

sify'



NEW AGE  
DIGITAL

**TECHNOLOGIES**

for Improved Training, Process  
and Performance in Manufacturing

# Workforce Engagement

Today's young professionals have grown up with the latest mobile/digital technology, making it necessary to adapt their training in order to engage a hyper-connected younger generation of workers. To do this, digital transformation must become an integral part of new operating models and talent strategies including digitally-enabled workforce across the industries of Engineering, Manufacturing, Aerospace, Construction, Healthcare, Pharmaceuticals, Medical Devices, and Oil & Gas.

Digital learning platforms build a more desirable work environment and increase efficiency and productivity of the workforce while meeting the learning on their terms.



# Changing Workforce Demographics

Many millennials believe the offshore industry is not a top choice for employment as it lacks innovation, agility, creativity, and meaningful work. Furthermore, multiple trends are driving a global shortage of talent in manufacturing because it takes several years to train new grads. As a result, digital innovation, coupled with new asset portfolios, will require companies to create new or redefined manufacturing roles.

## Digital Training Attracts and Engages

- Connecting learning with employee goals and expectations is a powerful way to build engagement.
- Employees are engaged when they feel passion for their work and organization.
- New technologies play an essential role in talent acquisition and growth of the digital-savvy iGen.
- Exploration and development will be transformed by edtech allowing operators to do more with fewer manufacturing technicians.

## Digital Technologies Trends

AI, robotics and wearables are the fastest growing technology expected to facilitate multidisciplinary work and efficiency.

### Top benefits are:

- Increased employee productivity
- Better real-time decision-making
- Increased training engagement
- Better asset management
- Accelerated knowledge-sharing
- Improved accuracy and reduced risks
- Substantial cost savings

## Augmented Reality

AR can augment physical and cognitive processes through over-the-air expert support onshore. It provides accurate information to technicians and enables proactive decision-making and visual instructions to remote experts in real-time.

### Use Cases

- Asset Management
- Safer installations and operations
- Training, operating and fixing complex equipment
- Remote expert support
- Testing and inspections
- Product design and manufacturing



## Virtual Reality

In simulating high-risk environments and experiences, VR offers better employee engagement and safety. 'Digital twins' can replicate the performance of an oilfield, refinery, or any other operational unit on a virtual platform.

### Use Cases

- Virtual Tour of Worksites
- Safety procedures
- Complex Manufacturing Assembling
- Emergency situations preparedness
- Maintenance and Troubleshooting
- Lean Manufacturing Process
- Testing and inspection
- Analyzing project designs
- Product design and manufacturing
- Disaster management
- Decommissioning operations

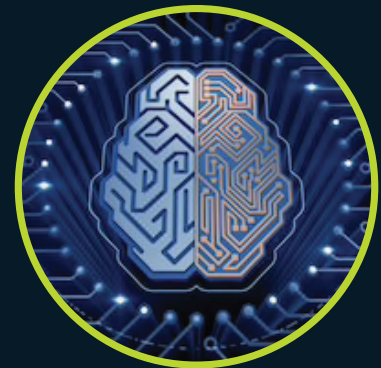


## Artificial Intelligence

AI is increasingly used to track individual field workers to automate resource scheduling and support safety monitoring.

### Use Cases

- Improve overall skillset and work experience
- Integrate assets and ways of working – impacting human and machine.
- Automate talent management
- Automate training and skills certification
- AI in combination with AR
- Advances personnel scheduling
- Financial and safety auditing automation





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