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Rolling Out a Generic Process

In July of this year, we began a new feature on BPTrends – **Notes on Innovation** – where we discuss ideas that process redesign teams can use when they consider how they might change a process. The July **Note on Innovation** was on RFID tags, Radio-Frequency Identification tags, or chips, that are embedded in products or parts to track and locate the items.

We recently read several articles that discussed the use of RFID tags to track and locate hospital equipment and the problems the hospitals encountered in deciding how to use these tags. That led us to some thoughts on generic processes and what's involved in installing or standardizing generic processes.

Hospitals use a wide variety of equipment and machines, including wheelchairs and gurneys used to transport patients, and expensive monitoring equipment used to monitor patient vital signs or to administer medication. In many cases, the use of a particular piece of equipment is required to treat a specific patient condition. As the patient condition changes, the equipment is no longer required and the equipment is set aside. This results in equipment being located randomly throughout the hospital, left where it was last used rather than moved to a central storage location.

If one thinks about this from a process perspective, one imagines a wide variety of hospital processes, including: Provide Emergency Diagnosis and Care, Provide Heart Surgery, Provide Physical Therapy, and so forth, each with a subprocess, or an activity within a subprocess, which we will term: *Locate Equipment*.

Presumably, when each of the various hospital processes was first modeled, there was a subprocess called, *Get Needed Equipment*. Later it was modified to include a branch for a standard scenario where the equipment is in the correct storage area, and a special scenario, where the equipment is not in the correct storage area and the people executing the process need an alternative activity – *Locate Equipment*. Having read a few articles on this, one realizes that this alternative scenario requires that one or more people run around the hospital looking for the needed equipment.

Aware of this common problem, most manufacturers of expensive hospital equipment have begun to incorporate RFID tags in their equipment. In essence, an RFID tag is embedded in the equipment and linked to a computer. A user sits at the computer and enters the item to be located and the system sends out a signal, identifying the specific location of the equipment.

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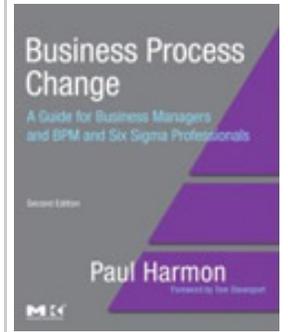

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Let's think about what is involved. *Locate Equipment* is a generic (or common) subprocess or activity that occurs in many hospital processes. We are introducing a new piece of technology, the RFID tag, that will radically simplify this process in the future. To get to that future, however, we will need to standardize the *Locate Equipment* activity and roll it out for each of the processes in which we intend to use it.

If the hospital is a CMM Level 3 organization and has most of its processes well defined, it should be able to review its process architecture and quickly generate a list of all of the places that the *Locate Equipment* activity occurs and develop a schedule for rolling out the new, standard activity. If the organization is a CMM Level 2, coming up with a list of all the processes or situations in which *Locate Equipment* occurs may take a bit longer.

If the hospital BPM team is smart, they will begin by defining the *Locate Equipment* activity in some detail. Figure 1 suggests how we might picture the *Locate Equipment* activity using a Scope Diagram. Some experience with the use of RFID might include several considerations we've missed, but this Figure suggests at least some considerations that would seem to apply to every case where the process is used. Clearly, software and a radio device are required to generate the signal and identify the location of the equipment, as well as a computer running the RFID location device and associated software that can be used by someone attempting to locate the equipment.



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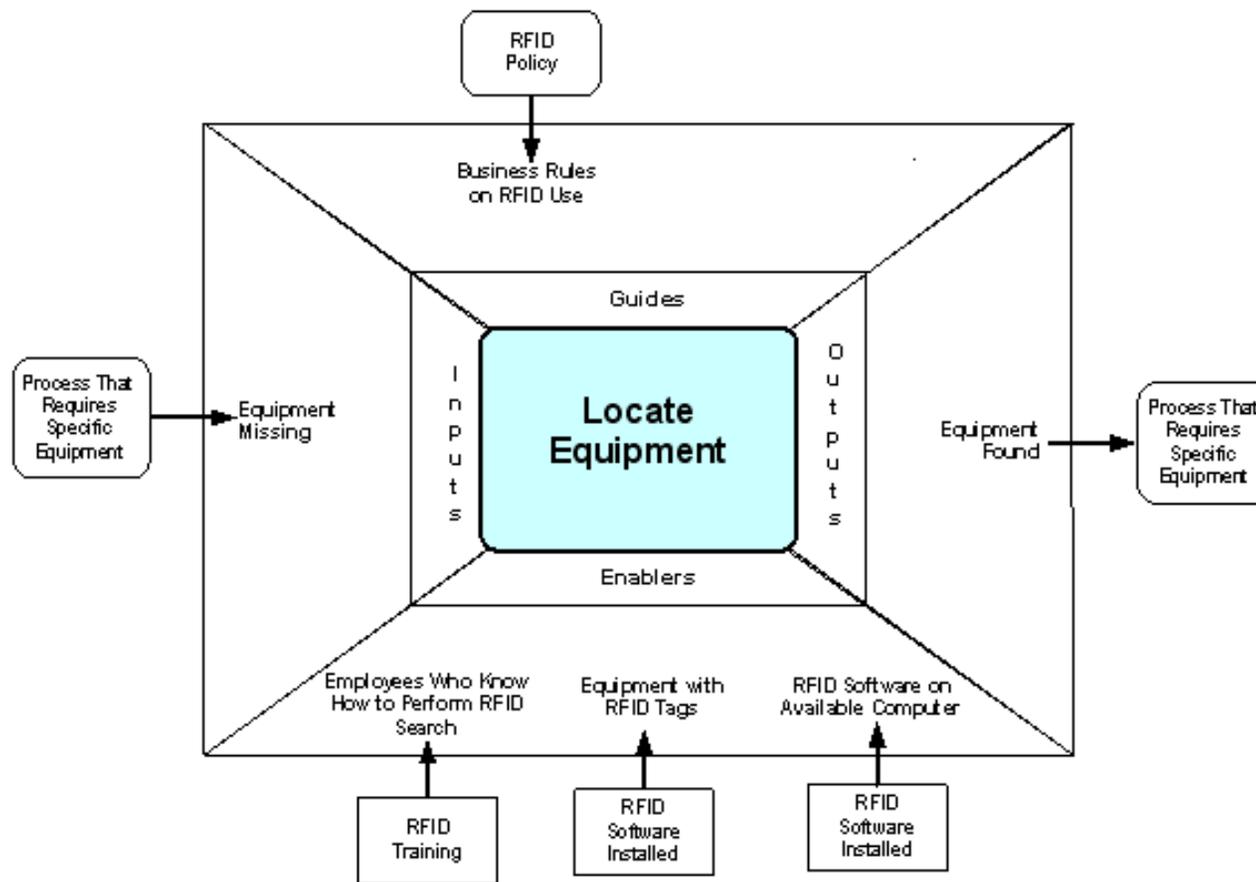



Figure 1. A Scope Diagram for a Project to Install a Common RFID-Based Activity to the Locate Equipment Process

Also, employees will need to be trained to use the RFID software. There are various training options, but one must be selected and appropriate training developed. Documentation may also be required and job descriptions may require changes.

A subtler issue is what to do about older equipment that currently lacks RFID tags. A commitment to RFID probably means that older equipment will need to be tagged. Depending on the amount of equipment involved, this may be a project that will require some time to accomplish.

Similarly, there may be management policies regarding where RFID can be used. Perhaps it can't be used near certain other equipment. Or, perhaps it can't be used near patients with pacemakers. The hospital will need to define policies to describe the constraints related to the use of the equipment and will need to generate appropriate business rules.

Once one has defined the overall context for the new activity, one can develop a flow diagram and specify the exact steps the employees must follow to locate equipment. This step-by-step procedure will need to be documented and used as the basis for employee training and software

interface design.

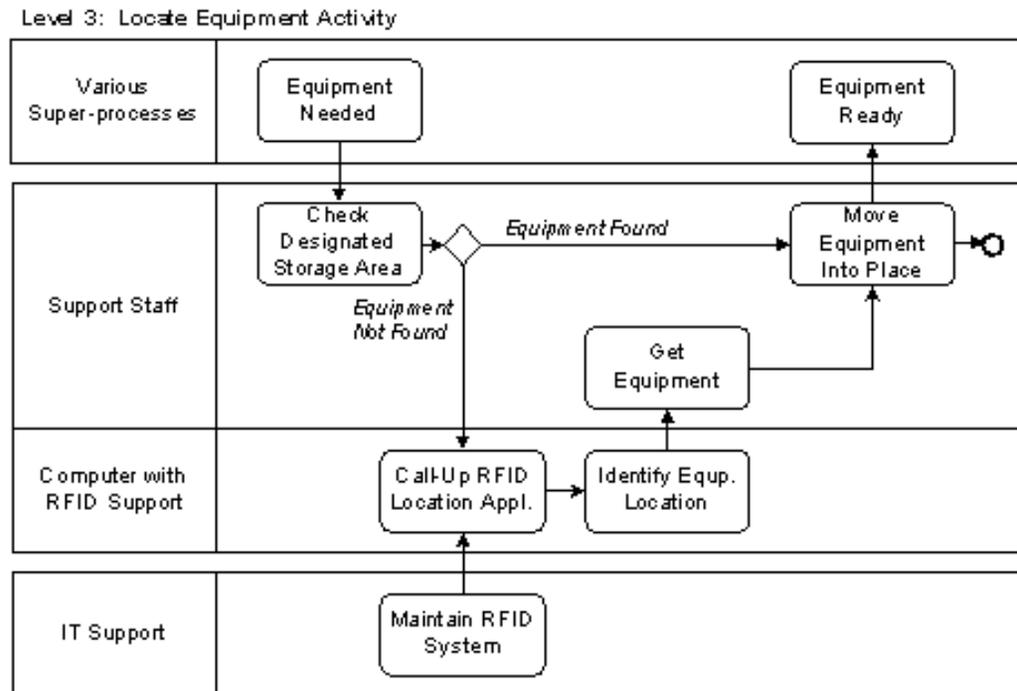


Figure 2. A Flow Diagram for a Project to Install a Common RFID-Based Activity to the Locate Equipment Process

Activity to the Locate Equipment Process

In addition to a Scope Diagram and a *Locate Equipment* procedure or flow diagram, our BPM team can now develop a Roll Out Process – a description or checklist of the conditions and the steps required to assure that the new *Locate Equipment* process is properly installed.

The Roll Out checklist might include items like:

- RFID tags installed on all equipment to be included in search program
- Radio device installed
- Software installed on local computers
- Employees trained in use of RFID equipment location software

Once the BPM team analyzes the new RFID *Locate Equipment* activity and understands what will be needed to roll out the new activity, they are ready to analyze each of the existing processes that include a *Locate Equipment* activity to determine what will be needed to convert each to the new approach. And, common training and software will need to be developed. However, in some cases, where computers are not now available, there will be problems that will have to be worked out.

What is obvious from this brief example, however, is that most of the same techniques that we use to analyze problems and plan for the roll out of revised processes can just as well be applied to planning for the installation of new technology. Technologies are used in processes, and a technology that will be used in a number of different processes throughout an organization implies a generic or common process – “Use New Technology” – that can be planned for, just as one would plan for any new activity.

In essence, the process is as follows:

- Define a new activity that will define how to use the new technology
- Define steps that will be necessary to roll out the new activity/technology
- Identify all processes that will use the new (generic) activity
- Develop a plan/schedule to roll the activity out to each process that uses it

It certainly helps if the organization is mature enough to have a process architecture and can quickly identify all of the places where the new technology/activity will be used. But in any case, treating the change as an activity, determining the context necessary to successfully implement the activity and the exact way in which the activity will be implemented, will make for a much smoother transition.

Till next time,

Paul Harmon