WHALEWORKS

PUBLICATION SERIES

VOLUME I

INNOVATION & FUTURE TECHNOLOGIES INSTITUTE

Emerging Technology, Exploration, and Responsible Innovation

PUBLICATION 009

Opportunity - Innovation - Community - Belonging

Publication Overview

Preparing Today's Youth for Tomorrow's Careers

Mission

Community Need

Technology continues to reshape every industry, yet many rural communities have limited access to advanced STEM opportunities. This Institute expands educational access while helping students explore high-demand careers before entering college, technical training, military service, or the workforce.

Innovation Programs

- Artificial Intelligence Fundamentals
- Robotics & Automation
- Drone Technology & FAA Awareness
- 3D Printing & Product Design
- Coding & Software Development
- Cybersecurity Basics
- Virtual & Augmented Reality
- Engineering Challenges
- Renewable Energy Concepts
- Esports, Game Design & Digital Creativity

Future Careers of 2040 Participants explore careers expected to experience significant demand over the coming decades, including AI engineering, robotics, cybersecurity, cloud computing, software development, advanced manufacturing, renewable energy, drone operations, data analytics, digital media, biomedical technology, and entrepreneurial technology ventures.

Three-Phase Funding Strategy

Phase I - Technology Launch ($40,000)

Acquire laptops, AI-capable workstations, robotics kits, drones, coding software, 3D printers, STEM supplies, and instructor support serving 40-75 youth annually.

Phase II - Innovation Expansion ($150,000)

Develop advanced technology labs, engineering workstations, expanded robotics, cybersecurity training, esports equipment, paid instructors, and regional STEM events serving up to 300 youth annually.

Phase III - Innovation & Research Center ($600,000)

Create a permanent innovation center featuring multiple technology labs, robotics arena, makerspace, AI classroom, engineering studio, drone flight training area, and regional workforce partnerships.

Equipment, Partnerships & Outcomes

Equipment: AI-ready computers, laptops, robotics kits, drones, 3D printers, engineering tools, VR headsets, networking equipment, cybersecurity training software, coding platforms, and makerspace equipment. Partners: Ocosta School District, community colleges, universities, technology companies, engineering firms, STEM organizations, and industry professionals. Expected Outcomes: Increased STEM participation, improved technology literacy, expanded career awareness, stronger innovation skills, certification opportunities, and a highly prepared future workforce for Grays Harbor County.