ABB Ability™ Connected Worker

Enhance safety and increase operational efficiency

Taking industrial procedures digital

As leading energy and process facilities increasingly adopt digitalization, a significant obstacle persists: how to minimize the risk of human error in situations where paper-based operating and maintenance procedures are common?

By digitalizing activities ranging from daily rounds to checklists, from inspections to complex operational procedures, companies can reduce the likelihood of human error, enhance workflow efficiency, and create safer workplaces—while increasing their profit potential.

People and procedures

From daily rounds, checklists and inspections to complex operational procedures, you rely on people performing critical manual work across operations

Operations

- Regular plant and shift walk through
- Shutdowns, startup and changeover
- Material transfer, pipeline lineup, loading and offloading
- Managing abnormal events

Quality

- In process quality control & assurance
- Visual inspections and manual data collection
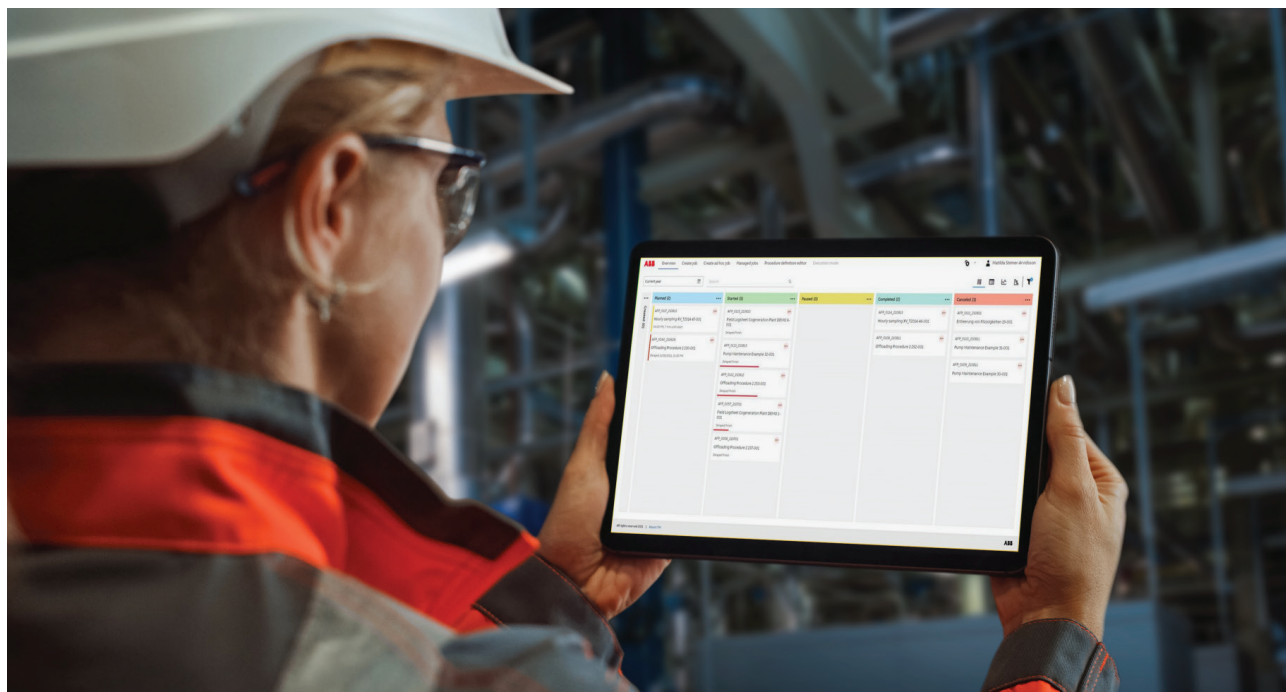- Validation and verifications

Maintenance

- Routine inspections/ rounds
- Repairs and tests
- Equipment preparation, recommissioning
- Calibrations

Environmental & safety

- Environmental compliance rounds
- Safety observations rounds
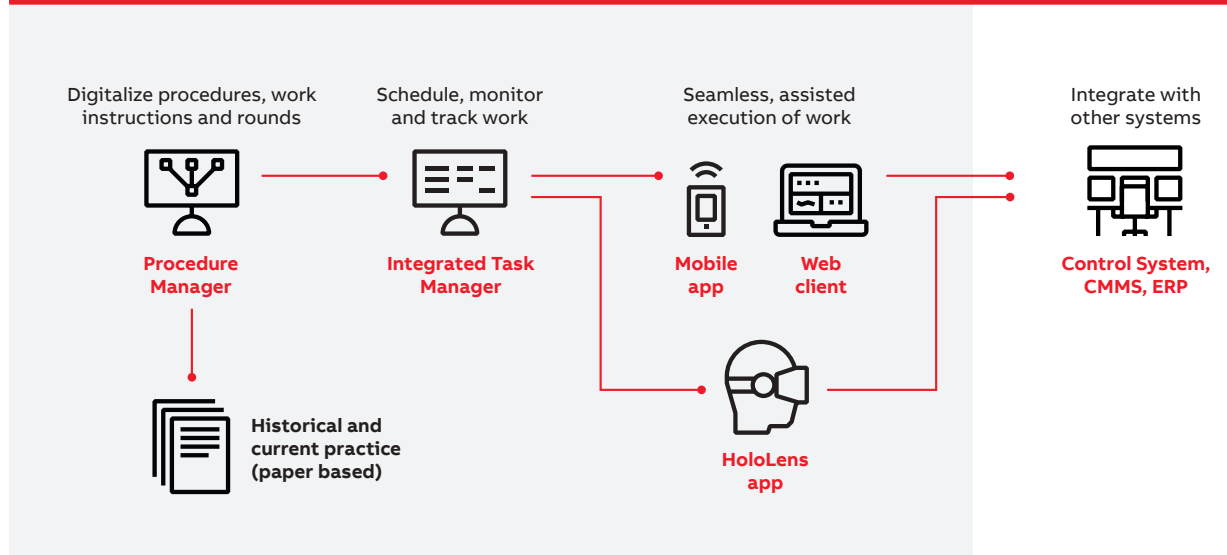
ABB Ability™ Connected Worker
Enhancing safety, minimizing unscheduled downtime and increasing operational efficiency

ABB Ability™ Connected Worker digitalizes the field operator experience when executing manual procedures, rounds, work instructions and checklists. ABB Ability™ Connected Worker uses state-of-the-art technologies to improve efficiencies and reduce human error.

ABB Ability™ Connected Worker solves the common challenges of doing things the traditional way
• Not readily accessible
• Lacks real-time information status and visibility
• Unpractical given real-world circumstances
• Duplicate data entry and manual data errors
• Not supporting collaboration across the operation
• Variations and non conformances are not systematically captured and continues improvements is limited

ABB Ability™ Connected Worker apps

Digitalize procedures, work instructions and rounds	Schedule, monitor and track work	Seamless, assisted execution of work		Integrate with other systems
Procedure Manager	**Integrated Task Manager**	**Mobile app**	**Web client**	**Control System, CMMS, ERP**

Historical and current practice (paper based)
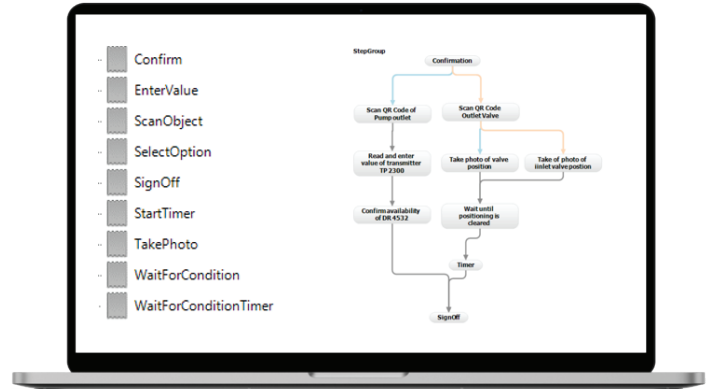
HoloLens app
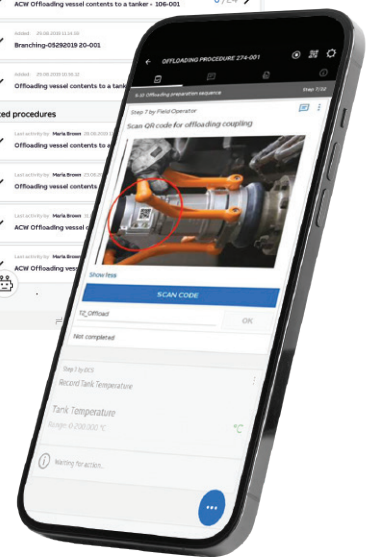
Application suite
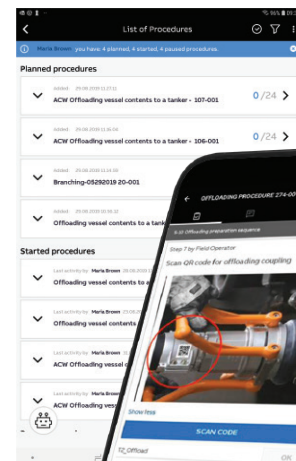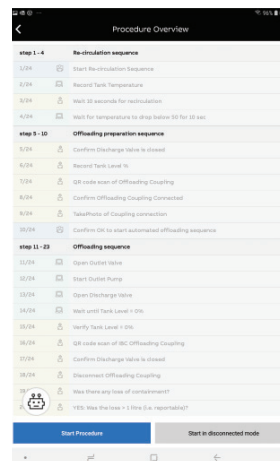## ABB Ability™ Connected Worker

Procedure Manager
- Drag & drop (no coding required), procedure builder
- Manages complex workflows including conditional logic and parallel tasks
- Includes rich instruction by adding images, documents and additional information
- Library of predefined frequently used step types
- Connects to control system and enables synchronization of manual and automatic tasks

Mobile App
- Guides and assists the user step by step through the workflow and records all execution details
- Enables accessible and up-to-date information on procedures and supporting details
- Guides manual inputs and trigger actions
- Comments & photo capture
- Manual and automatic data capture
- Work online or offline
- Voice synthesis & QR code scanning

Application suite (continued)
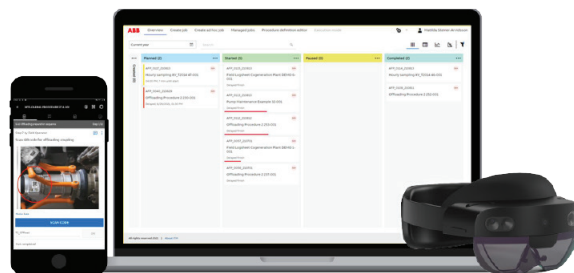## ABB Ability™ Connected Worker

HoloLens App
- Guides and assists the user step by step through the workflow and records all execution details
- Enables accessible and up-to-date information on procedures and supporting information
- Guides manual inputs and trigger actions
- Comment and capture photos
- Manual and automatic data capture
- Field data is visible in the augmented context of the physical area in view

Integrated Task Manager
- Schedule and track jobs using Kanban as a work management method to help visualize work and maximize efficiency
- Manually or automatically assign tasks to groups/individuals
- Define date and time or recurring time for repeating jobs at specified intervals
- Job history and performance
- Automatically schedule jobs based on triggering from other systems or devices, e.g., ERP, DCS, and PLC
- MS Teams seamless integration
- Provides procedure performance analytics including overall and detailed step durations

Key features
Intuitive, productive and flexible

Field/mobile users

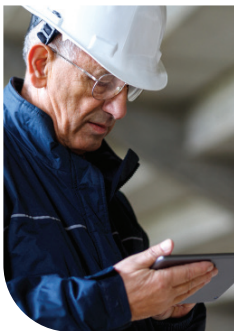|					
Step by step instructions	**Supporting information**	**Bar/QR code scanning**	**Take pictures & videos**	**Collecting data**	**Add comments**
Synchronization with control system	**Access to real time information**	**Augmented reality/ hands-free**	**Voice commands and synthesis**	**Intelligent knowledge assistant**	**Signature capture and audit trail of actions**

Managers/office users

Configurable checklists and procedures	**Job dispatch**	**Job performance and comments**	**Administrative tools**	**Work/status updates**

Intuitive
UX, easy to use

Productive
Work anywhere, on- or offline

Flexible
Phones or tablets

Benefits

ABB Ability™ Connected Worker enables consistent, effective and safe execution of manual procedures – every time

Enhances health & safety
- Reduces incidents and abnormal situations by effectively guiding and supporting operators every step when executing critical procedures
- Complies with statutory requirements

Increases efficiency
- Improves creation, distribution and consistent execution of procedures, resulting in reduction of waste, complete procedures faster and minimizes downtime caused by manual errors
- Integrates with process control system to ensure real-time synchronization of manual with automated industrial procedures

Improves field operations collaboration
- Links procedures and tasks to the appropriate stakeholders and providing the interface to enable seamless collaboration. Everyone is "on the same page."

Documents and retains tribal knowledge
- Retains operating discipline knowledge as a basis for efficient and standardized work practices
- Provides a basis for operator training and certification

Accelerates process improvements
- Captures procedure execution performance, collect data and operator comments allows for continuous improvements

Ensures complete audit trail and data
- Features audit trail of actions, time-stamps and complete execution history for every step to ensure workers follow procedures

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Information to come