Hand in hand with the crew

As systems on board become more complex, owner-operators struggle to find crew with the right skills. But Remote Diagnostic Service (RDS) may lessen the need for specialists on board, turning crew into competent all-rounders instead.

With crew costs one of the highest expenses in the maritime sector, it makes good business sense to have a team of generalists on board who can access specialists 24/7.

But does this lead to a passive crew who merely wait for a call from the RDS center? Far from it, says Rune Braastad, Vice President Marine Services at ABB: "We don't take responsibility away from the crew and we don't do anything in the remote center that they usually do on board. Rather, we help the crew maintain their competence."

"Let's take the example of a complex failure on a propulsion drive. Before we had RDS, we sent an engineer on board to fix it. Now we help the crew to do it via the remote link.

"After analyzing data, we tell them a component might have failed and could they please go and measure and verify this. They will go and trace the fault. So, in this way, we educate the crew," says Braastad.

Chat function

With so many different nationalities working on board vessels, this interaction is usually in English. The chat function on RDS often makes communication easier when the phone connection is bad or accents are hard to understand.

The crew use chat to describe their problems in writing and the engineers at the RDS center use it to write down a procedure for the crew to carry out.

"We can even follow on the remote link and see what they're doing. We can tell them to do certain tests and then monitor and guide them through. They can do tasks that the service engineer used to do but with a long delay and at high cost," says Braastad.

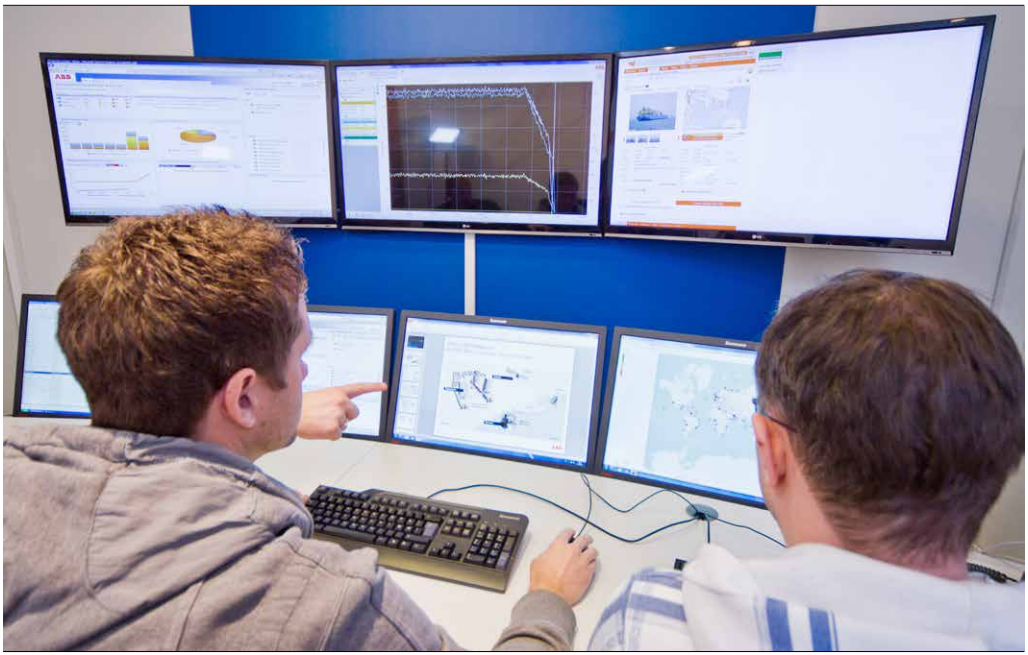
The RDS team does not do any remote changes to the vessel. Its function is purely one of monitoring.

Increasing complexity

"Vendors in several segments have RDS where they sit in an operational system and they do the changes on board. When we started developing our RDS, a few customers we spoke to said it was risky to have things changed remotely," says Braastad.

One example came from a customer in Brazil whose supplier went online to upgrade a drilling system without informing the crew. Major problems ensued

RDS control room in Billingstad, Norway



when measurements were changed from metric to imperial.

Because systems are becoming more complex and integrated, sometimes it's difficult for crew to see where there is a failure.

"Is it on the propulsion drive, on the power system, in the automation system? By combining RDS for all the systems, we can see what happened. All systems are time stamped against each other so we can see exactly where the fault has occurred. A failure in the power system might cause a failure in other systems," says Braastad.

"I think the other advantage of RDS is that it really connects us to the customer. We developed this service with the clear goal of becoming a partner for the customer. We usually know the name of the electrician on board and vice versa."

Pin pointing faults

Braastad adds that the role of RDS is "to keep what ABB has promised – to make sure we have people available and that we are capable of handling any situation professionally. It's a question of managing the customer's risks."

Since the RDS is directly connected to the component level of the equipment on board, engineers can fault trace down to a single component.

"People tend to think of RDS as being similar to the automation or HMI [Human-Machine Interface] systems on board, which give slow, general information about power trends. But we get high-resolution data showing events, alarms, faults and data loggers," says Braastad.

According to him, this is the big difference between ABB's RDS and those of other vendors. "They just have a remote computer reading the automations. In our view, that's not RDS. It's a remote system but not a diagnostic system. We are at a much more basic level; we can pinpoint problems on a component level."

It seems this RDS is as much about being tuned into the crew as it is about being plugged into the nuts and bolts of the system; in other words, getting right down to basics.

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Photo: Rune Braastad