

SECTION 5

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# Case Study

# Reimagining the Worker Experience in Emerging Digital Utilities Ecosystems



# Disruptive forces impacting the energy industry

- Consumers contribute to generation and manage their consumption
- New entrants, competitive alternatives
- Energy choice as a social choice
- Reduced demand impacting revenue
- Greater reliability expected at lower prices
- Alternative rate making models incent performance and innovation
- Unpredictable weather and natural disasters
- New digital technology opportunities and threats (e.g., cyber security)

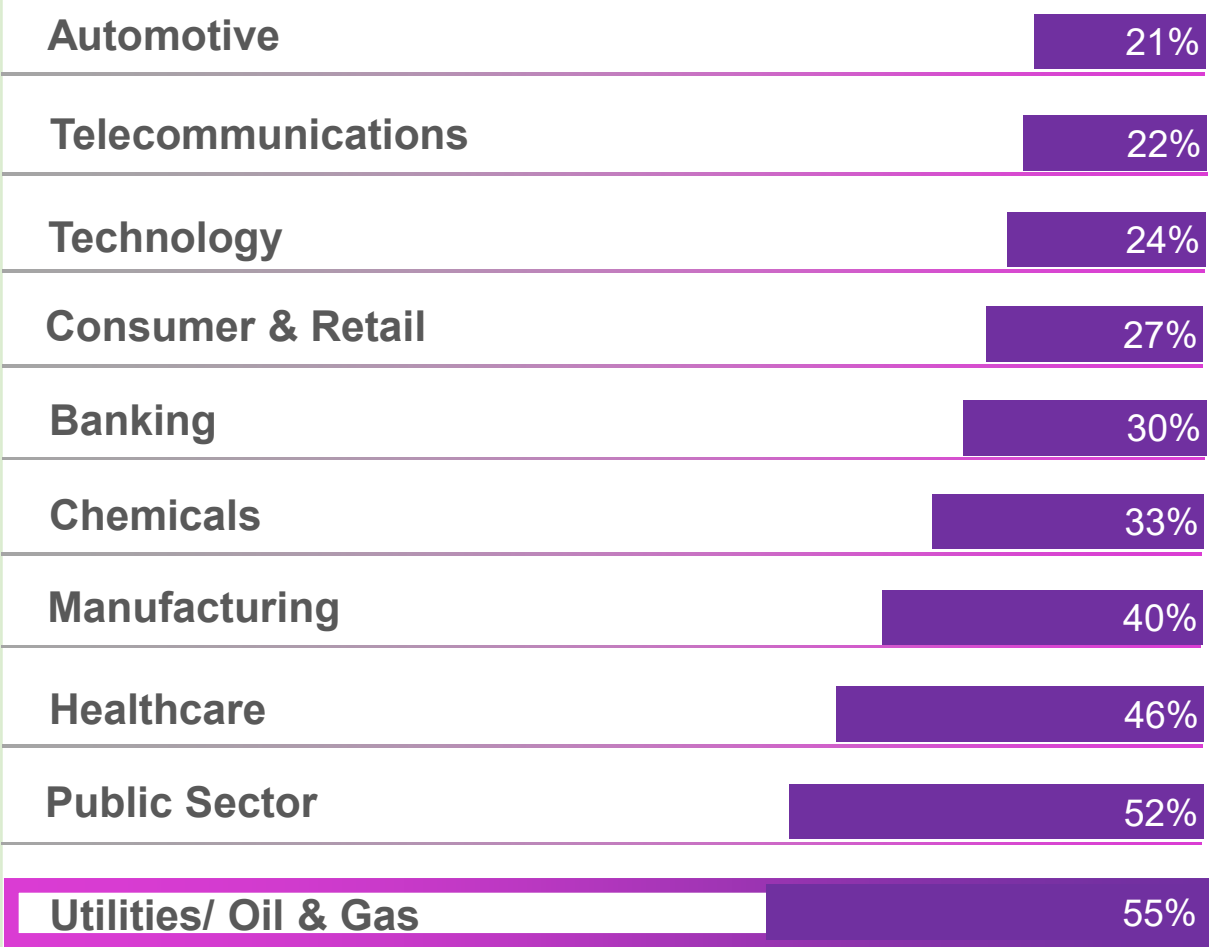


## Need to address through:

- More reliable electricity at lower costs
- Stronger customer relationships (and good will with regulators)
- Prosumer/connected home strategies
- Maximization of asset value
- Employees as participants in an inter-connected business ecosystem.

# Utilities have been slow to transform

Percentage of digital laggards



## Reasons for being digital laggard

- Inherently mature product/service (traditionally)
- Highly regulated industry
- Captive customer base
- Risk averse

Graphic from BCG – Digital Maturity

# Business Assessment Summary

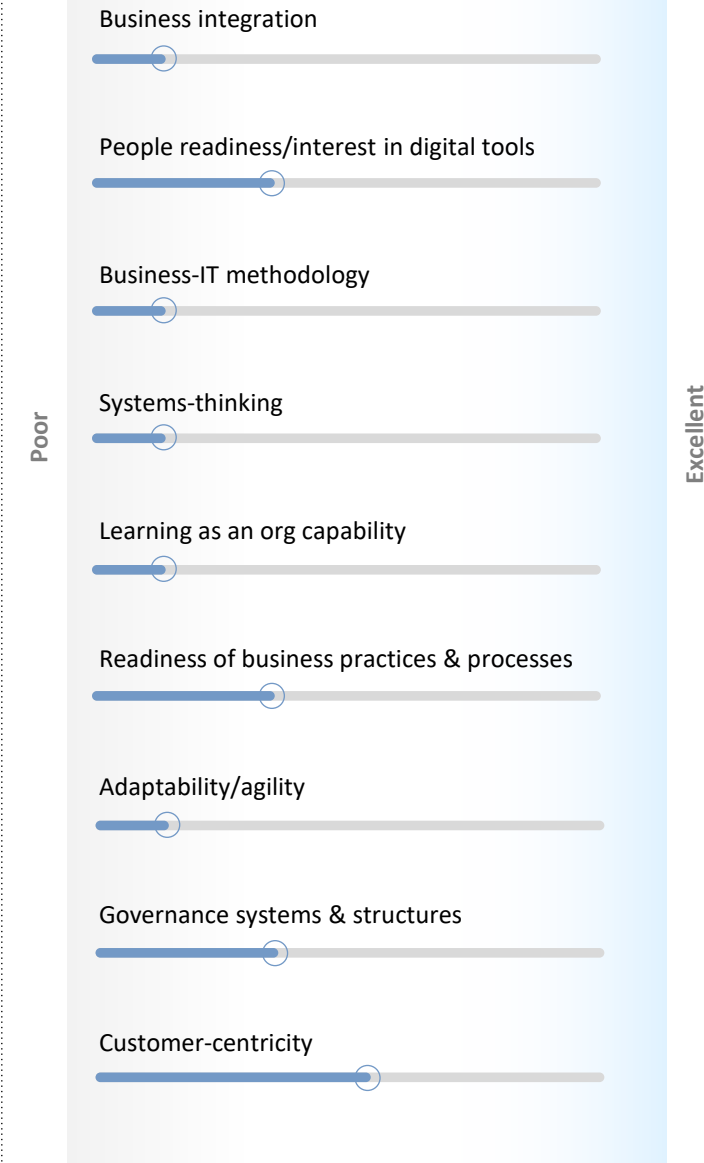
## BUSINESS ENVIRONMENT ASSESSMENT

- Siloed with high variability across businesses; transformation efforts within business areas are on different schedules and use different approaches
- Cultural alignment (as mindsets and behaviors) necessary for new business model to succeed is lagging behind needed change
- Lack of cohesive workflow and processes that bind across the organization, and create context for people and scalability/sustainability for the business
- People systems for self-service and support are poorly designed, hard to find and use, provide minimal value to engagement or EVP
- Logically structured, systematic approaches are not reliable
- Poorly governed resources and digital assets

### Key challenges

- Business siloes
- Lack of progressive Business-IT methodology
- Lack of reliable systems-thinking
- Immature learning mindsets and behaviors
- Gaps in critical business processes
- Adaptability/agility challenges relative to organizational change

## Digital Maturity Summary





# Vision and Value Proposition

The Digital Worker/Employee Experience will provide productivity and systematic scalability in an increasingly automated environment, where labor will be valuable, and digital a way of doing business.

The Experience is a platform for people that over time will:

- Provide end-to-end context and rich resources to **automated tasks and agile processes**
- **Augment and assist**, freeing people to do the work that is most valuable
- Be agile, leveraging data and insights to become **smarter** over time
- **Support extensibility**, providing cohesiveness in an evolving ecosystem
- **Manage change**, influencing and equipping people in new practices.

# Utility Business-Digital Ecosystem

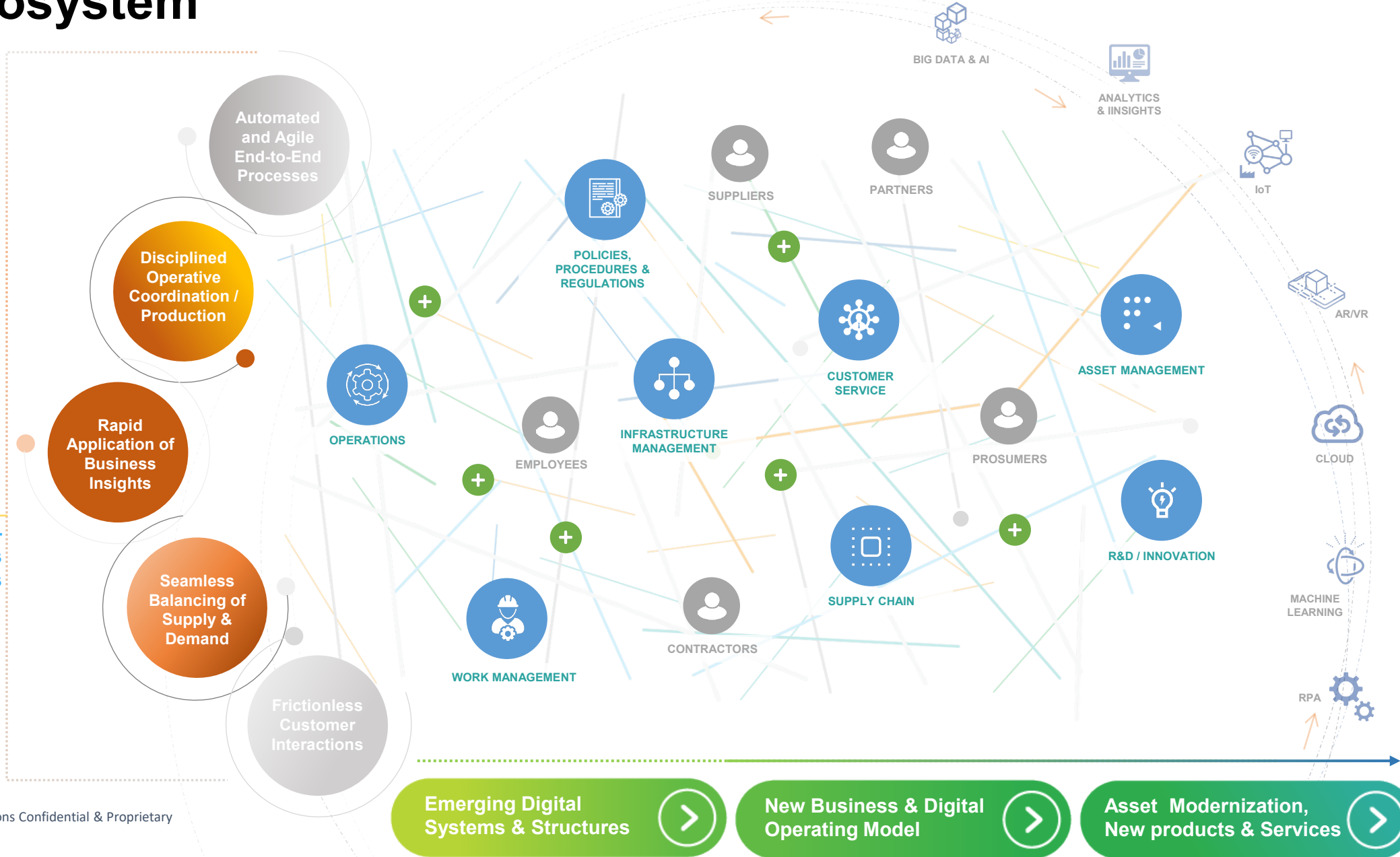
In a business-digital ecosystem, **people are connected, participate, and exchange value like nodes in a network**—in non-linear contexts and with strategic purpose. Digital **experiences create channels for contributions that move business results** and are the mechanisms that monetize the business model.

## Capturing New Business Value

- + Efficiencies in maximizing asset utilization
- + Trust & transparency
- + Faster innovation
- + Improved customer satisfaction
- + Reduce operational expenses/improve operational efficiency
- + Reduce errors, improve safety, satisfy compliance

## Integrated Digital-Enabled Business Capabilities

- Constituents
- Integrated business systems & processes
- Strategic initiatives & Assets



Emerging Digital Systems & Structures

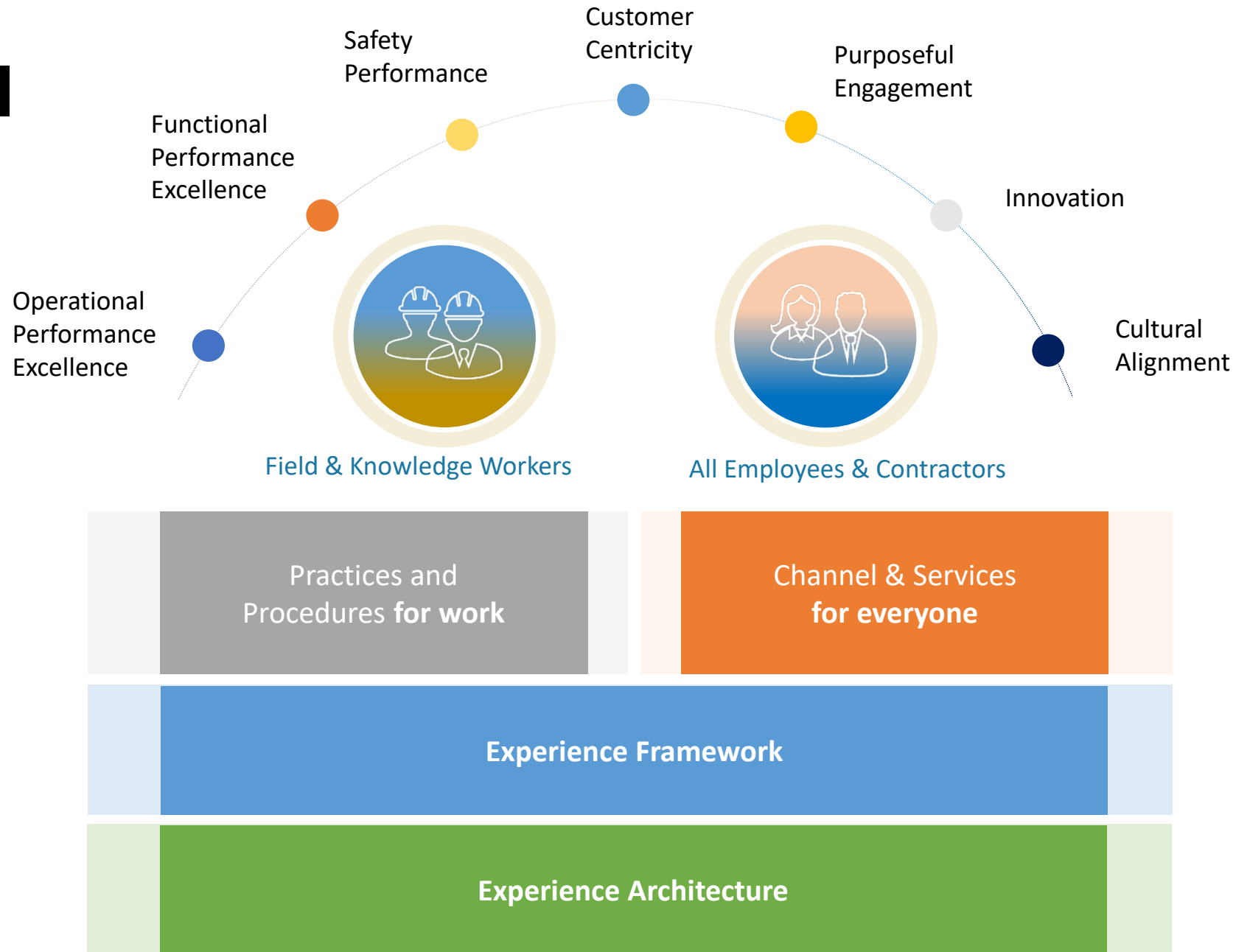
New Business & Digital Operating Model

Asset Modernization, New products & Services

# Solution Model

A **Solution model** forms the basis for **one-to-many capabilities**, which provide **individualized experiences** that achieve **business goals**

This **initial** model focuses on the **worker experience for field-related work** and the **overall Employee Experience**





# Enabling Just-in-Time Practices and Procedures in the Context of Work



## Outcomes

- Improves findability
- Contextualizes access
- Allows consistent execution of practices
- Facilitates measurement and improvements
- Enables safe ways of working

**'Unit of Work'**  
defines systematic relationships of WORK to

- Tasks
- Systems
- People
- Resources (from the ecosystem)

Just-in-time delivery in the context of people's work requires that we associate **Units Of Work** with common **Work Contexts** in order to integrate a **Work Ecosystem**

## Work Ecosystem

- Safety
- Procedures
- Tools & Equipment
- Site/Environment
- Learning/Training
- Standards/Designs
- SMEs
- Insights
- Work Comms

**Work Contexts**  
applied to common practices and interactions to enable

- Timely communications
- Systematic collaboration
- Continuous learning
- Efficient workflow
- Alignment to work practices and procedures



A logical unit that establishes systematic relationships of resources, information, and people to work orders. Relationships evolve over time with a maturing Work Ecosystem landscape.

**Worker Profile**

- Learning & Training history
- Qualification
- Safety record
- Work history
- Equipment/Tool

*Assigned work*



The **digital solution** efficiently and reliably **incorporates elements of the work system** into the **work/worker relationship**, driven by job and worker profiles.

**Work/Job**  
(defined by a WO)

- Designs + Sketch
- Compatible Units
- Permits

**Extended Job Profile**

Sources relevant information from work system based on work order

- Training related to the job
- Required qualification
- Related procedures
- Relevant communications
- Job equipment history, status
- Job equipment safety info
- Job environment: site, location information
- Customer info
- Supporting contacts (designer, material handler, scheduler etc.)

**Work Ecosystem**

- Safety
- Procedures
- Tools & Equipment
- Site/Environment
- Learning/Training
- Standards/Designs
- SMEs
- Insights
- Work Comms

# Work Contexts

In addition to systematic relationships established by the 'Unit of Work', Contexts are applied to work practices to enable digitally-assisted understanding, decision making, and exchange opportunities.

Stay informed and up to date on timely  
**Communications**

- Procedure updates
- Tool updates
- Proactive safety information
- Job-related communications
- Relevant business data
- Emergent information, insights, and trends

Ask and answer questions, contribute knowledge to **collaborate in a systematic way**

- Peer-to-peer channels
- Feedback
- Lessons learned
- Report safety issues
- Seek innovation

Pursue **continuous learning and growth** proactively

- Optional training
- Situational and safety learning
- Developmental learning
- Mentorship

Understand roles and follow the **workflow**

- Transparency
- Accountability
- Intake/handoff
- Situation-based interactions
- Evidence based decision making

Understand and align to desired **work practices and procedures**

- Procedures
- Standards
- Safety
- Governance practices



**Execute work**

# A channel to improve organizational digital maturity while creating capabilities to improve the customer experience

Experience personalized to Workers & Crews



## Outcomes

- Resilient and adaptable workforce
- Continuous learning and feedback
- Engagement and participation
- Accountable to self-serve
- Ownership of one's career
- Support of development of others
- Digitally enabled and capable workforce
- Management freed for strategic work

### Support adoption of digitally enabled tools

- Anytime, anywhere access
- Frictionless experiences
- Cross-touchpoint and cross-channel access
- Collaboration and knowledge sharing
- Integrated business intelligence
- Just in time, just enough

### Encourage self-sufficiency and accountability

- Pursue valuable information, knowledge, and resources via authoritative sources
- Use self-service when available (not via proxy)
- Seek and contribute to digital sources for guidance and informed decisioning
- Contribute to the nimbleness of the organization

### Create a connected organization

- Engage in two-way, peer-to-peer communications
- Collaborate with purpose (solve problems, seek help)
- Pursue continuous improvements
- Seek diverse ideas
- Innovate within cultural boundaries
- Engage in new hire integration

### Change mindsets and behaviors

- Internalize organization's purpose and vision
- See oneself in the future of the business
- Develop personal learning practices
- Enact and improve emerging practices
- Pursue the changing nature of work

### Enable career journeys

- Continuously adapt to needs of the future
- Discover learning opportunities
- Seek career growth
- Own performance and ongoing development
- Coach team members on their careers
- Integrate new hires to their career journeys

# Methods and Procedures

Evolution over time

Functional requirements mapped over time for:

- 1) Methods and Procedures
- 2) Health and Safety
- 3) Communications
- 4) Learning
- 5) HR
- 6) Onboarding

## Near-Term

- **Clean up procedural content.** Identify and remove redundant, outdated, and trivial content (ROT).
- **Establish single authoritative source for procedural content.** Solve for duplicate versions that preserve/perpetuate ROT.
- **Define top-level procedure taxonomy.** Create controlled vocabulary for metadata to classify, organize, and target content and aid in search and governance. The taxonomy will evolve over time.
- **Link work methods and specifications to CUs.** As a reliable, modular unit of work, the CU provides an opportunity to support an extensible content architecture based on jobs.
- **Enable read receipts for critical content.**
- **Support “find a person” functionality for key work contexts.** Link experts to methods to support peer-to-peer information sharing.

## Middle-Term

- **Link all relevant procedures to CUs.** Enable push and pull of all relevant procedural content, including engineering and operating instructions.
- **Link tools-related procedure content to CIDs.** This will support: governance practices based on tool and equipment changes; findability based on individual equipment choices/usage.
- **Link relevant procedures to nameplated equipment.** Supports content architecture in absence of CUs (e.g., in emergent work)
- **Link procedures to job codes and storm roles.** This will support targeted communications around procedure updates.
- **Link safety procedures to incident types.** Enable proactive delivery of safety guidance in the context of work and/or based on trends.
- **Create reliable channels of inquiry and contact.** Provide ways for workers to identify experts, ask and answer questions about their work, and share feedback and understanding.

## Long-Term

- **De-silo procedure content production.** Define relationships among teams with shared ownership in procedural content to support alignment to a unified model.
- **Support systematically structured and adaptive content.** Variable content formats managed through taxonomy deliver just-enough content views and enable findability.
- **Enable transparency of information and decision making between office and field.** Provide rationale for decisions to avoid “as designed/as built” discrepancies and build systematic knowledge.
- **Establish “crew” as a reliable factor in targeting job-based content.**
- **Check worker profile and work history to push information related to work execution.** This may include training, procedure refreshers, business insights, etc.

# New Digital experience, in the ecosystem

Constituents

Managers of Knowledge Workers

Hybrid Field/Office Roles  
Relay techs, Distribution control center roles, etc.

Field Workers  
Linemen, electricians, troublemen, metering agents, etc.

Knowledge Workers  
Engineers, designers, schedulers, stenos, distribution techs, etc.

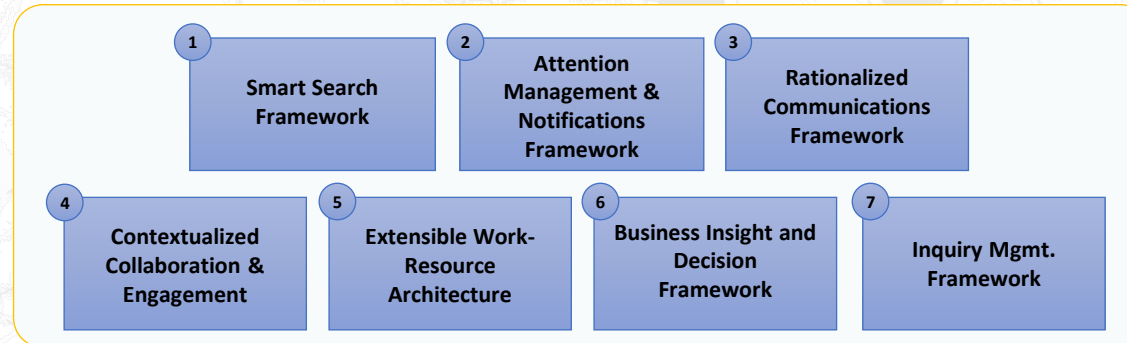
Customer Service Roles

Field Supervisors

Devices, Channels, Digital Touchpoints



EEx Horizontals; Digital Experience Building Blocks



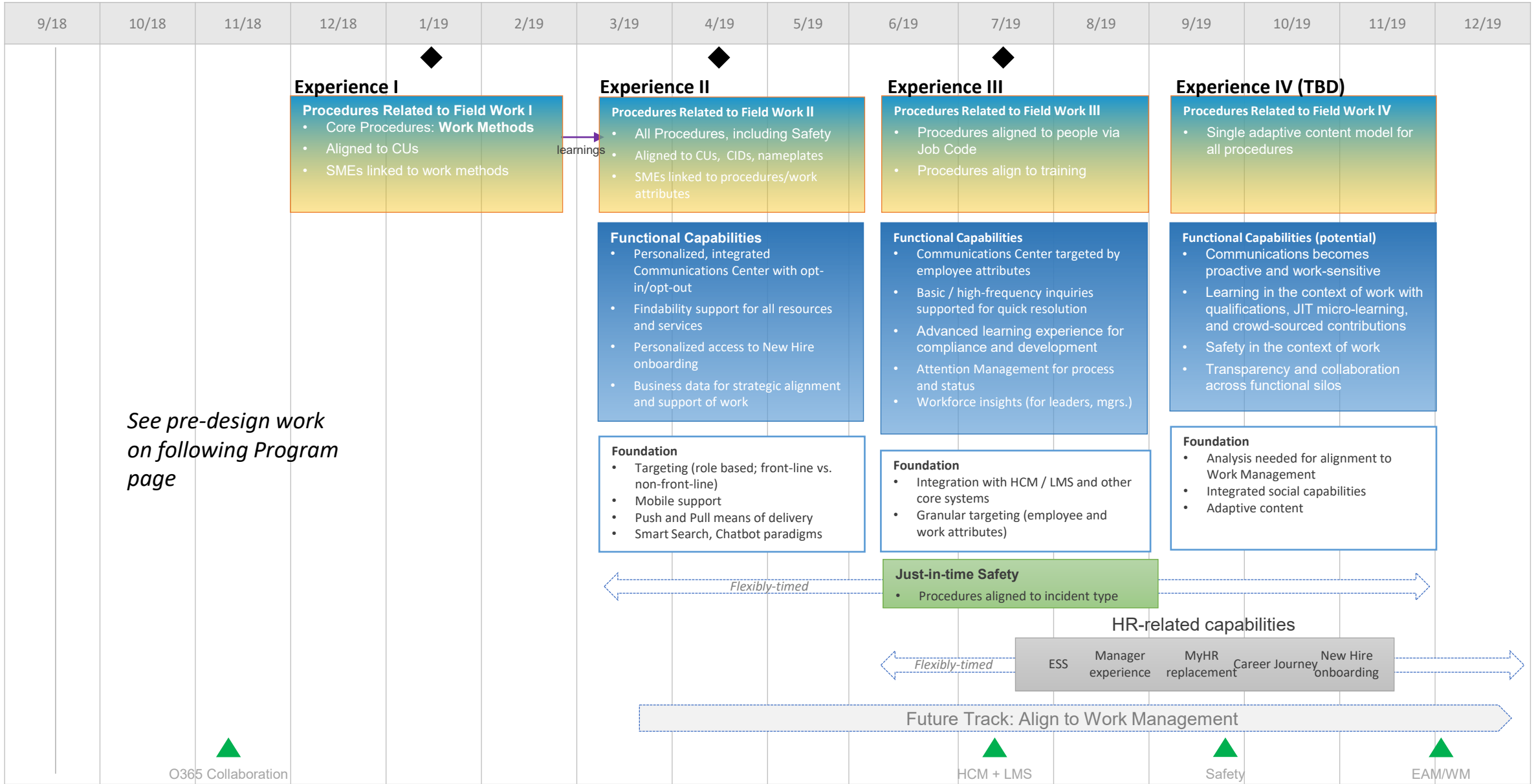
1:n Foundation Capabilities

- a. Security services
- b. Roles, Personalization, Targeting
- c. User Profile, Preferences
- d. Mobile
- e. Omni-channel orchestration
- f. WCM; Content services
- g. Integration
- h. Usage tracking/metrics
- f. Collaboration
- g. Search...

Ecosystem Members & Properties

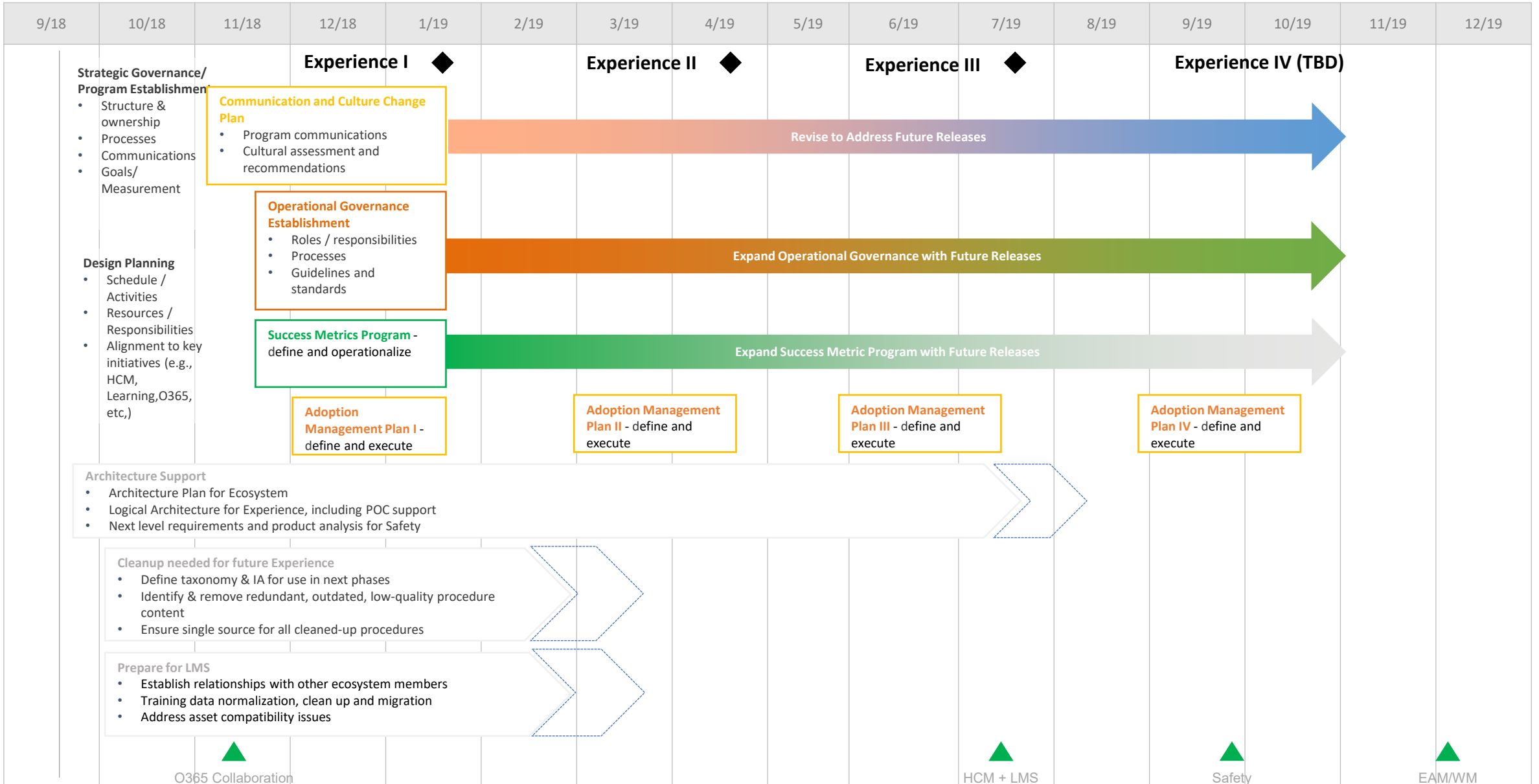


# Business-Digital Roadmap



See pre-design work on following Program page

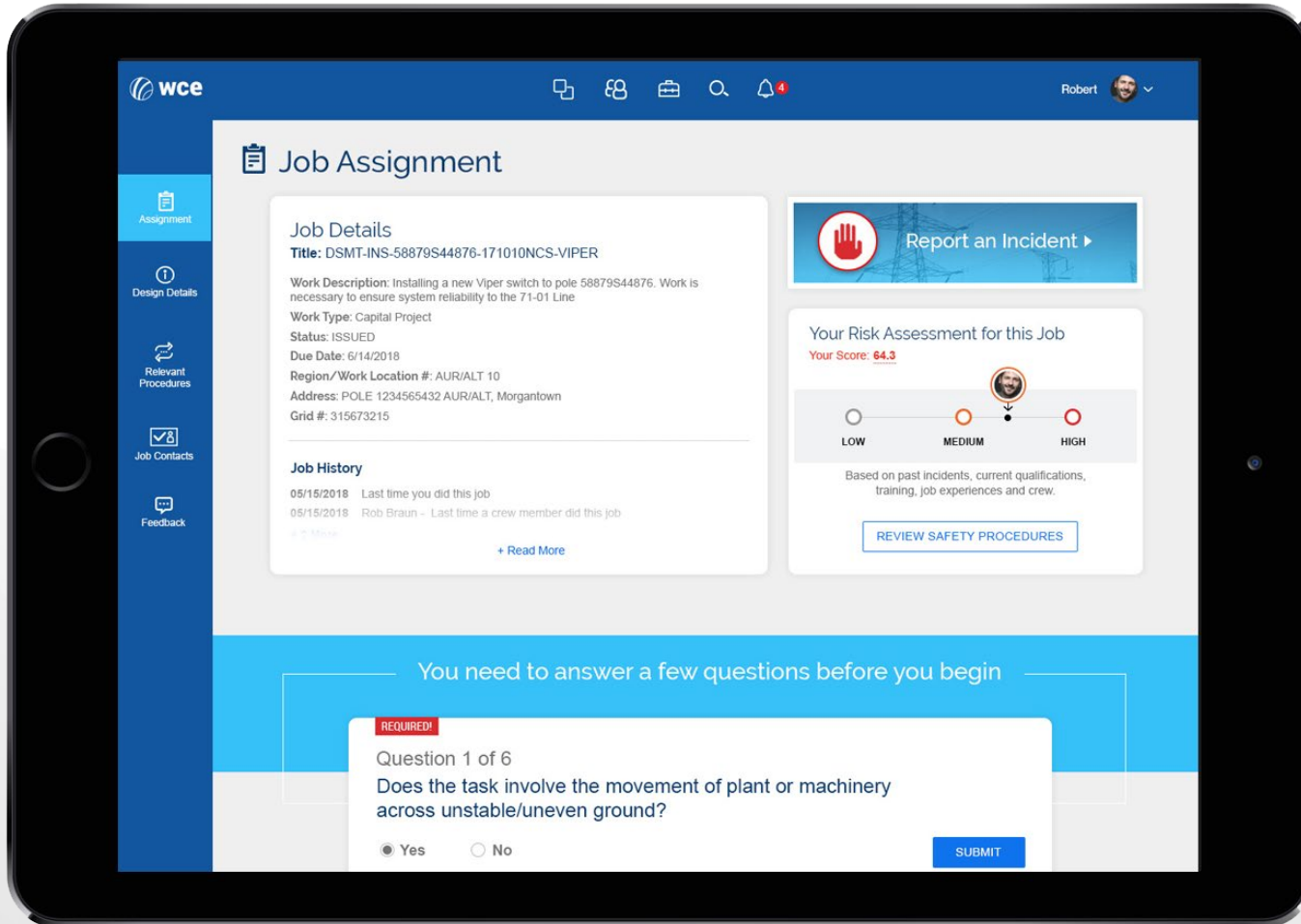
# Business-Digital Roadmap – Supporting Program & Activities





# Visualizations: At work

## + Field worker experience



## + Team dashboard

**My Team**

You have 2 people taking time off this week. You are onboarding 1 new hire this week.

**The Week Ahead**

Work Order	Resources	Hours
123456	2	18
789101	1	2
123456	4	40
652489	3	17
365789	2	5

**Employee Time**

Employee	Hours	Days
John Smith	40	5
William Reilly	40	5
Jennifer Jones	38	4
Steve Miles	44	6
Dana Knox	40	5

**Safety Alerts**

- 9/13/18 - Extreme Cold Weather Alert [Read more >](#)
- 8/27/18 - Ongoing Work in School Zones: School Recommendations Sept 8 [Read more >](#)

**Weather Updates**

48° CURRENT WEATHER

58° 12PM, 52° 4PM, 48° 8PM, 45° 12AM

**Safety Incidents**

My Team This Year

- 6 Good Catch
- 4 Near Miss
- 0 DART

**Recent Incidents**

Date	Type	Location
6/4	Wildfire encounter	Denver
5/30	Vehicle collision	Aurora
3/21	Trip and fall	Fort Collins

**Your Team's Risk Profile**

A snapshot of your team's risk profile based on past incidents, current qualifications, training and job experience.

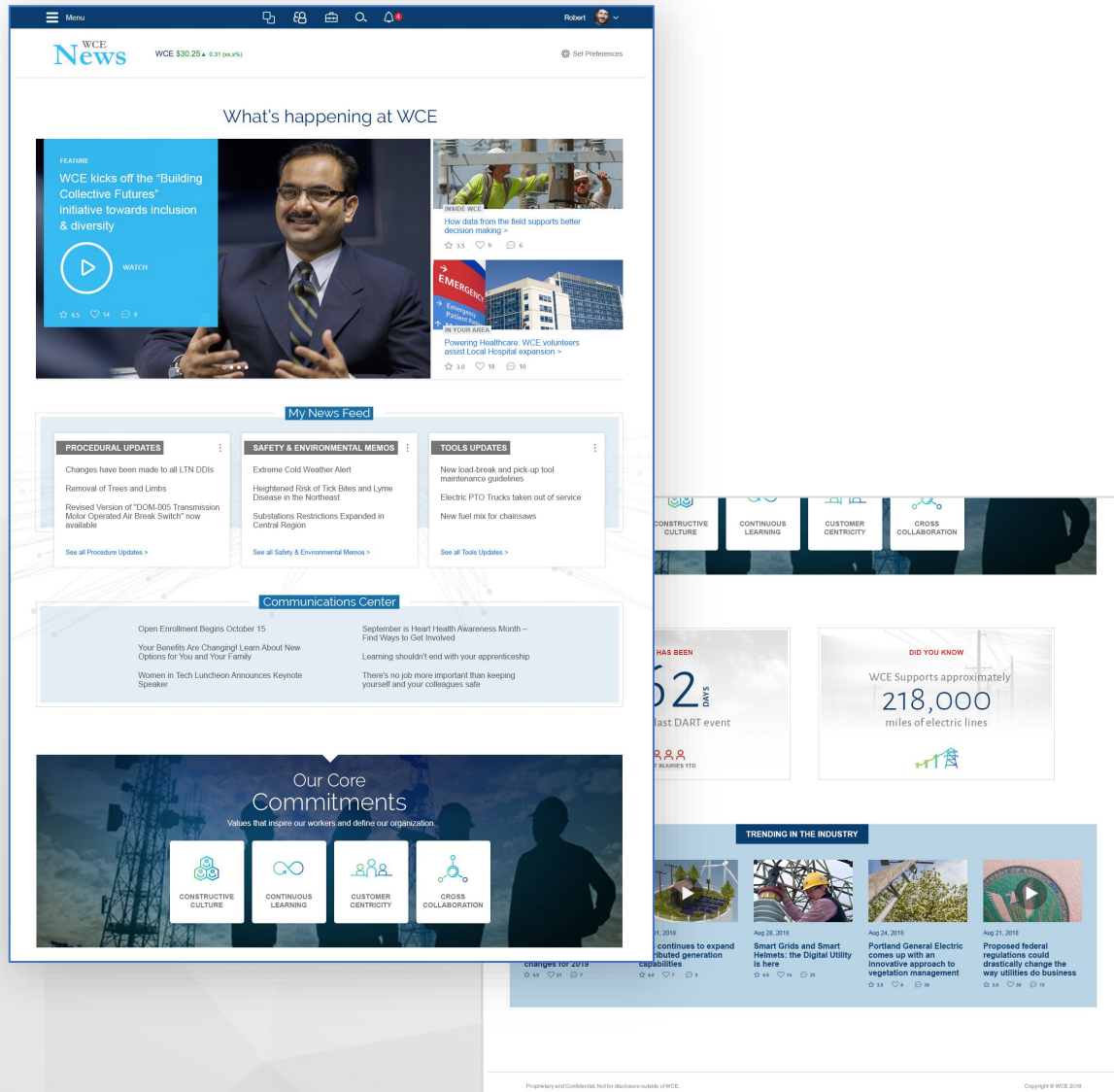
- 12% LOW
- 68% MEDIUM
- 20% HIGH

**Training Status**

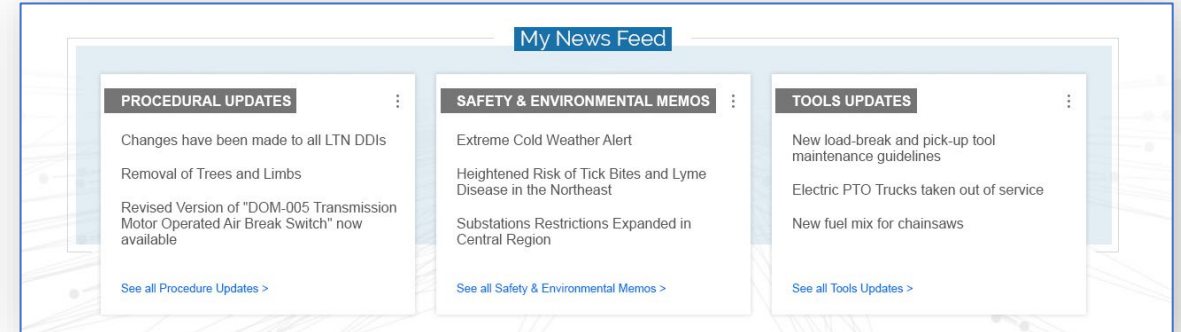
- John Smith - Viper Certification - **Overdue**
- Kristen Connelly - Bucket Safety - **Assigned**
- Lance Green - OSHA Compliance - **Assigned**

**Where's My Team**

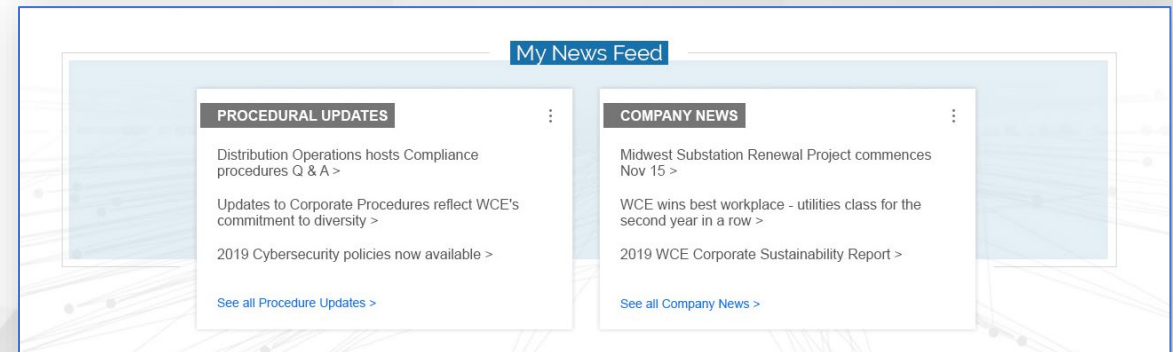
# Visualizations: Communications



## + Targeted to field workers



## + Targeted to knowledge workers



# Visualizations: Something for Everyone

## + Personalized learning

The tablet screen shows a user interface for 'My Learning'. At the top, there's a navigation bar with a menu, user profile (Robert), and various utility icons. The main content area includes:

- My Learning** header with 'Set Preferences'.
- Introductory text: 'WCE prides itself on being a learning organization. Continuous learning cultivates innovation, collaboration, and engagement. We are here to help you stay on top of your learning.'
- BROWSE ALL TRAINING** button.
- ALERT** - You have overdue required training to complete: CBT 04 - Substation Safety >
- TAKE NOTE** box: 'You have recommended training... Identifying T&D Line Hardware E-Learning | WCE | 10 Min Based on a recent incident'.
- Recommendations for You** section with items like 'Tool Committee Meeting Event | WCE' and 'LNM026 Reading Grid Maps E-learning | WCE | 1hr'.
- Video Tutorials for Linemen** section with 'Closing a switch' (2 mins) and 'Stop, Call, Wait' (5 mins).
- We've identified some experts who match your learning path!** featuring Sarah Rodgers, Michael Freedman, and Thomas Smith.
- WorkBot** chatbot: 'Have questions about equipment installation? I can help.'
- SAFETY TREND** video: 'Learn Linemen rescue procedures virtually'.
- Continuing your education?** section with 'WCE's tuition reimbursement program has you covered' and a 'VIEW POLICY' button.
- Learning collections to support your goals** section with categories: 'New to WCE', 'From Linemen to Field Supervisor', and 'Worker Management Skills'.

## + New hire experience

The desktop screen shows a user interface for 'wce New Hires'. At the top, there's a navigation bar with a menu, user profile (Robert), and various utility icons. The main content area includes:

- wce New Hires** header with 'FAQ', 'MY SCHEDULE', and 'CONTACTS'.
- Welcome to WCE John!** with a profile picture and introductory text: 'You've joined a great company, and we're glad to have you as part of our team. WCE onboarding gets you up and running, by providing you with the corporate information, resources, and roadmap you need to start your career - everything from finding your tools to finding your way.'
- New Hire Training Schedule** section with a 3-day orientation plan.
- New Hire Checklist** section with tasks like 'Compliance Training (overdue)', 'Complete your WCE profile', 'Activate and Configure your Device', 'Order your Work Gear', and 'Enroll in Benefits'.
- My Onboarding Plan for Work** section (created for you by your Field Manager, Mark Smith) with 'Resources to Review' and 'Schedule Time to Meet' with team members like Mark Reynolds, Jane Morrison, Tony Rodgers, and Robert Jones.
- Your Work and Beyond** section with video thumbnails for 'Learn more about other Business Areas at WCE', 'Showcase: 2019 Strategy and Beyond with John Markson', and 'Constructing an Inclusive Culture'.
- Perks & Amenities** section with a grid of benefits like 'Call Phone Discounts', 'Financial Perks', 'Childcare Discounts', 'Housing Assistance', etc.
- Connect with other Recent Hires** section featuring profiles for Angelina James, Richard Carlson, Kevin Smith, and Chris Prichard.
- Your Suggested Learning** section with cards for 'LNM016 Ropes and Tying Knots', 'LNM026 Reading Grid Maps', and 'DEB011 Distribution Construction Forum'.
- My Onboarding Plan for Work** section (created for you by your Field Manager, Mark Smith).

# Visualizations: Something for Everyone

+ Personalized and contextual access to HR data, information, and support

## My Time Off

Set Preferences

**Vacation Time**  
Total 30 Days  
10 available, 20 used

**Sick Time**  
Total 20 Days  
8 available, 12 used

**Your Pending Time Off Requests**

- 5 DAYS: 5/10/18 - 5/14/18 Vacation. Not likely to be approved.
- 1 DAYS: 6/15/18 Vacation. Likely to be approved.

VIEW DETAILS | REQUEST TIME OFF

**Reminder**  
Remember to keep your manager informed about your schedule. If you know you'll be out of the office, let us know.

**Helpful Resources**  
Policies for Time Off >  
Holiday Calendar >  
Attendance Guidelines >  
Storm Duty Schedule >

**Have Additional Time Off Questions?**  
WorkBot: We're here to help! CHAT

## My Paycheck

Set Preferences

Week 9/3/2018: \$1,375 GROSS AMOUNT

Week 8/27/2018: \$1,642 GROSS AMOUNT

VIEW ALL PAYSTUBS

**Manage Pay Related Information**  
Direct Deposit >  
Tax Withholding >

**Reminder**  
Remember to enter your timesheet on a daily basis.  
ENTER YOUR TIME

**Helpful Resources**  
Pay Calendar >  
401K Elections >  
Overtime Guidelines >

**Have Additional Pay Questions?**  
WorkBot: We're here to help! CHAT

## My Benefits

Set Preferences

**Plan Overview**

	Policy Information	Enrolled Coverage	Deductible	Manage Your Care
Medical	Policy # 123456 (855) 333-5454	Plan A - Family	\$1,000	Find a doctor or hospital >
Dental	Policy # 123456 (855) 333-5454	Family	\$2,000	Find a dentist >
Vision	Policy # 123456 (855) 333-5454	Self	No Deductible	File a claim >
Prescription	Policy # 123456 (855) 333-5454	Family	No Deductible	

VIEW DETAILS

**New**  
You have 30 days left to complete open enrollment.  
ELECT MY BENEFITS

**Occupational Athletics Benefit**  
Claim expenses on physical activities and exercise in support of your own occupational athletics engagement.

**Have Additional Benefits Questions?**  
WorkBot: We're here to help! CHAT

# Visualizations: Common Experience Capabilities

The Alerts interface features a top navigation bar with a menu icon, a search icon, and a user profile for 'Robert'. Below the navigation bar, the 'WCE News' logo and stock price 'WCE \$30.25 ▲ 0.31 (0.9%)' are displayed. A red alert banner at the top reads 'ALERT Extreme Cold Weather Alert 1 of 4 READ ALL'. The main content area is titled 'Safety & Environmental Alerts' and lists four alerts. The selected alert, 'Extreme Cold Weather Alert', is expanded to show details: 'What to know' (An extreme cold weather alert has been issued this morning, and is expected to continue into next week.), 'What to do' (Dress warmly, Ensure proper head and hand coverage at all times, Keep active when working outdoors, Take indoor breaks), 'Contact' (TD & I Health and Safety >), and 'Relevant Documents' (SP-06 Cold Weather). A checkbox at the bottom indicates 'I have read and understand the impact and required action of this alert.' and a blue 'SUBMIT' button is at the bottom right.

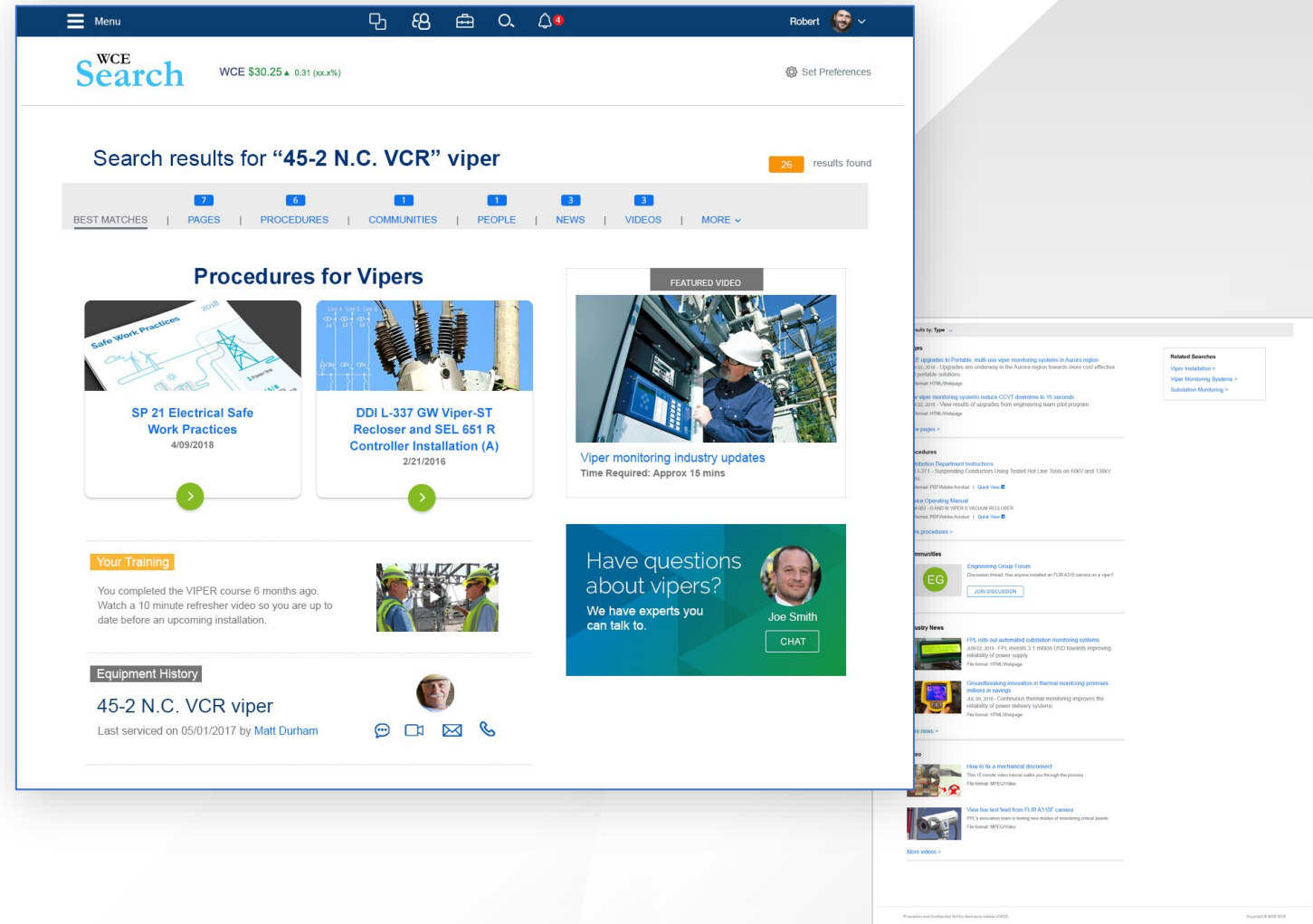
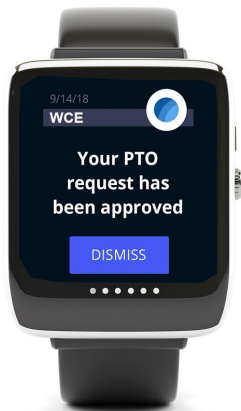
## + Personal assist

The personal assistant interface, titled 'the grid', shows a chat conversation with 'WorkBot'. The chat starts with a greeting: 'Hi! I'm WorkBot, your virtual assistant. What can I help you out with today?'. The user asks 'How much time off do I have left?'. WorkBot responds with a snapshot of time off balance: 'Sure! Here is a snapshot of your time off balance.' and displays two tables: 'Vacation Time' (Total 20 days, 10 days remaining) and 'Sick Time' (Total 12 days, 6 days remaining). The user asks 'I may need more time off than what I have available. What am I eligible for?'. WorkBot lists eligibility for disability leaves: 'Short term disability: 3 - 6 months View Policy >', 'Long term disability: 6 - 12 months View Policy >', and 'Personal unpaid leave View Policy >'. The user asks 'Ok, How do I apply for Short Term Disability?'. WorkBot provides a button to 'APPLY FOR SHORT TERM DISABILITY'. The user asks 'I may need to ask someone about my situation, Who can I talk to?'. WorkBot provides contact information for 'Benefits: 123-456-7890 www.uf.com'. The user asks 'Is there anything else I can help you with today?'. WorkBot responds 'No thanks.' and a 'SEND' button is visible at the bottom.

# Visualizations: Common Experience Capabilities

+ Customized push notifications

+ Smart search

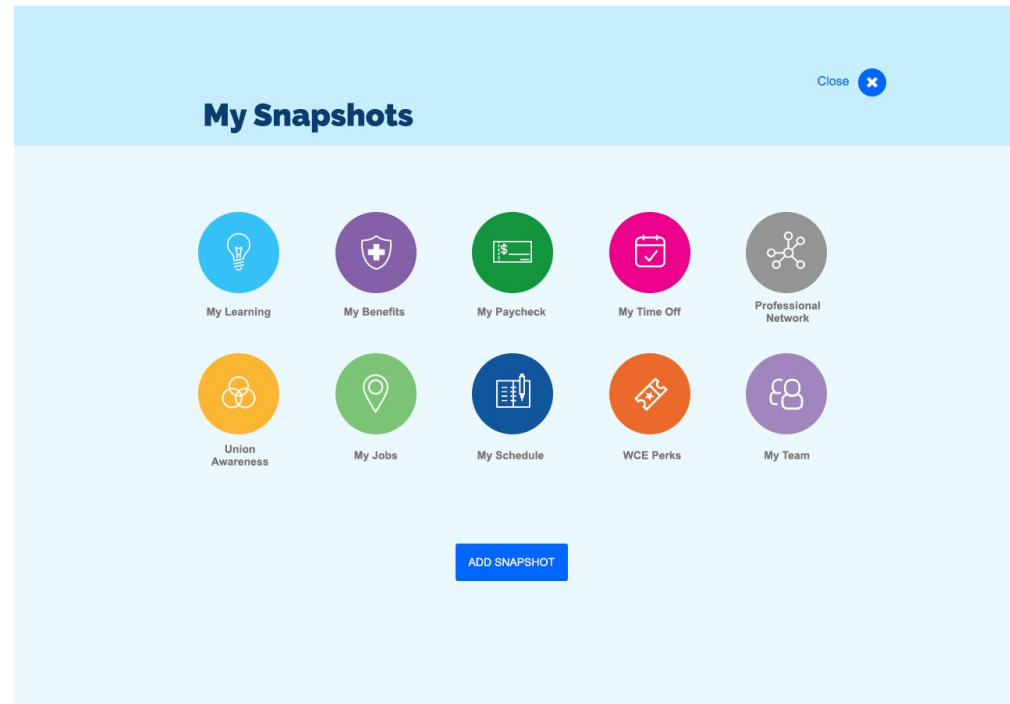


# Visualizations: Common Experience Capabilities

## + Common components bar




## + Snapshot utility






# Visualizations: Common Experience Capabilities


## + Notifications utility





Close 


### Message Center

-  **SAFETY ALERT:** Extreme Cold Weather Alert  
Issued 6:30 a.m. [READ](#)
-  You have a job qualification that is about to expire  
2 days left [VIEW](#)
-  You have pole installation refresher training  
Due Soon [REGISTER](#)
- Benefits:** Open enrollment begins October 15 [REGISTER](#)

## + Profile utility

My Profile 

-  My Info
-  My Participation
-  My Qualifications
-  My Team



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[EDIT PROFILE](#)