

Supporting Tullow Oil's real-time operations

Tullow Oil, London/UK



Critical operational decisions for oil production and significant cost savings delivered with SMART Board® interactive whiteboards.

Tullow Oil is an international oil exploration and production company with operations in 22 countries, 37 oil producing fields and over 90 licenses. They are headquartered in London and employ over 1,400 people. As Africa's leading independent oil company, Tullow Oil's major investment and activity in recent years has been in Ghana and Uganda. This includes the Jubilee offshore field in Ghana, a world class oil field with up to 1 billion recoverable barrels. Tullow Oil's vision is to become the leading global independent exploration and production company. Murtaza Amin is the Production Technology Team Lead, based in Tullow Oil's main office in Accra, Ghana. His role is to understand and manage the flow of oil and gas from the reservoir, up the wells.

The Challenge

Managing the oil production process, particularly the interaction between what is happening below and above the surface, is a technically challenging business. For a company like Tullow Oil, it is critically important to know, for example, how much oil is being produced by a well and how the well and reservoir are behaving, but this is a difficult task as it is a very fluid, dynamic process. This is where the need for real-time data and technologically advanced tools for data handling and team collaboration comes into play. Tullow Oil not only needs to be able to capture the data, but to interact with different locations in using this data and share it with head office. Murtaza outlined two particular challenges that Tullow Oil needed to overcome: "Oil production operations involve multifunctional teams with geologists, production technologists, reservoir engineers, process engineers, well engineers and others. Traditionally they work in silos with very little interaction but it is important that they come together and understand each others activities, constraints and issues. It is also very difficult to get data from the field. It used to be collected and managed by hand, which was prone to error and delay. This has led to automated systems of data collection and dissemination. As a result, we have a huge volume of data coming in, but this presents a new challenge of how to manage this data in order to optimise operations."

The Solution

At Tullow Oil, they have addressed these issues through a system called 'Technology Assisted Production' (TAP). As Murtaza explains: "TAP not only brings the data together, but processes it and sends it out. This takes a lot of data management work away from

Challenge

Managing the oil production process, particularly the interaction between what is happening below and above the surface with a real-time data and technologically advanced tool.

Solution

At Tullow Oil the SMART solutions have a critical role as a key visualisation and collaborative tool.

Result

The SMART solutions and the TAP system deliver a saving of tens of thousands of dollars in indirect costs. This includes substantial savings in travel time and travel costs.

engineers, so they can concentrate on using the data to make intelligent decisions." This is where the SMART Board® interactive whiteboard comes into play. Within TAP, the SMART Boards have a critical role as a key visualisation and collaborative tool. Murtaza explains: "Representatives from all of the technical disciplines within the oil production team can now sit in one room together, show each other the relevant data using the SMART Boards and have an informed, joint discussion to take pro-active, multidisciplinary, integrated decisions." To host these important discussions, Tullow Oil has a collaborative workspace in its Accra office, where the SMART Board sits. The data is received in real time from their oil production facility, displayed on the SMART Board and used by the multi-disciplinary team. They also use SMART Bridgit® data conferencing software to collaborate and share data with their Sub-Service Group, their Well Engineering Team and their Marketing Group in Tullow Oil's London head office.

The Benefit

Tullow Oil is now reaping the benefits of its SMART Board-enabled TAP system, as Murtaza Amin explains. "It was previously very difficult to get all the engineers together. It required a formal process just to arrange the meeting, which might happen once a month, and these meetings were not interactive; people spoke then left," says Murtaza. "Now that all the data comes in one room, our engineers come together automatically every day without formal meetings." Tullow Oil's SMART Board interactive whiteboards are an essential component of its TAP system, giving its engineers and other colleagues not only the ability to view and share data, but also to annotate, manipulate and write on the display, to use touchscreen commands and to instantly save and share the results. The multiplicity of benefits for Tullow Oil from its SMART Boards includes substantial savings in travel time and travel costs, according to Murtaza: "Travel time and costs have been reduced, as we can now share data remotely. This includes travel to offshore oil facilities, which is resource intensive. We estimate that the SMART Boards and the TAP system deliver a saving of tens of thousands of dollars in indirect costs." It is also beneficial from a health and safety perspective to reduce the need for offshore travel. However, perhaps more significant for Tullow Oil are the operational benefits that the SMART Board-enabled TAP system is delivering. "The data can be used to watch what is happening at a very fine level of detail, such as what happens when a particular well is being opened up," explains Murtaza. "On the other hand, it also gives us an overview of all operations. This helps us to make some great operational decisions."

Furthermore, within the oil and gas industry, uptime is everything. By contrast, downtime, when equipment needs to be shutdown or taken offline for maintenance and repair, is very costly, particularly when it is unplanned. It's difficult to quantify the benefits of TAP in terms of the production gains, but Tullow Oil is working towards estimating the uptime gain that the system is delivering, including SMART's role within it. Murtaza provides an indication of what Tullow Oil is looking to achieve. "We aim for 100% uptime and typically end up with 95-98%. As a result of using this system, we are aiming to achieve an uptime gain of a further 2%. Uptime savings come from being able to proactively spot an issue within the data much earlier than was previously possible. This allows us to alert the team on the ground so that they can fix a problem or make improvements to the production process far sooner, which delivers huge operational and commercial benefits. It also helps us to manage the onward chain, as if we know our production volumes more accurately, we can better liaise with the teams responsible for the onward transit of the oil." All in all, SMART Technologies is playing a pivotal role within the TAP system that is helping Tullow Oil look to achieve its business-critical goals of looking after its wells, optimising its production process, fixing any problems at an early stage and reporting on production qualities and quantities faster and more accurately. System that is helping Tullow Oil look to achieve its business-critical goals of looking after its wells, optimising its production process, fixing any problems at an early stage and reporting on production qualities and quantities faster and more accurately. It is a genuinely innovative solution within the oil and gas industry and something that is generating considerable interest from visitors to Tullow Oil's facilities, including the oil majors. In due course, Tullow Oil is aiming to expand their use of SMART products and replicate this system elsewhere, including Uganda, where its oil exploration project will soon be moving into the production phase, and London.



Tullow Oil's oil production operations in Ghana are monitored in real time using SMART Board® interactive whiteboards.

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Murtaza Amin,

Production Technology Team Lead, Tullow Oil, Accra, Ghana

About SMART

SMART Technologies is a leading provider of collaboration solutions that transform the way the world works and learns. We believe that collaboration and interaction should be easy. As the global leader in interactive whiteboards, we bring more than two decades of collaboration research and development to a broad range of easy-to-use, integrated solutions that free people from their desks and computer screens, so collaborating and learning with digital resources are more natural.

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