

Mission Critical Operations

In response to the dire need for skilled employees in the facilities maintenance and mission critical fields, The Department of Labor provided a grant to a consortium of schools to be led by Cleveland Community College in Shelby, North Carolina. As part of this consortium, Wake Technical Community College was tasked with working with an outside vendor to develop a workplace simulation for MCO Technicians.

Drivers

There are a huge number of employees in mission critical related fields who are currently approaching retirement. Unfortunately, there is currently a lack of skilled employees to fill these roles as they are vacated. These roles have adapted to new technology requiring a higher level of skill than previously required to fill these roles. The technological adaptation has led to the requirement of a broader base of skills from technicians. No longer is an employee's expertise in a specific skillset sufficient to serve in an MCO Technician role. New technicians must be able to adapt their skills to equipment from a broad range including HVAC, energy management, IT, electronics, and so forth. Broadly speaking, there is currently a lack of understanding of what mission critical operations encompasses in the current industrial environment. The idea of mission critical operations has not yet made it into the broader cultural lexicon. When approaching mission critical operations, with the broad skillsets included, many potential employees are intimidated by the skillset required and feel that they cannot meet the requirements.

Wake Tech Solution

As part of the NCMCO consortium funded through a grant by the Department of Labor, Wake Technical Community College has partnered with Applied Research Associates and their subgroup Virtual Heroes to create a simulation that allows the user to experience the operational expectations of an MCO Technician in a virtual environment. This virtual environment allows the user to develop their skills in a safe low impact environment and be directed to best strengthen skillsets that need additional development. The simulation was developed with the input of industry partners and subject matter experts. This allowed for the most realistic environment possible with an emphasis on the skills most relevant to current MCO Technician standards. The simulation allows for introduction to MCO skills in a less intimidating environment to limit the apprehension of those who may not feel prepared for this field. Furthermore, by implementing the simulation into the coursework for the MCO 110 – Introduction to MCO class, we provide the opportunity for further instruction on areas of concern.

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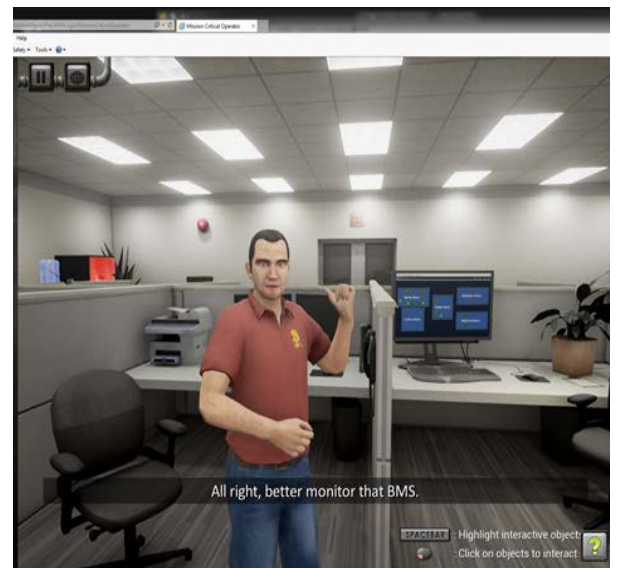


The MCO simulation is a fantastic introduction for newcomers to the MCO role. The simulation provides immersive learning content and familiarizes users with MCO facilities, operations, and actions. Students utilize the virtual environment to experience what it is like to be a mission critical operator and make decisions in a risk free environment.

Steve McIlwain, ARA/Virtual Heroes

Results

- The simulation has been implemented into presentations developed to increase knowledge of MCO and its components in the broader community. This has allowed for information on the makeup of MCO to spread throughout a broader group than would be expected without this tool.
- Students introduced to MCO through the simulation have been less intimidated by the field as a whole and feel more prepared for the coursework required in the MCO program.
- Broader understanding of MCO role and skills by constituents.



The MCO Simulation developed by Wake Technical Community College provides an innovative introduction to this challenging, yet very rewarding degree program and career path. Students who might be interested in this field can literally get a first person look at some of the job related activities they may need to perform. This is an invaluable and unique tool!

**Rob Robertson, Mission Critical Strategy Manager
Duke Energy**

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