

ENCQOR 5G Academic Technology Development Program

Title: Augmented Reality for Manufacturing

Challenge Launch Date	August 27, 2019
Challenge Deadline	September 24, 2019
Project Statement	<p>Manufacturing the cutting edge products that enable the deployment of 5G at volume requires Ciena to develop innovative solutions for their own supply chain and raise the bar towards Industry 4.0 also known as Smart Manufacturing.</p> <p>Ciena is interested in researching and piloting the usage of augmented reality glasses in the manufacturing and operations support environment.</p> <p>As Ciena's manufacturing volumes ramp across multiple products, variants, and across multiple contract manufacturers in different geographies, it will be important to leverage technology to connect teams, increase accessibility to context and time sensitive information, and find ways to help upskill and guide our operators.</p>
Project Partner	Ciena Canada
Timeline	Up to 1.5 years
Available funding	Up to \$150,000
Applicant Type	Ontario based College or University.
Location	Work can be completed at the applicant institution. Some travel to Ciena's facilities in Kanata, Ontario may be required.
Project Details	<p>The following is a summary of key features and pilot concepts that Ciena is interested in researching and exploring:</p> <ul style="list-style-type: none">- The ability to use live "see what I see" video chat for remote factory training, visual confirmation (assembly, process, test), and debug support- The ability to use the headsets camera for product Light Emitting Diode and other visual inspection tests

	<ul style="list-style-type: none"> - The ability to project visual assembly and process related overlay cues for assembly and testing of products - The ability to project and interact with work instructions, schematics or 3D models of products for trouble shoot and repairs - The ability to assist with capital asset scanning and visualization of test stations & equipment maintenance status. e.g. calibration status - The ability to use the head set camera for Unit Under Test Scanning - The ability to overlay shop floor dashboards and command centers right in the users head set including the ability to use gestures. - The ability to integrate and work with Ciena’s existing Manufacturing Execution System called MCS. - The ability to auto identify and login users to MCS -
Project Goals/ Outcomes	Ciena will work closely with the selected College or University to explore, develop and pilot augmented reality trials in production with existing contract manufacturers.
Applicant Capabilities	<ul style="list-style-type: none"> - Research experience in Augmented Reality technologies - Familiarity with Microsoft Hololens, Google Glasses or other headsets - Ability to work in an Agile development environment - Experience with AR application development
Additional Information	The selected institution will collaborate directly with Ciena on the project. Project resources will be drawn from the Ciena IT and Engineering Operations Organizations.

Launched in 2018, the [ENCQOR 5G Academic Technology Development Program](#) partners Ontario based Researchers with ENCQOR 5G Anchor Firms on 5G technology development projects. Areas of research interest are defined by Challenge Statements submitted to OCE by the [ENCQOR 5G Anchor Firms](#) and posted to the [OCE website on a rolling basis](#).

If you are interested in developing an expression of interest, please visit the [program guidelines](#) for information on next steps.

For any questions about new Challenge Statements or the ENCQOR 5G SME Technology Development Program please contact Sarah Fairlie at sarah.fairlie@oce-ontario.org