

Safety

Committed to compliant and reliable operations

Safety is the foundation of everything BP does, every single day. Its goals are clear: no accidents, no harm to people and no damage to the environment. That's a huge responsibility — one BP does not take for granted.

A safer BP

From 2005 to 2010, BP had serious accidents in its refining, pipeline and offshore operations — in Texas City, in Alaska and in the Gulf of Mexico, respectively. Each had different causes, and each taught BP important safety lessons.

In the years since, BP has transformed itself by, among other things, introducing new training programs, deploying innovative technologies and strengthening its safety culture — all of which provide interlocking, overlapping layers of protection. As a result, the people who work for BP have never been better prepared

or equipped to operate safely than they are today.

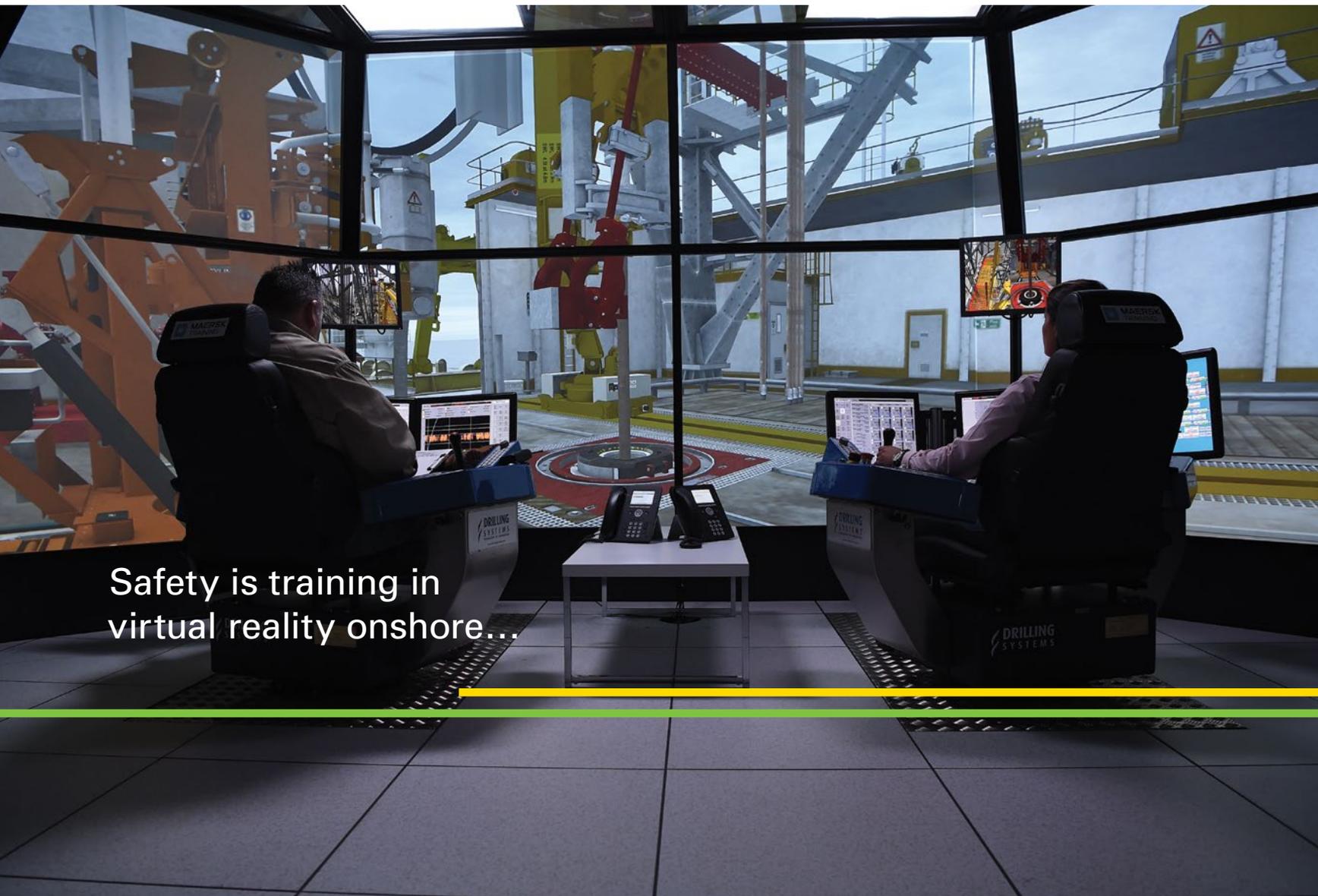
The numbers tell the story. From 2010 through 2016, BP's most important safety metrics showed significant improvement. For instance, the company's total number of Tier 1 process safety events — the most consequential events involving an unplanned or uncontrolled release of materials — fell by more than 75 percent across the globe.

In fact, whether looking at oil and gas production or refining and petrochemicals, BP's rate of Tier 1 events is below the published industry sector average.

BP is proud of this progress, but also recognizes that it cannot rest on past achievements. Complacency undermines safety, which is why BP is working every day to become even better, even safer.

How BP works

BP's approach starts with its core values, including safety, excellence and respect. These values define BP, and its people strive to



Safety is training in virtual reality onshore...

demonstrate them in all aspects of their work.

BP also has company-wide guidelines for how to operate, which it calls its Operating Management System (OMS), and it organizes people according to their functional responsibilities. Each function has its own rules and requirements — consistent with BP's broader OMS guidelines — for how to do particular jobs.

In the company's Global Wells Organization, for example, BP drillers around the world meet specific requirements in their training, contractor management and well operations. This helps ensure that BP teams in the Gulf of Mexico conduct well operations in a similar way to teams in the Caspian Sea.

All BP teams — no matter where they work or what they do — can consult with the company's Safety and Operational Risk (S&OR) organization if they have any questions about how to safely execute their jobs.

While front-line workers still have the primary responsibility for safe and reliable operations, the S&OR

organization works alongside BP businesses to deliver an independent view of risk, offering an additional and valuable layer of assistance and expertise.

Taken all together, BP's values, OMS, functional organizations and the S&OR team provide the framework and the support to operate safely.

How BP trains

BP takes a comprehensive approach to training its workers, combining rigorous standards, world-class instruction and sophisticated tools to prevent accidents and injuries.

Its training programs emphasize not just classroom instruction, but also hands-on simulation. BP replicates scenarios its teams are likely to encounter, as well as potential challenges that, though unlikely, BP expects people to be ready to handle.

For example, through BP's partnership with Maersk Training, both employees and contractors train on lifelike, state-of-the-art simulators that can replicate



...so we can drill safely offshore.

BP teams train and re-train in virtual reality simulators, so they can be better prepared for any situation offshore.

nearly every critical job on an offshore drilling rig. BP uses the simulation facilities to run customized exercises that allow its offshore teams to practice scenarios relevant to specific wells, and to prepare for a wide range of possible contingencies.

BP also uses simulators to train workers at its refineries and chemical plants. Much like the offshore simulators, these systems allow people to practice different job tasks — such as unit start-up and shutdown, and pump and valve operations — in both normal and abnormal conditions, which helps them learn how to monitor for potential problems and avoid accidents.

How BP responds

While BP instructs, trains and practices to prevent accidents, it also prepares its teams to respond in the unlikely event that one were to occur. This way, if an accident were to happen, BP could quickly take the steps necessary to minimize its impact and protect people and the environment.

BP's response plans and preparation incorporate what

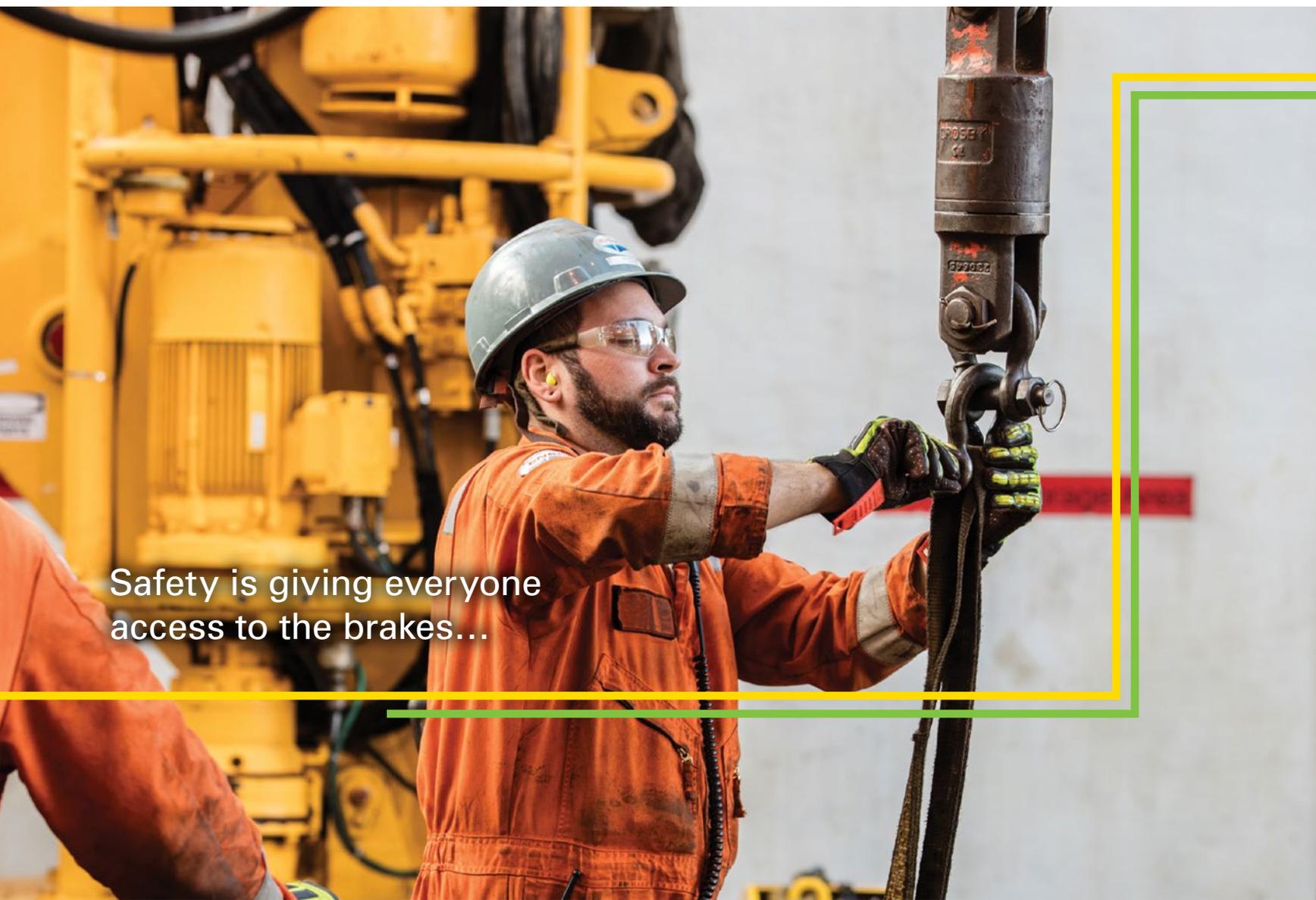
it has learned over many years of operation, including from the 2010 Deepwater Horizon accident. For example, BP has global standards and experts to help ensure that teams in deepwater regions are prepared and equipped to respond to an oil spill, and it has shared research and best practices with governments, partners and competitors around the world.

Even as BP has prepared to respond to an accident, it also has worked hard to ensure that such a response is never needed. Among its many initiatives, BP continues to work with industry members to improve standards on the safety and reliability of subsea blowout preventers and other critical equipment.

Technology

Once people are trained and on the job, BP uses leading-edge technologies to help its teams see things their naked eyes can't. These technologies help BP teams predict where safety challenges might arise so that they can prevent incidents from occurring.

BP's objective is to identify potential issues and intervene



Safety is giving everyone access to the brakes...

before they become actual problems. For example:

- BP's Global Monitoring Center provides round-the-clock support for deepwater well operations in the Gulf of Mexico, ensuring that offshore personnel receive 24/7 assistance from onshore experts — and extra sets of eyes on the company's wells. Specialists in the Monitoring Center are in constant communication with rig teams to help analyze real-time data, focusing on pumps, pits, flow pressures and rates.
- BP has developed a suite of intuitive computer consoles — known as BP Well Advisor — that use sensory technology to gather data about the company's well operations and then translate the data into simple, real-time indicators to help rig crews and office-based experts enhance safety and performance.
- At its Cherry Point Refinery, BP uses phased array ultrasonic testing to confirm the safety and soundness of piping systems and pressure vessels. This technology allows BP to explore for interior corrosion and other damages, while also assuring weld quality.

Culture

Of course, BP workers provide the ultimate safety net. That means that anyone, anywhere, can and should stop any job for any reason if he or she thinks it is unsafe. Given the scale of BP's operations, that is a big responsibility. But it is a responsibility everyone has and must fulfill.

BP recognizes that to have a strong safety culture, it has to promote a strong speak-up culture — a culture in which employees and contractors alike are encouraged to raise questions or concerns. BP supervisors know they have a special duty to be accessible to their team members, and to ensure that everyone feels comfortable speaking up.

Conclusion

BP is committed to the safety of its people and the communities where it operates. This requires constant vigilance and dedication. That's why BP is working every day to improve its training, technology and culture. Because at BP, safety is never being satisfied and always working to be better.

...so everyone
comes home safely.

At BP, our goal is no accidents, no harm to people, and no damage to the environment. That's why we empower anyone to stop a job if something doesn't feel right.

