Information** category would be fields such as: **Name**, **Address**, **Home/Mobile/Work Phone**, **Fax**, **Job Title, Email, Alt Email, Language**, and **Currency**. The value in the “Language” field determinuteses the language displayed in FSM when the user logs in. You could use Messsage Translations or import from a translator to modify the language. If you use multi-currency, the “Currency” field defaults your technician"s currency when he creates his usage records.
Under the **Relationships** category would be fields such as: **Mobile User** and **Calendar**. The “Calendar” field is the work calendar for the person. Calendar exceptions are for vacation, jury duty, and training courses. We will discuss calendar exceptions later in this lesson.
Under the **Security** category would be fields such as **Access Group** and **Approver/Approval**. Access groups determinutese who can see or access certain records. Approver/Approval fields define approval of monetary limits for a person.

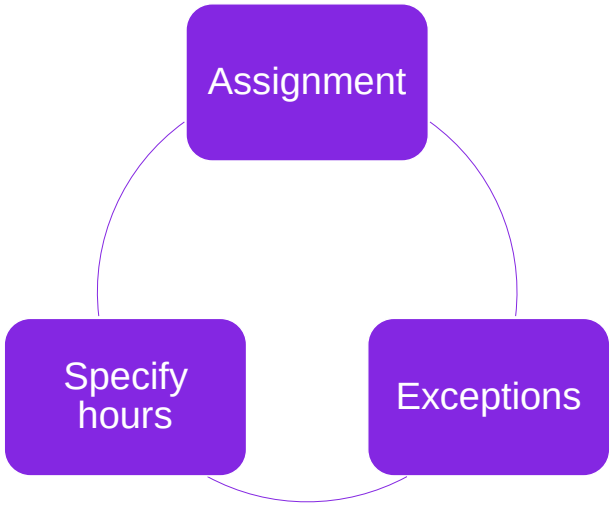


The Places tab defines how the person is related to the specified place.
Works from place Used to identify default places for a person. This is important in Repair Center for the receiver and the shipper as well as the person who creates the RMA.
Starts work from Used to identify the place where the person begins work; used when calculating and optimizing routes for scheduling.
Place for stock Used for the default location of stock for field service representatives or repair personnel. This is also used with the Mobile user to determinutese where they get their stock from. Mobile must also indicate the location.
Default place for portal access If a person accesses portals, used to define the place whose information the person can access.
Place for portal access If a person accesses portals, used to define any other place whose information the person can access.



Person records must exist before they can belong to a team. Team records are used to identify one or more people who compose a group. Because tasks are assigned to teams or team members, a person must be a member of a team before that person can work on a task. The team leader must also be specified as a team member if the team leader can also work on tasks.
Persons assigned to a team can have their team memberships temporarily inactivated without removing them from the team.
For example, you might inactivate a person who is temporarily reassigned to another job function. You can create sub-teams that are subordinate to the specified team.
When you create sub-teams, you can choose whether to use either the team or sub-team name when performinutesg work assignment or use the Schedule Board.
A team can have both members and sub-teams.

Person
Work Calendar



Work calendars are used to specify working hours and exceptions for persons or places. They are used on Schedule Board to assign requests and tasks, in Repair Center to determinutese turn around times and in MWFM to optimally assigning requests and task. You can create multiple calendars and then assign the appropriate calendar to individual places or individual employees. Work calendars **specify hours** to accommodate part-time and split shifts as well as holidays. Work calendars are assigned to each Person record and used for scheduling on the Schedule Board and Repair Board. We will discuss work calendars again when we talk about Places.

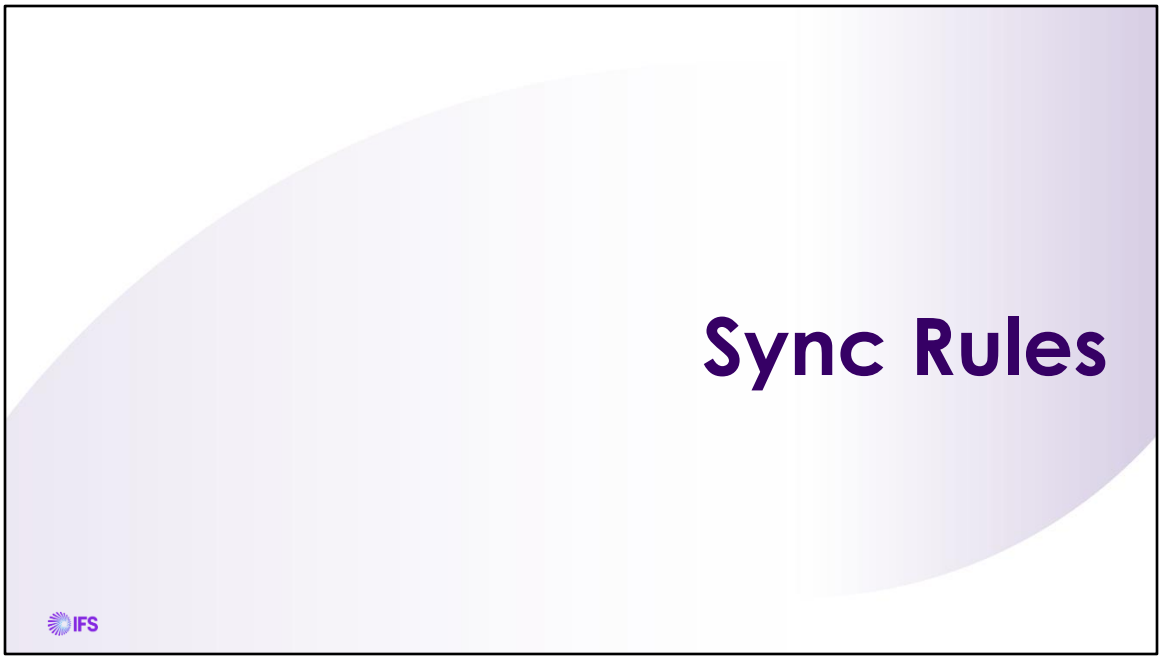
Exceptions include when the person is not available to work, such as vacations or training classes. It can specify as working or non-working and can appear on the Schedule Board in a unique color which must be set up using Color Settings under the Adminutes menu. The "Non working" option determinuteses whether work assignment can be performed in the exception period. When not selected, the exception appears on the Schedule Board, but work can still be assigned. When selected, work cannot be assigned.
Work calendars consist of **day codes** and **time blocks.** Day codes are an FSM code table. Time blocks are defined on the time_block code table. You can create any time blocks you need but when you specify time blocks on this tab, they cannot overlap.

Person

Enabling The Mobile Client

Mobile User (Details Tab) – Must be selected. Identifies that a person can be associated to a mobile device

- FSM License Type – STUDIO, NAMED, or MOBILE



Sync Rules
Learning Outcomes

By the end of this lesson, students should have:

- Understood the purpose of Sync Rules and how they're used to implement FSM Mobile.
- Learn about the impact Sync Rules have on the mobile device's database schema.
- Understood best practices for building Sync Rules.

SYNC RULES

METADATA WHICH DEFINE WHAT TABLES AND DATA SHOULD BE ON THE DEVICE AND HOW THAT DATA IS FILTERED AND SYNCED.

Sync Rules
What Are They Used For?

- Identify which tables have their data synchronized to the device.
- Generate the database on the device (tables and indexes).
- Determine how data is filtered before going to device.
- Set how often a table's data is synchronized.
- Gather and send related data for a transaction being sent to a device.
- Identify MPMs to be invoked when a table update is received from mobile.

Sync Rules

Synchronization Types

Real Time

As transactions occur in FSM, they sent to the mobile device.

Batch

Transactions are sent to the mobile device in batches based on a defined frequency. Only changed data is sent.

Sync Rules
Real Time

- Intended for time sensitive data (tasks, requests, notes, attachments).
- Processed on a transaction-by-transaction basis.
- Generally sent to a specific user who is assigned the data (e.g., the PERSON_ID on a TASK record).

For data that isn't changing often and whose updates a user in the field needs to be aware of quickly.

Sync Rules
Batch

- Intended for large data sets of non-time critical data (places, products, models, parts).
- Runs on a frequency (number of hours).
- Only sends down updated data.
- Generally, sends data to many or all devices.

For data in tables with a lot of records that need to go to the device but don’t need to be updated immediately

Sync Rules

Key Fields – Header Fields

For Batch Rules, ONLY use Batch – Delta!

Field	Description
Table Name	The table this rule manages. Each table can have at most one Rule.
Delivery Method	Determines how messages are sent.
Frequency	Determines how often messages are sent. Only for Batch.
Active	If not selected, this rule will not be used.
Owner	If selected, a field on this table identifies the person who should receive an updated transaction.
Broadcast	If selected, all devices will receive updates to this table.
Last Run	Displays when this table was last synced. Only for Batch.

IFS

Application Parameters
Learning Outcomes

By the end of this lesson, students should have:

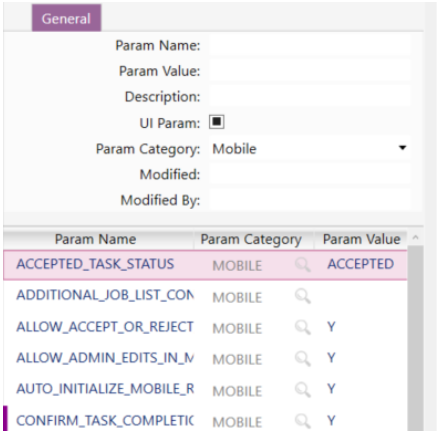
- Understood the purpose of Application Parameters.
- Know the App Params available to configure the behavior
  of the mobile applications.
- Understood the impact of each App Param.

APP PARAMS

PARAMETERS USED TO CONFIGURE COMMON BEHAVIORAL CHOICES WITHIN THE FSM APPLICATION.

Application Parameters
Access

- App Params are accessible in the Smart Client
- Admin\System\App Params
- To see App Params for Mobile, apply Param Category = MOBILE filter
- Each param has a Description which identifies its purpose
- Changes to App Params are broadcast to devices (see METRIX_APP_PARAMS Sync Rule).

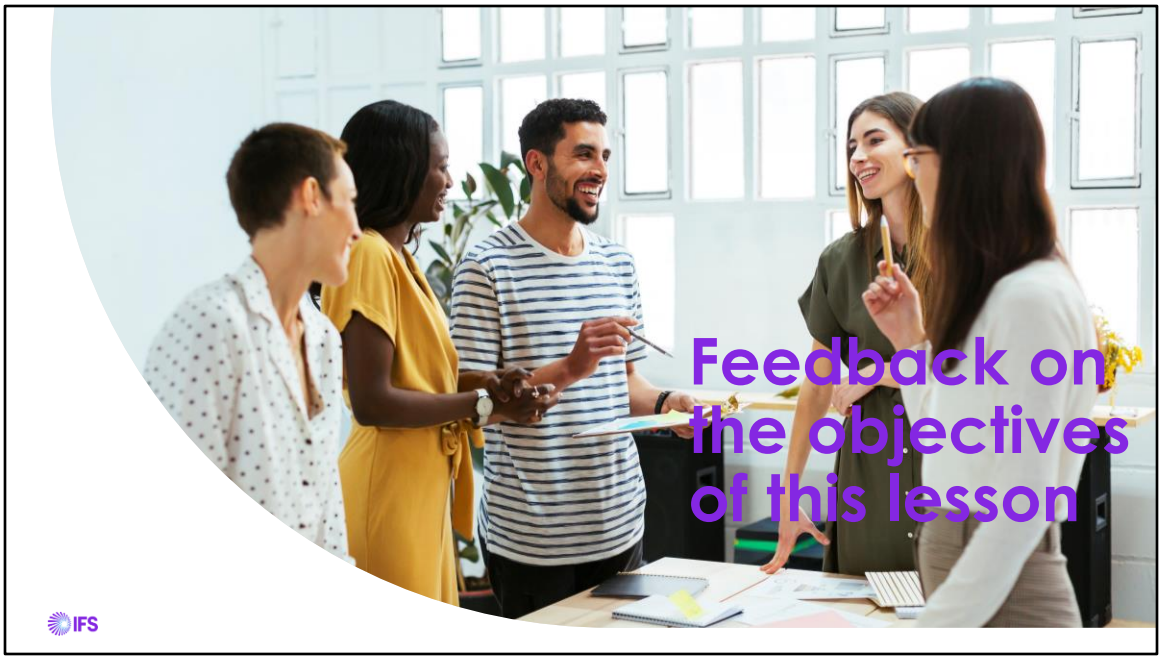


Application Parameters

Accepting Or Rejecting Tasks

- Allows you to specify whether or not technicians should have the option to accept or reject an assigned task
- If enabled, notifications will be displayed on the device and on a connected wearable

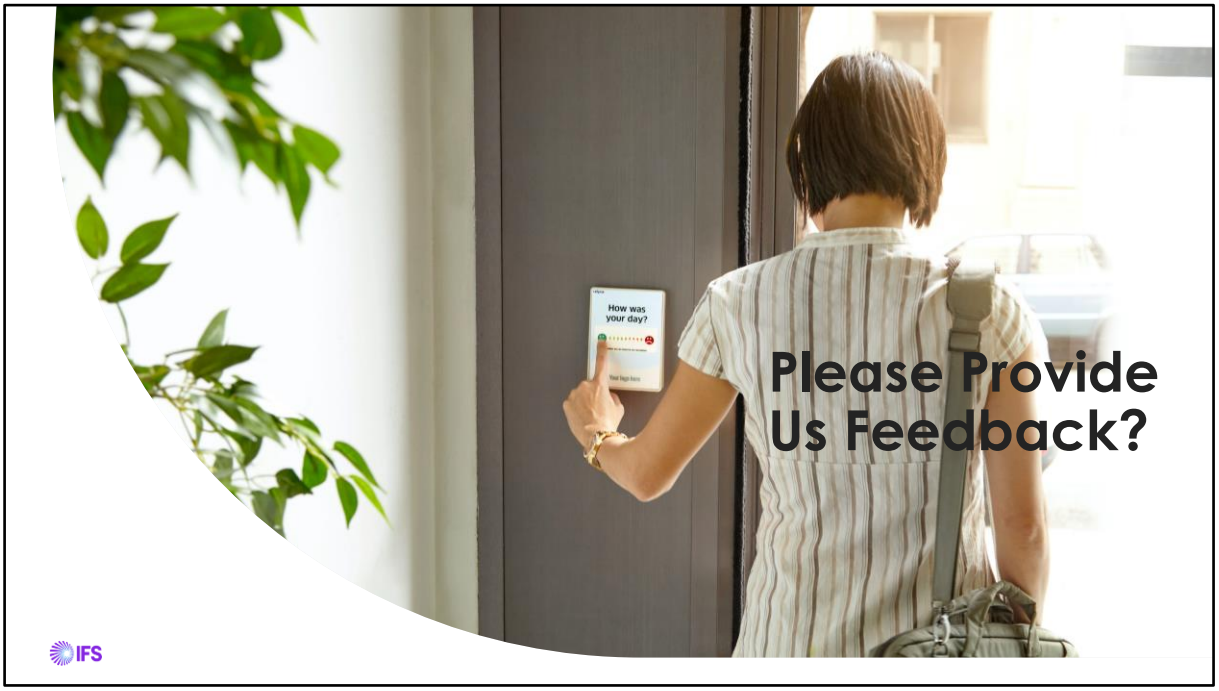
Parameter	Description
ALLOW_ACCEPT_OR_REJECT_TASKS	If Y, the user has the option.
ACCEPTED_TASK_STATUS	The status the task should be assigned if the user accepts it.
REJECTED_TASK_STATUS	The status the task should be assigned if the user rejects it.



By the end of this lesson, students should know:


Wrap-up


Questions?


How was your day?
Please Provide Us Feedback?

Thank you!

#MOMENTOFSERVICE