# Factory Automation Competition (FAC)

VEX CTE Workcell

Presented by:


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ROBOTICS EDUCATION & COMPETITION FOUNDATION

SUMMIT

VEX ROBOTICS PROGRAMS

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# Team

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Introduction

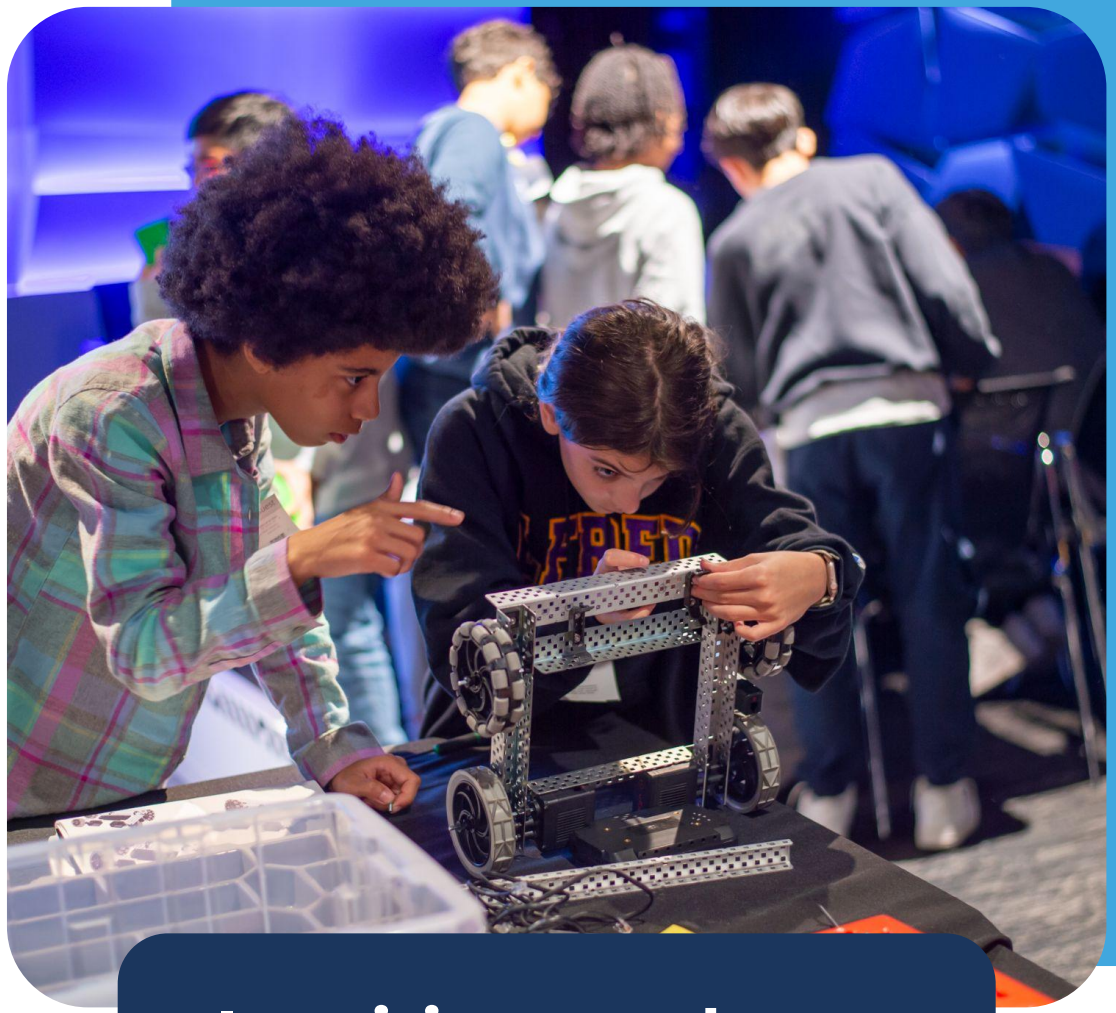
# Mission & Vision

## Mission

The Robotics Education & Competition Foundation's global mission is to provide every educator with competition, education, and workforce readiness programs to increase student engagement in science, technology, engineering, math, and computer science.

## Vision

We see a future where every student designs and innovates as part of a team, overcomes failure, perseveres, and emerges confident in their ability to meet global challenges.



**Inspiring students, one robot at a time.**

# VEX CTE Workcell

## Robotics in Industry

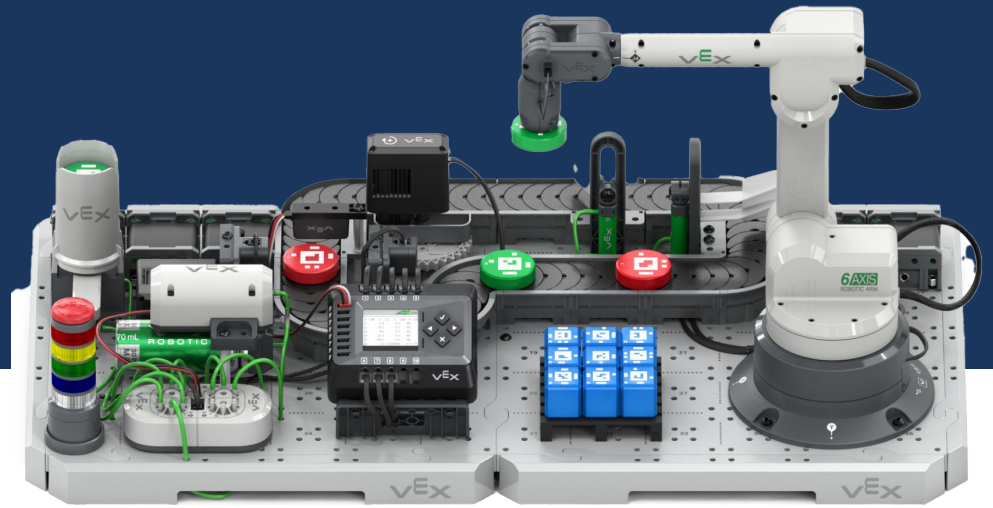
Students learn how to connect their love of robotics competitions with an industrial-style robotic arm, conveyor system, and sensors.

## 6-Axis Industrial Arm

Allows students to gain an understanding of a teach pendant

## Complete System

Provides students the ability to explore how multiple systems work together



# 01

# A Brief History of the Program

# The Evolution of FAC

01

Generation 1

## VEX V5 Workcell

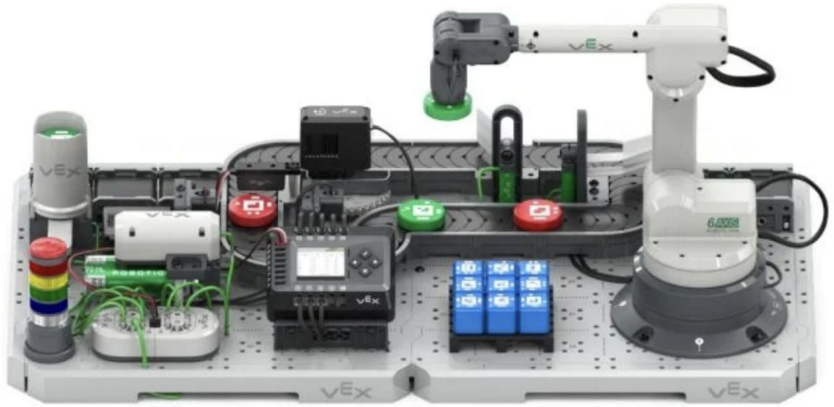
Was originally designed through a grant from the ARM Institute in 2019. This competition was introduced in 2020.

Generation 2

## VEX CTE Workcell

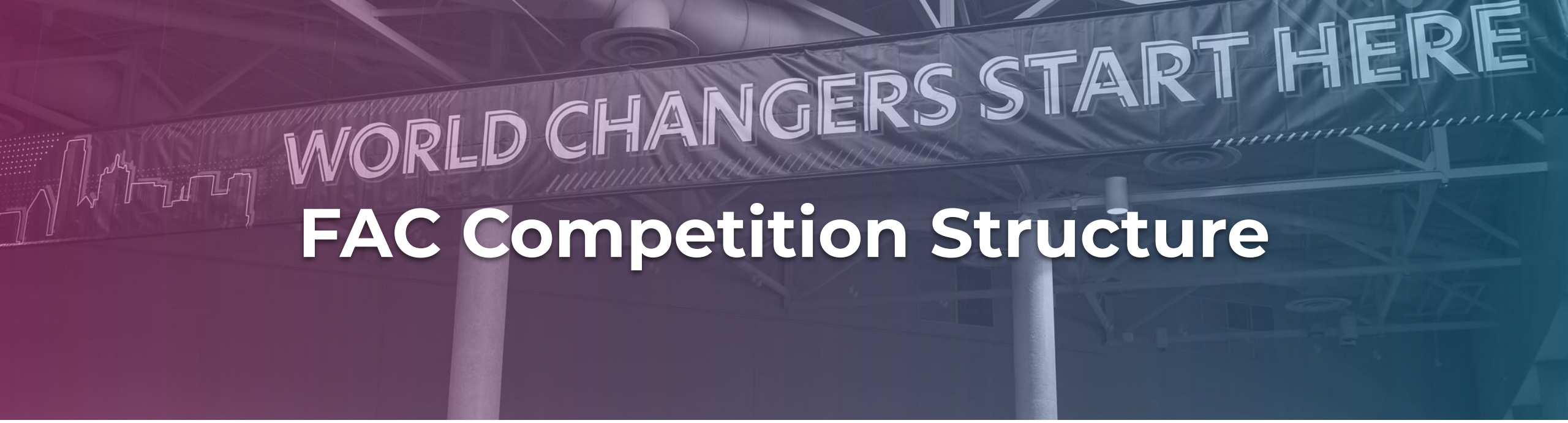
The 2025-26 season will be the inaugural season for this competition.

02



# 02

## Competition Overview




# FAC Competition Structure

### Classroom Competition

Unlike the VIQRC and V5RC competitions, this is a classroom competition without any travel

### Virtual Submissions

Teams create a video of their competition phase(s) and upload the link to the event to be scored

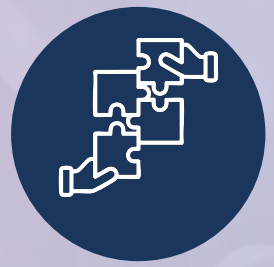
### Engineering Notebook

Teams still have the ability to document their engineering design process and programming skills with real world research

# Format of FAC

**Phase 1**

Easily accessible to all students. Will not use all components of the competition kit.



**Phase 2**

Builds upon the tasks designed in Phase 1 and extends student's thinking. Could be the end of the MS competition.

**Phase 3**

Becomes more difficult and will involve all components of the competition kit. Pushes students to think outside the box.

**Engineering Notebook and Interview**

Students will keep up with an Engineering Notebook (Project Plan) and record a 10-minute presentation for judging.

# Hardware for FAC

01

**VEX CTE Workcell**

02

**VEX GO Competition Field Kit**

03

**VEX AIM**

# Industry Skills

- Manufacturing Skills
- STEM Principles
- Communication
- Teamwork
- Project Planning and Execution

# Contact

## We are here for you

Event Partners are the core of our competition program here at the REC Foundation. Please reach out to us with any questions or concerns. Thank you for all of your support.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**Resources**

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