

Creating Cybersecurity Professionals of the Future

Jade A Hott, Derek Dahl Zohner, Kathryn Marie Fetzer, Travis Edward Malzahn

August 2019



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**Idaho National Laboratory
Idaho Falls, Idaho 83415**

<http://www.inl.gov>

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Malzahn, T., Zohner, D., Fetzer, K., & Hott, J.

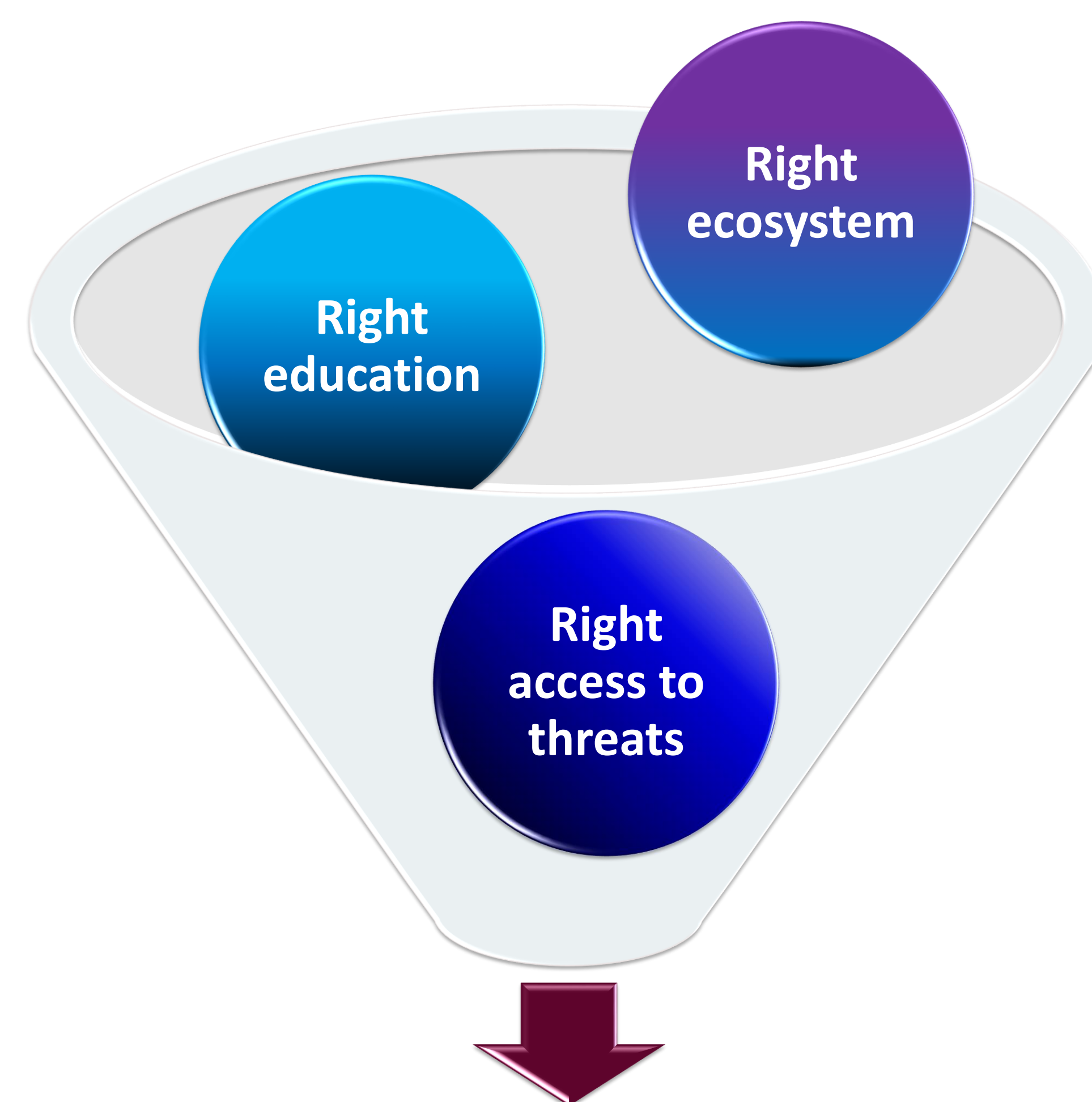
Idaho State University

Mentor: Ralph Ley

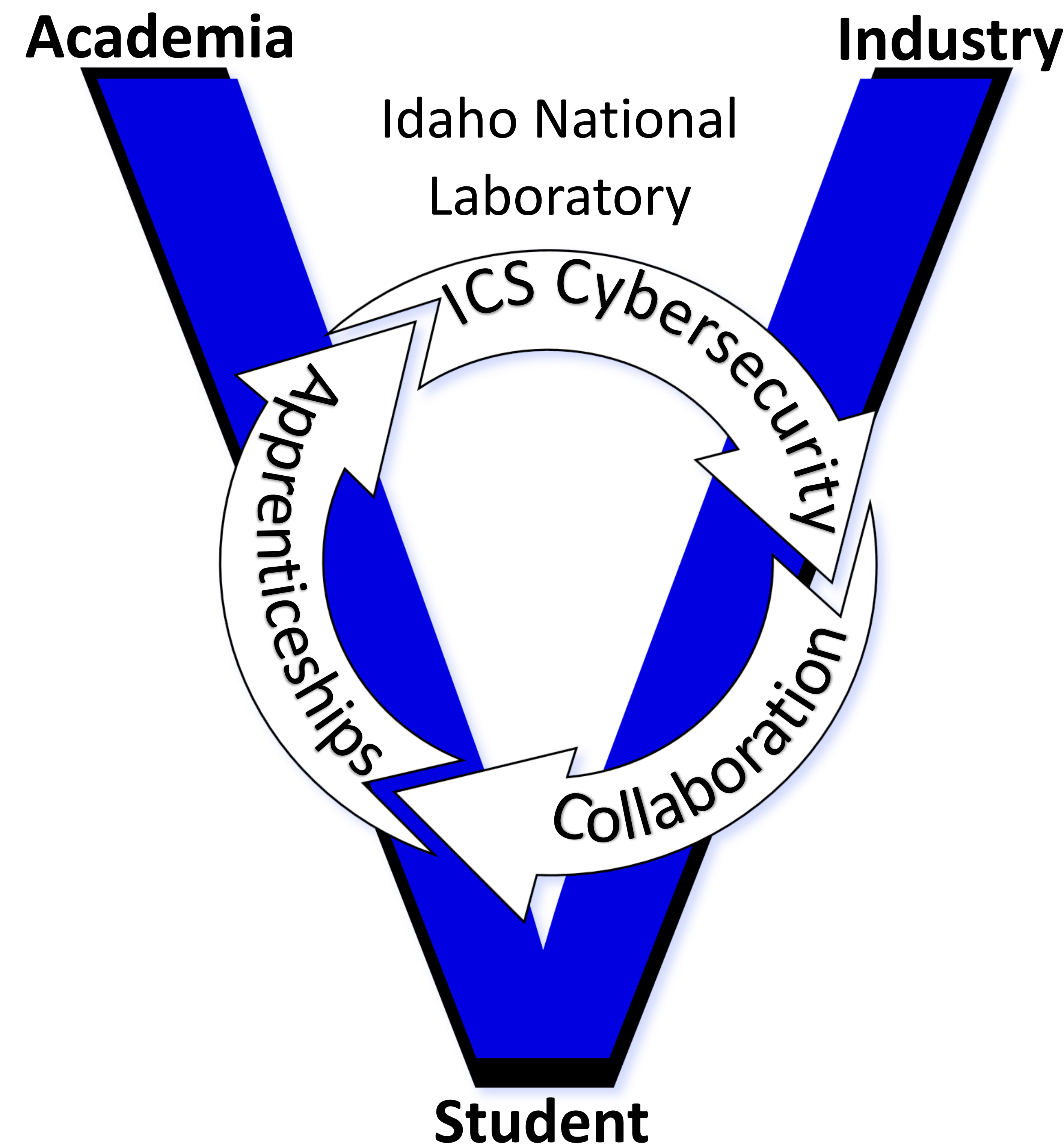
Organization: N&HS

Introduction

- By 2022, shortage of 1.8 million cyber professionals (CSX and ISACA, 2019)
- Lack of coordinated collaboration
- Academia takes approximately 3 years to modify curriculum
- Evolving threatscape in Industrial Control Systems (ICS)
- Focus on cyber risk to lifeline infrastructures



ICS cybersecurity professionals



Anticipated Results

- Create an ICS cyber workforce pipeline solution
- Transform ICS operational resilience
- Deliver an ecosystem framework for advanced collaboration with access to the latest research & threat information

Methods

People

- Coordinating efforts of academia, industry & INL
- Mentors & apprentices

Process

- Assessing industry needs
- Developing curriculum
- Developing apprenticeship

Technology

- Building virtual ecosystem
- Virtualizing an ICS testbed

Virtual
Ecosystem for
Collaboration &
Transforming
Operational
Resilience