



Product Capability

Automated Workflow for Basic FM Operations

Facility and maintenance managers know that any time they can make their workflow more streamlined and efficient they not only improve performance but also reduce costs. The design of FM Works™ enables many basic workflow functions to be easily automated by using the software capabilities “out of the box” -- without the expense and complexity of more advanced “workflow engines.” This document presents some typical scenarios and discusses how FM Works provides easy automation of basic work flow. We present the functions of FM Works in a work flow format, similar to the way it will be used in a typical work place, from the perspective of the user, performing a daily routine of processing work orders or requests.

Scenario #1 – Basic On-Demand Work Request Cycle

The first example is the simplest – a basic on-demand work request (WR) received by the help desk (or dispatch operator), assigned to a craftsperson and then completed without any problems or issues along the way. We will use this scenario to show how three components of standard FM Works enable important basic processes to be automated:

- ✓ The **e-Works** component enables primary communication with the customer by means of the company intranet and e-mail.
- ✓ The **Work Order Express** component allows you to make work assignments and update work data via the company network or via the intranet.
- ✓ The **Works Manager** component, using an interface similar to Microsoft Outlook, allows the user to quickly see the work in the system by clicking one icon and easily drilling down to detail as necessary.

The e-Works component of FM Works automates basic communication with the requestor – thereby freeing up your staff to work more productively on other tasks. The requestor enters the WR directly via the company intranet, thereby, eliminating the help desk task of keying in the basic WR information.

The Work Order Express component enables automated dispatch of the assigned work to the craftsperson as well as enabling the craftsperson to enter data about the work that was done and the time and materials that were used and to update the status (e.g., “Completed”).

The e-Works component can be set up to automatically notify the requestor by e-mail as the work progresses through its various stages. When it is sent and what the e-mail says are fully defined by you.

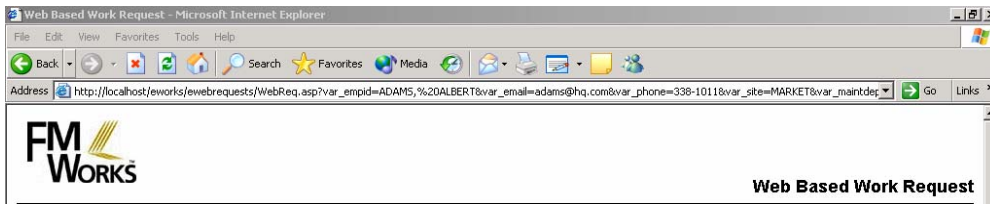
The Works Manager component allows the user to quickly and easily see the work by various criteria all electronically. WorkViews can be saved for instant recall at the touch of a button – without the need to look at printed forms or run a report. From the on-screen list, a simple mouse click lets the user drill down to the underlying detail just like Microsoft Outlook™.

The following graphic depicts the basic WR process and the screens that are seen by the various users. (NOTE: Not all details are shown.) Keep in mind that the system automatically sends the emails and posts the records. The entire workflow process from start to finish is conducted electronically without paper. Without FM Works, busy people with other priorities, pressures and interruptions may miss steps. FM Works seamlessly takes care of these details for you, allowing you and your staff to attend to the work at hand.

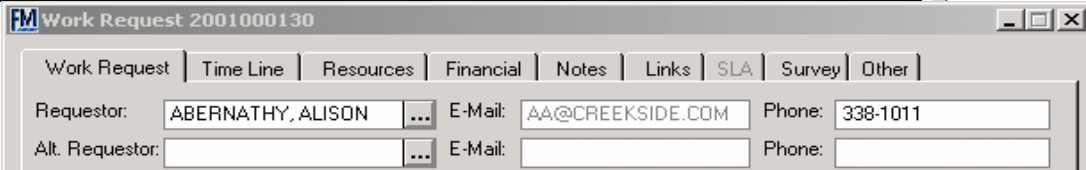
Basic On-Demand WR Cycle - Typical Work Flow



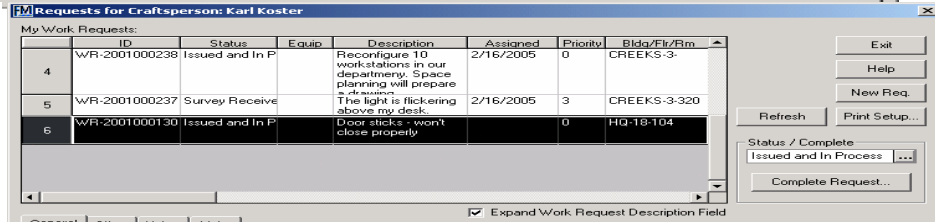
Work Requestor
A requestor fills out and submits a Web Work Request



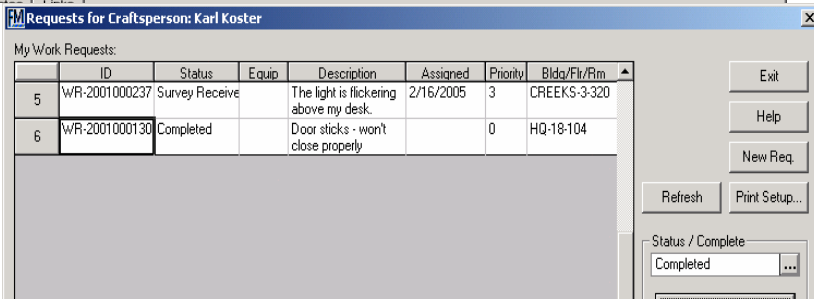
Dispatch Operator
FM Works automatically notifies Dispatch of a new WR



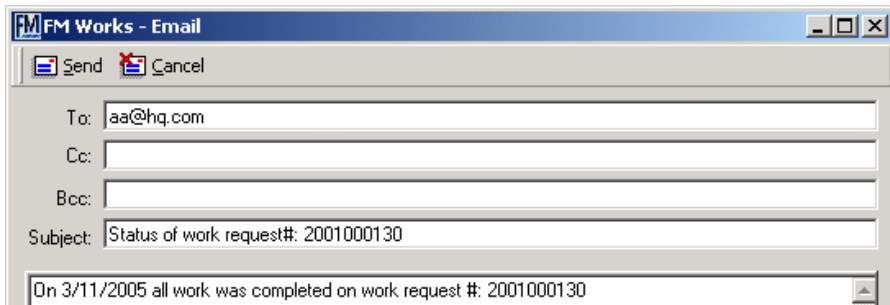
Crafts Person
Once assigned, the craftsperson's work queue is updated with the new WR



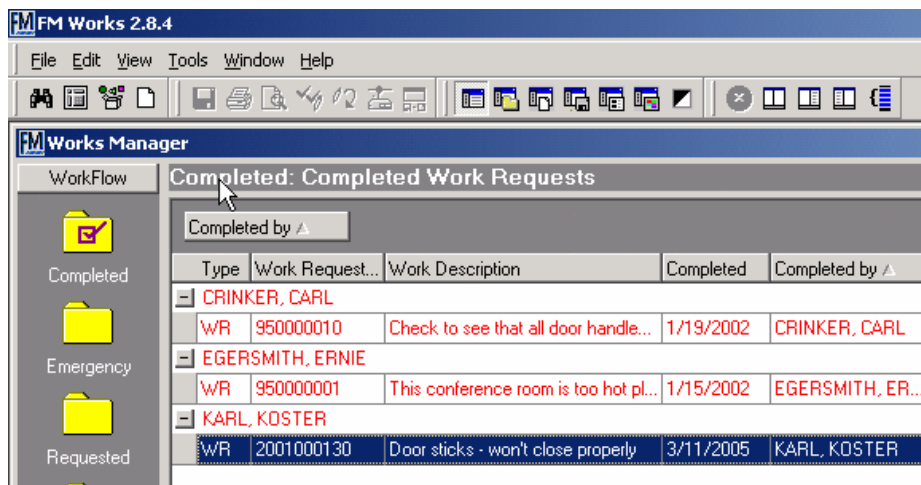
Crafts Person
Work is done; T&M costs and other data are entered, WR is marked "Complete"



Work Requestor
Requestor gets an e-mail saying the work is complete, with a link to an optional satisfaction survey



Maintenance Director
Manager sees this WR and all other Completed work and data via the system w/o paper. All data and attachments are archived for future reference and reports



Scenario #2 – More Information Needed from the Requestor

It is sometimes the case that all the information needed to assign resources and dispatch the requested work is not provided by the requestor. The normal process of getting this additional information involves telephone calls, voice mails and/or e-mail. While the needed information is being chased, the work request gets set aside on the desk somewhere.

FM Works enables this process to be much more efficient. Using a combination of the following components:

- ✓ The **Works Manager** component enables the user to change the status to “On Hold for Info” that triggers an automated e-mail back to the Requestors while simultaneously tagging the WR as being “on hold.”
- ✓ The **e-Works** component enables automated e-mail communication with the requestor.

Using FM Works flexibility to set up status codes and to designate whether or not a status code triggers an automated e-mail, we create a code of “Need More Info” and set up the e-mail message to inform the requestor that more information is needed and to use the Notes field to specify the info required.

Then the help desk or dispatch operator simply enters the needed information into the Notes field, changes the status to “Need More Info,” and presses the Save button. The e-mail is automatically sent to the requestor.

The operator can easily keep track of which WRs are on hold due to lack of information by using the saved WorkView feature to set up a view that returns WRs with that status and by setting up the display columns to show the Notes field, the Requestor, etc.

If a reminder e-mail is needed, the operator can send it directly from FM Works without needing to go to the regular e-mail interface.

Once the info is received, it can be pasted into the original WR description and the WR is removed from “On Hold” and moved along to the next stage of its cycle – probably issuing it to a craftsperson.

The graphic on the next page shows the primary stages of this sample workflow. Notice the way electronic communication eliminates paper and allows for instant dialogue exchange.

More Information Needed – Typical Work Flow



Change status to NMI and enter the info needed in the Notes field.



An e-mail is automatically sent to the requestor using the Notes field. The additional info is provided by return e-mail where it can be cut and pasted into the WR



In the meantime, the WRs needing info are easily tracked using saved WorkViews

Type	Work Request Code	Work Description	FMW Notes	Re
WR	2001000000	The ice machine is broken.	What is wrong with it?	BA
WR	950000017	Someone moved a large pi...	The section of the frame that was removed cannot be l...	NA



Once the info is received, the work queue is updated and the work is performed

ID	Status	Equip	Description	To Perform	Priori
3	Issued and In Proce	AHU-17	Please replace the AHU-17 filters.	6/3/2004	0
4	Issued and In Proce		The light outside the elevators are flickering. Please check this out.	2/11/2002	0
5	Estimate Submitted		There was a new cubical installed in my area and the electrical connection was never completed.	1/13/2002	0
6	Issued and In Proce		Someone moved a large piece of equipment out of the elevator and ripped up the door frame. Please file down the jagged metal on the door frame, patch the hole, and repaint	1/13/2002	0

Additional Sample Scenarios

This section will briefly describe a few more scenarios where standard FM Works can be used to automate some or all of the workflow required by the circumstances. These scenarios do not have graphics, but the processes described are familiar to any FM or maintenance manager; and you should be able to understand, at least in general, how FM Works can be put to work.

Dispatch to an Outside Contractor

A WR is assigned to an outside contractor who has been given access to the FMW system via the web. *Most organizations use contractors for some regular, routine maintenance work such as filter changes in HVAC equipment and/or specialty trades like Plumbing and Custodial. Their work can be processed as a PM-generated or on-demand WR.*

- The Dispatcher for the department opens the Resource tab for the WR that is to be assigned and clicks on the menu for Labor and selects the name of an outside contractor from the drop down list. An email addressed to the contractor is automatically generated by the system. The default text can be customized if desired before being sent right from the FM Works WR screen.
- The Contractor receives and reads the auto-generated email that has notified her/him of a WR. The contractor accesses the requestor's FM Works system via the web and has access only to the WRs assigned to her/his company (similar to the view of the inside craftsperson in scenario one).
- Just as the craftsperson did in scenario one, the Contractor can select the required resources to do the job i.e., parts, tools, travel, and labor, and then can change the status to "Work Complete." This action signals the user organization maintenance staff of a change in status so they can process the WR further. The "Completed WR" can serve as a receipt of service performed. Using SLA rates, charges can be calculated for purchasing.

Parts Needed for the Work Are Not in Stock and Must Be Ordered

The WR needs to be placed "On Hold for Parts" and the parts ordered because the Dispatcher saw that the FMW parts inventory shows that none are available in stock.

- Had there been a reason the work could not be completed, the service provider would have changed the status appropriately, for example to "On Hold for Parts" to alert the requestor as to the reason for the delay. When the part comes in, everyone is notified. The Contractor completes the work and changes its status in the system to "Work Complete." Any system user can also route the WR to a different trade, department, contractor or craftsperson for processing the work (say a plumber was dispatched to deal with a problem that turned out to be electrical).

Parts inventory and usage are documented and tracked in FM Works using the optional PARTS MANAGER.

- If your organization keeps an inventory of parts, you can benefit by documenting and tracking inventory and usage in PARTS MANAGER. Any system user can see the quantity in-stock and reserve parts for pending WRs. Using Parts Manager, a craftsperson deducts parts from inventory as they are used.
- Stores staff can add, subtract, and relocate inventory. Parts of a like kind can be inventoried in multiple locations.
- Even workers in-the-field can check availability and process parts usage over the web, thereby, adjusting the parts inventory instantly.

Requested Work Needs Engineering and CAD Work Performed

Let's say the WR is for a remodel of space. The basic scope and a redline drawing have been prepared, but now engineering must prepare the detail CAD drawings, a bill of materials, detailed scope of work, maybe even a project plan using Microsoft Project or Primavera, etc.

- During the installation of FM Works (or any time after) status codes can be defined for "Needs Engineering," "Engineering in Progress," and "Engineering Complete."
- For the WR, the FM Manager reviews the preliminary scope and the redline AutoCAD drawing and decides to send the project to engineering.
 - He changes the Status to "Needs Engineering."
 - He uses the electronic document linking feature of Work Manager to link the related documents and drawings to the WR.
 - He Saves the WR.
- The Engineering Manager uses Works Manager to check the saved Workview called "New Projects" which contains links to those WRs recently assigned to "Needs Engineering."
 - He reviews the linked documents by simply opening them directly from Works Manager in the "Links" tab. (NOTE: The documents are not copied and physically moved along, just the links to the files, defined in a common area on the network, are stored.)
 - He decides to assign George; so he uses the "Resources" tab and makes the labor assignment.
 - He Saves the WR.
- George logs in using Work Order Express and sees the new WR in his assignment queue.
 - He gets to work on the project and changes the status to "Engineering in Progress."
 - Using the links feature in WO Express, he opens the linked documents and drawings.
 - As he works on the project, he creates new drawings and documents (e.g., a parts list, a detailed scope, a project plan, etc.) and links each of these to the WR.
 - Once done, he changes the status to "Engineering Complete."
- In the meantime, the Engineering Manager uses Works Manager to check a saved workview called "Projects Underway," which contains links to those WRs in the status of "Engineering in Progress." He can see what progress is being made by looking at the linked documents. He can also see the time being charged to the project by George in the "Resource" tab and can drill down to the detail screen.
- The Engineering Manager uses Works Manager to check the saved workview called "Projects Complete," which contains links to those WRs having the status of "Engineering Complete."
 - He reviews the linked documents by simply opening them directly from Works Manager in the "Links" tab.
 - If parts need to be ordered, he can now change the status to "Needs Parts."
- The stores supervisor will see that WR appears in his/her queue. The parts list is one of the linked documents, and he/she uses it to order the parts for the job.

We'll stop the example at this point, but it should be clear that other status codes for parts availability, etc. can be established and used to move work through the system.

During this entire process no paper has changed hands. All information, status control and documentation is contained in or linked to the WR. Personnel involved in the process see work to be done either by looking at saved work views or having it appear in their assignment queue automatically. Other interested parties such as requestors, contractors, etc. are kept informed by e-mail and links to web pages as necessary.

This brief overview shows how the power and flexibility of FM Works “out of the box” can be put to work to automate and streamline many aspects of the basic work flow. We do not claim that this level of FM Works is a complete workflow system or workflow engine. We have under development a much more sophisticated, rules-based component called Work Router. But because of FM Works’ basic design, it can be used very effectively as shown in these scenarios and examples at no additional cost and in a very straightforward, uncomplicated manner.

FM Works is remarkably user-friendly, with a familiar look and feel, designed by and for FM people to benefit the users -- whether it's the occasional requestor, a craftsman, or the system administrator. But, don't let these friendly features lull you into thinking that FM Works is anything less than a robust, powerful and full-featured CMMS. The power of FM Works is on a par with the big names in CMMS. Because FM Works was designed by and for FM people, the system stands tall among the best CMM Systems available today.

So whether it's comprehensive features or ease-of-use you're after in a CMMS, FM Works fills the bill.

In this brief document, we have tried to demonstrate processes, similar to those your organization can actually use to process work orders and manage maintenance. If we missed the mark, allow us to show you, with a personal demonstration, how well the versatility and flexibility of FM Works adapts to your process and your organization. Once you see how easily it manages **your** work flow, you'll love all it does for you.

Please visit our website at www.fmworks.com to request a personal demonstration or call **(800) 942-8293** today.