

SCHEDULING

JUST THE FACTS

SCHEDULING

REDUCE THE INSTABILITY

- Establish a standard process where-in there is a highly visible bi-directional flow of real-time information between the customer and the lab.
- Endeavor to have all the relevant information is known and the test units are on hand well before the start of a test.

INCREASE RESOURCE UPTIME

- Provide real-time visibility over which tests are started or completed
- Provide real-time visibility over which equipment and people are available.

FOCUS ON THE PROBLEM

What do you need to know to schedule efficiently?

Resource Availability.

Managing resources is key to scheduling. Scheduling tools that are integrated with resources simplify the scheduling task.

Scheduling tests closely together minimizes test operator and equipment down-time. But to achieve this kind of tighter schedule, it is necessary to plan the sequence of tests with this goal in mind. All the required information, including the product to be tested, must be on hand. The operator needs a thorough understanding of what is to be done, and the test equipment needs to be ready and available prior to the beginning of the test. As testing occurs, equipment availability needs to be monitored to reflect actual activity.

It is important to understand that scheduling instability is inherent in pre-production product development because there is great uncertainty regarding when products are ready to test. The reality is that re-scheduling tests is frequent and time-consuming! Scheduling instability will not go away but it can be managed. Reducing scheduling instability by careful management will have a significant impact on lab efficiency.

There are tremendous opportunities to gain efficiency and reduce risk by establishing a standard process across all the labs within an organization. The progress of testing, the results upon completion and the operator, test and equipment status can all be easily monitored. This topic is explored in the Solutions article “Lab and Customer Visibility”.

When a rescheduling activity is triggered, efficiently restructuring the schedule and communicating the new schedule to the participants is of paramount importance. What do you need to know to schedule efficiently? Resource availability. Managing resources is the key to re-scheduling, the new schedule to the participants is of paramount importance.

SOLUTIONS

Streamlining **interactions between the customer and the lab** will reduce schedule instability. To do this requires increased communication between the customer and the lab. Customer self-service should be encouraged, allowing the customer to place test requests, view resource availability and monitor the status of tests by providing real-time visibility into the lab.

The key to **interactions within the lab** is providing simple access to all the information that a test operator requires before the test is to be performed. This includes what is to be tested and when the test should be performed along with knowledge of the test procedures and methods, equipment calibration, maintenance records and information regarding the product to be tested. The fewer places a test operator has to look to gather this information the better. A single data repository is the optimum solution.

SOLUTIONS CONT.

Auto-scheduling is of immense value as a solution. Auto-scheduling is defined within this article as the ability to grab an entire sequence of scheduled tests, each with operator and test workstation assignments, and move that entire group of tests to a new time period. But moving a group of tests implies that the resource assignments may not be valid (available) in another time period. So moving the tests must take into account:

- when the lab is open (weekends, holidays and shifts),
- whether the test can run unattended (e.g. certain environmental tests),
- what the test duration is for that test on a particular workstation,
- understanding the time requirements for the movement of the test units between tests,
- whether the test can be double-booked (run in a workstation simultaneously with unrelated test units),
- availability of test equipment and operators including operator’s daily activities (including time-off) and equipment maintenance and calibration schedules.

Sounds complex? It is. This is what lab schedulers do. Establishing an efficient process and providing better tools will have a big impact.

Efficiency can be measured in up-time and better utilization rates for the resources and in completing testing within the agreed time-frame.

CONCLUSION

Lab efficiency is quite sensitive to timing, particularly the availability of products to test but also the availability of test resources (test operators and equipment). Great efforts are required to build a coherent process and provide real time visibility about scheduled tests and availability of test equipment and personnel.

When evaluating the cost (test process breakdown, recalls, and higher failure rates) of doing nothing and benefits (speed to market, accuracy of results) of better managing your labs with a scheduling solution, the ROI promises to be high.

SPECIAL POINTS OF INTEREST

Sounds complex?

It is.

This is what your scheduler’s do.

Frequently.

Establishing an efficient process and providing better tools will have a big impact on your lab and your customers.

Reduce the instability of scheduling and re-scheduling

- Increase communication between the lab and its customers

- Increase the visibility over resource availability

- Provide simple access to equipment maintenance and calibration records

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