



Improve  
Operator  
Performance

PlantMentor®



The automated control systems in refineries and processing plants give operators and engineers a degree of process command that was unimaginable a generation ago. However, they see what's happening one screen at a time—like viewing an entire landscape with a telescope. How well they interpret and act on what they see not only defines day-to-day performance, it determines how well they handle that rare problem that could have huge consequences.

RWD's suite of PlantMentor training solutions helps your operators gain the insight and skills they need to understand what's really going on in their units. It drills them rigorously on how to deal with virtually any scenario—rapidly and effectively. After completing PlantMentor training, your people will work smarter and more productively. Among other benefits, it can increase your capacity and improve your uptime. More importantly, it's a crucial piece of your risk mitigation strategy.

RWD's PlantMentor delivers:

- A reduced likelihood of major incidents.
- Reduction of time-to-competency by up to 50 percent.
- Powerful troubleshooting and decision-making capabilities.
- Better bottom-line results.
- More effective training through operator-centric interactive learning and exercises.
- Rigorous instructional design with measurable objectives and embedded knowledge checks.
- Lower cost than traditional training.
- Proficiency enhancement for even long-time operators.
- Increased learner motivation, responsibility, satisfaction and retention.
- Support for certification programs.

#### Key Advantages

- PlantMentor's online interactive model provides learners with 24/7 access and self-paced training.
- PlantMentor can be hosted on your learning management system or through RWD.
- PlantMentor is customizable for the requirements of specific refinery units.
- PlantMentor courses can be ported to instructor-led classroom training.
- Customized plans provide as much—or as little—support as is needed.
- PlantMentor is compatible with either AICC- or SCORM-conformant learning management systems.
- PlantMentor now features audio narration of all material.



# PlantMentor® currently provides training for the following unit types:



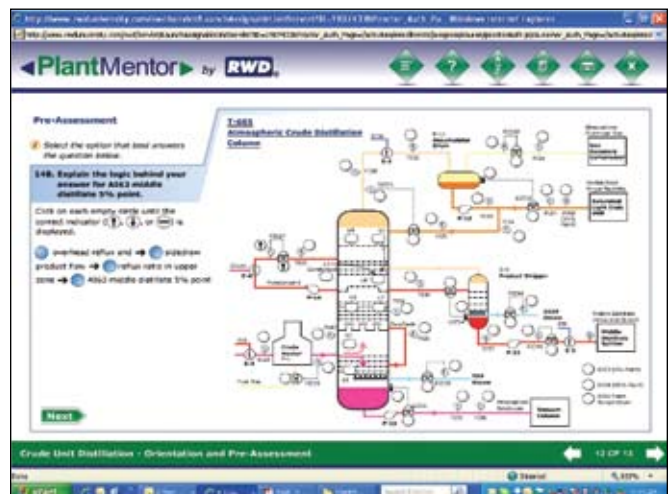
## The PlantMentor® Learning Model

Beyond the routine training that they receive, operators and engineers tend to work on an experiential basis. They do what they do because that's how they've always done it. They generally know what works, but don't always know why it works. Unfortunately, this means they're more apt to make flawed decisions. PlantMentor is based on a model from a completely unrelated field—the medical profession.

Medical students rigorously study the human anatomy and systems. They learn symptoms and how to diagnose them. As interns, they're constantly queried by physicians/instructors about what they're seeing in patients and how they're reaching their conclusions. As residents, they address real-world medical problems, further testing themselves.

With RWD's PlantMentor, learners undergo a similar process (though far briefer at an average of 40 hours). They study the “anatomy” of their units. They learn a rigorous and repeatable troubleshooting methodology. Then PlantMentor presents them with question after question that emphasizes “what if” thinking—deepening their understanding of the unit. Finally, they're presented with complex troubleshooting and optimization problems to diagnose and devise solutions for. The PlantMentor process turns operators and engineers into real diagnosticians.

**PlantMentor provides an  
interactive learning experience  
including complex process  
simulation.**



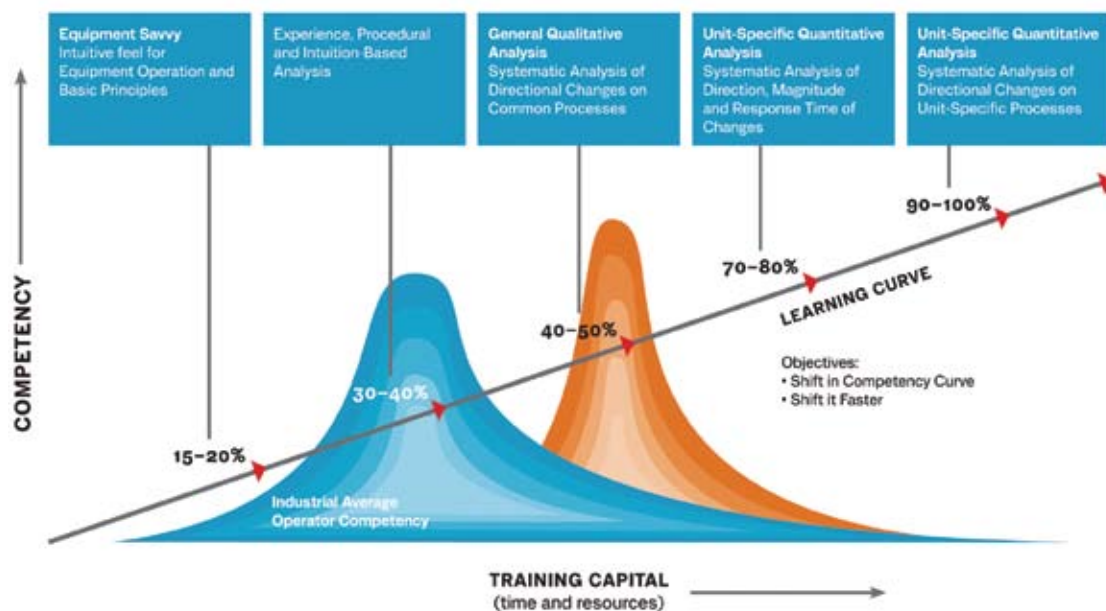
- Amine Loops
- Crude Unit Distillation
- Delayed Coking
- FCCU Main Column
- FCCU Reactor-Regenerator
- Gas Plant Absorbers and Strippers
- Hydrogen Reforming
- Hydrotreating
- Isomerization
- Light Ends Distillation
- Semi-Regen Reforming
- Sulfur Recovery Unit
- Sulfuric Acid Alkylation
- Tail Gas Unit

## PlantMentor® Training: Your Best Insurance

Your facility has to have operators and engineers who not only keep their units “between the lines” of day-to-day operations, but know how to steer their units away from the ditch. You need operators who can look at a given set of undesirable conditions, and quickly understand the root causes and which course of action should be followed.

If you already have operators with these skills, consider yourself fortunate. If you don't, PlantMentor can get your current operators and engineers up to speed in short order. People with PlantMentor training can better meet or exceed your current operational targets—a valuable thing in today's economy. They can help you fill the holes left by retiring engineers and operators. And they can be your best insurance against the possibility of a major incident occurring in your refinery or plant.

Some of the biggest names in the energy industry have adopted PlantMentor through hundreds of their units — now it's your turn.



**PlantMentor reduces learning time by an average of 40% and increases comprehension by 40-70% over traditional training methods.**



## Your Challenge

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### Loss of Highly Skilled Operators and Engineers

Due to hiring cutbacks in the 1990s, petroleum and chemical facilities now face a shortage of highly skilled operators, as Baby Boomers leave the workforce. Younger operators have not achieved comparable competencies quickly enough to fill the gap.

### Making Sense of Automated Controls

While automated control systems allow refinery units to run much closer to their theoretical limits, they present operators with fragmentary information that can be difficult to synthesize. Console operators are challenged to make sense of what they're seeing on multiple screens, impeding determination of root causes and courses of action.

### The Increasing Severity of Adverse Events

Automated controls have undoubtedly reduced risk. But the consequences of adverse events are now likely to be more severe—with tremendous cost in dollars, regulatory scrutiny, reputation, environmental damage and human suffering. A major incident can quite literally be a disaster for all stakeholders.

## Our Solution

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RWD's PlantMentor accelerates operators' time-to-competency by means of a rigorous process-analysis and troubleshooting methodology. Through intense repetition of course exercises, learners gain a far deeper understanding of their assigned units—achieving the competencies required to more effectively fill the shoes of their retiring colleagues.

RWD's PlantMentor intensively drills operators in a consistent and common-sense approach for recognizing what multiple symptoms across a unit may signify. PlantMentor® gives them the knowledge and skills they need to assemble the "puzzle pieces" and formulate a corrective action plan—rapidly and effectively.

RWD's PlantMentor creates more responsive and knowledgeable operators and engineers—workers who are better able to catch, diagnose and prevent anomalous events from spiraling out of control. By reducing the chances for serious incidents, PlantMentor-trained operators may enable greater preservation of resources ...equipment ...processes ...people ...and reputation.

