Managing Competency with a Transitioning Workforce

Vikram Saraf
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Agenda

• History lesson and look at what it taught us?
• Competency Management in 2018
• Explore the profiles of the people
• Discuss the technology
• Look at the paths to competency
• Interactive demonstrations
• Q&A
• Hands-on
HONEYWELL’S HISTORY OF COMPETENCY MANAGEMENT

• Conceived by Honeywell in 2015

• Customer driven initiative

• Key drivers
  – Tenure of workforce
  – Challenges attracting and retaining incoming generation
  – Do more with less

• Industry issues
  – Low commodity prices
  – Reduced budgets
  – Industry wide aged installed base

• Solutions… None!
SO WHAT’S CHANGED?

• Commodity prices have rebounded
• The workforce is becoming polarized
• Industry suppliers have begun to realize there is a problem
• And…..

NOT MUCH ELSE!

• Except, we’re more knowledgeable
SO WHAT HAVE WE LEARNED?

- **Tenured workforce**
  - Walking trust of company knowledge
  - Extracting knowledge is key
  - Varied comfort levels with technology

- **Incoming workforce**
  - Multi-taskers with shorter attention spans
  - Want continuous feedback
  - Technology savvy
  - Experiential Learners

- **Time to functional competence**
  - Traditional timetables won’t work
  - Technology challenging both groups
  - Need to leverage technology

- **Job execution & quality**
  - Cannot trade speed for quality
  - Smart use of technology is key
  - Information on-demand critical
WHAT ELSE HAVE WE LEARNED?

• Key focus areas align with key drivers
  – Shorter learning curve
  – Increased skills retention
  – Higher productivity
  – Increased job compliance
  – Improved employee safety

• This is not an “event” it’s a paradigm shift
  – Customers expect Honeywell to have “skin in the game”
  – Outcome driven program is preferred

• One size does not fit all!
  – Program flexibility critical
  – Critical needs exist in different places for different companies
LET’S LOOK AT THIS INCOMING WORKFORCE

Inventions of the 1990’s

- GPS
- Linux
- Email
- Netflix
- WWW
- eCommerce
- Hybrid Vehicles
- USB Flash Drives
- Text & Instant Messaging
- Digital Video Recorder (DVR)
- Near Field Communication (NFR)

Things the Incoming Gen Can’t Relate To

- Dial-up
- Zip Drives
- Paper Maps
- Y2K Worries
- Film Cameras
- Tape Recorders
- Beepers/Pagers
- Answering Machines
- Giving a presentation using slides
- Carrying your Cell, Camera & MP3 player
- Explaining how to record & watch TV at the same time
WHAT ARE THEY DEALING WITH?

• What are 5 exabytes of Data?
  – The amount of data created between the dawn of civilization and 2003
  – The amount of data created every 2 days in 2016
  – The amount of data created 29 minutes by 2020

• Why is it happening?
  – Digital video production
  – Digital photos
  – 6.1 Billion Smartphone users by 2020
  – 50 Billion connected devices by 2020
  – 450 Billion business transactions/day by 2020

• IDC predicts a 42% CAGR for data through 2020

By 2020 we will generate 1.7 GB of new information every second for every person in the world!
WHY DOES THIS MATTER?

• Because the inbound generation of workers are:
  – Digitally Focused
  – Adept at accessing information when and where needed
  – Tech savvy
  – Exceptional multi-taskers

• Because information accessibility:
  – Will have to be via the cloud
  – Will have to be on-demand
  – Will have to support rich content structured data

• Because you need to manage knowledge transfer
  – Formal education needs to be selective
  – Ongoing education needs to be impactful
  – Practice becomes essential

*Because you can’t carry that many books!*
COMPETENCY MANAGEMENT 2018

• Paths
  – Targeted at key positions
  – Consistent process for skills
  – Highly scalable

• Technology
  – Precisely targeted
  – Supports the skills process
  – Multi-use provides ongoing ROI

• Profiles
  – Varies by job role
  – Leverages skills & experience
  – Not intimidating, Not boring
Maintenance Specialist Competency

Immersive Competency – Training On-Demand in a Safe, Virtual Environment

AR / VR Guides The User In Installation & Troubleshooting

Provides a Safe Environment to Practice Critical or Infrequent Tasks

- Immersive
- Multi-User
- Cloud Based

- Faster Learning
- Higher Retention
- Teacher & Student
- Inject Faults to Test Skills
- Low CAPEX Required
- On-Demand Learning

Preparation for Typical and Unexpected Situations
Immersive Competency

Prepares workers for a variety of situations using Mixed Reality Simulations

- Immersive on-demand learning
- Virtual environments
- Apply critical thinking
- Gap analysis
- Simulation-based scenarios
- Learn through doing
- Knowledge and competency assessment
- Augmented Reality & HOLOLENS™ technology
Field Operative Productivity

Intelligent Wearables – Capturing, Exchanging & Delivering Knowledge and Expertise

Mobile Assistant Providing Automated Workflow & Real-Time Data

Provides an Ecosystem for Information, Insights & Collaboration in the Moment

Workflow Visualization

Social Learning

Expert on Call

Quicker time to Closure

Build Skills While Learning

Immediate Access

Fewer Errors

Knowledge Transfer

Faster Resolution

Instant Access to Knowledge, Work Procedures & Expertise
Knowledge Management

Competency & Learning Management – Provides a Cohesive Learning Experience

Enables you to Build a Culture of Learning and Development

Executives & Managers See How learning Impact Organizational Success
PROFILES

• Generational gaps need to be bridged
  – Differences in learning styles
  – Wide array of comfort levels with technology
  – Working methods totally different

• Experienced….Or not
  – Skill levels of employees vary widely
  – Give credit where credit’s due
  – Course correction where needed

• Capture and transfer knowledge
  – Unique or site specific
  – Need to avoid transferring “bad habits”
  – Implementation can’t be intimidating
TENURED EMPLOYEES

• You need
  – Capture & leverage experience
  – Avoid intimidation
  – Increase productivity
  – Understand where skill gaps exist
  – Eliminate bad habits

• They need
  – Credit where credits due
  – Demonstrate capabilities
  – Appropriate Interventions
  – Tested to ensure capabilities
  – Qualified on the technology
NEW EMPLOYEES

• You need
  – Shorter time to functional competence
  – Greater productivity
  – Engaged
  – Avoid bad habits

• They need
  – Training
  – Access to knowledge base
  – Practice newly acquired
  – Expertise on-demand
  – Demonstrate skills
  – Tested to ensure capabilities
  – Qualified on the technology
MID-CAREER EMPLOYEES

• You need
  – Enable excellence
  – Maximize productivity
  – Shared their expertise
  – Enhance capabilities

• They need
  – Skills enhancement
  – Access to knowledge base
  – Practice newly acquired
  – Expertise Enabled
  – Demonstrate skills
  – Tested to ensure capabilities
  – Qualified on the technology
FOR MANAGED COMPETENCY ONE SIZE DOES NOT FIT ALL

Managed ICSS Competency for Board Operators

Managed ICSS Competency for Process Control Engineers

Managed ICSS Competency for Maintenance Technicians

Managed Operator Competency

UniSim OTS

Facility Based

Role Based

Role Based

Role Based

Competency Management
Managed ICSS Competency – Ensures Qualified ICSS Personnel

Provides a Consistent Reference Level to Measure Employee Performance Against

Best-in-Class Benchmarks
Skills Demonstration
Qualifications

Insights into Competence
Hands-on and Virtual
Knowledge Retention
Understand Skill Gaps
Invaluable Practice
3 Year Certification

Knowledgeable People to Operate & Maintain Your Plant

Competent Workforce

Builds Knowledge and Capabilities Through a Standardized, Structured Approach
Managed Operator Competency – Maximizing Plant Performance through Qualified Operators

Realistic Virtual Training Environment to Maximize Skill Development

Transfers the Ongoing Maintenance and Educational Curriculum to Honeywell

System Rejuvenation
Formalized Learning
Ongoing Analysis

Evaluation & Benchmark
Individual Training Plans
Skills Demonstration

Gap Analysis
Skills Practice
Qualification

Qualified Operators Delivering Consistent Performance
Managed Competency Contractor – Ensuring the Transfer of Knowledge Skills Across the Enterprise

Delivering Plant Performance through Employee Performance

Employee Performance is a Combination of Knowledge, Act/Reaction & Resolution Time

Improved Performance
- Drive best practices

Formalized Process
- Visibility of skill gaps

Consistent Job Performance
- Uniform Knowledge
- Redution in near misses
- Knowledge retention
- Adherence to standards

Goes Beyond Simply Teaching Employees the Technology
LET’S HAVE SOME FUN!
Objective:
• Provide remote employees immediate access to expertise when needed
• Enable new employees to have support from tenured employees regardless of their location
• Provide SESP customers with over the shoulder support from GTAC (coming soon!)

Challenges:
• As people retire, there are fewer people with expert knowledge available to support remote sites
• Accessibility and cost to transport expert personnel to remote sites can be very high
• Improved support levels for SESP customers to increase the value they receive for their support dollars

Solution:
• Intelligent Wearable or other Android based device in the field
• Intrinsically safe or ruggedized model depending on customer requirements
• Expert On-Call app

Benefits:
• Reduction in operating expenses
• Faster time to proficiency
• Higher job compliance
• Faster meantime to repair
• Increased level of support for SESP customers
SCENARIO: Capturing & Transferring Knowledge

**Objective:**
- Enable customers to capture site or system specific knowledge from their tenured staff
- Provide a vehicle for new employees to receive information and procedures when needed on an on-demand basis
- Leverage technology across multiple applications within a competency program

**Challenges:**
- As people retire their knowledge and experience go with them
- Incoming generation of workers prefer to have a base level of training and access information as needed, when needed
- Average length of tenure for the new workers 3-5 years causing a change in instructional methods

**Solution:**
- Intelligent Wearable or other Android based device in the field
- Intrinsically safe or ruggedized model depending on customer requirements
- ProShot app

**Benefits:**
- Faster time to functional competence
- Higher job compliance
- Faster meantime to repair
- Retain site or system specific knowledge
- Instant access to complex procedures
Q&A
You Have Questions
We Have Answers
Appendix