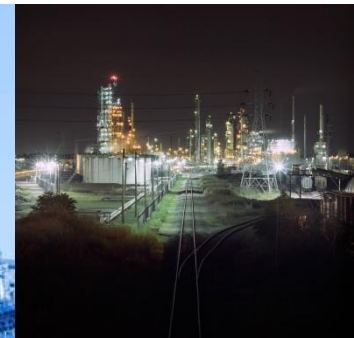


Agriculture and Food	Banking and Finance	Chemical
Commercial Facilities	Communications	Critical Manufacturing
<i>Dams</i>	<i>Defense Industrial Base</i>	Energy
Healthcare and Public Health	Information Technology	<i>Nuclear Reactors, Materials and Waste</i>
Postal and Shipping	Transportation Systems	Water

<i>Defense Industrial Base</i>	Emergency Services	Government Facilities
National Monuments and Icons	<i>Dams</i>	<i>Nuclear Reactors, Materials and Waste</i>



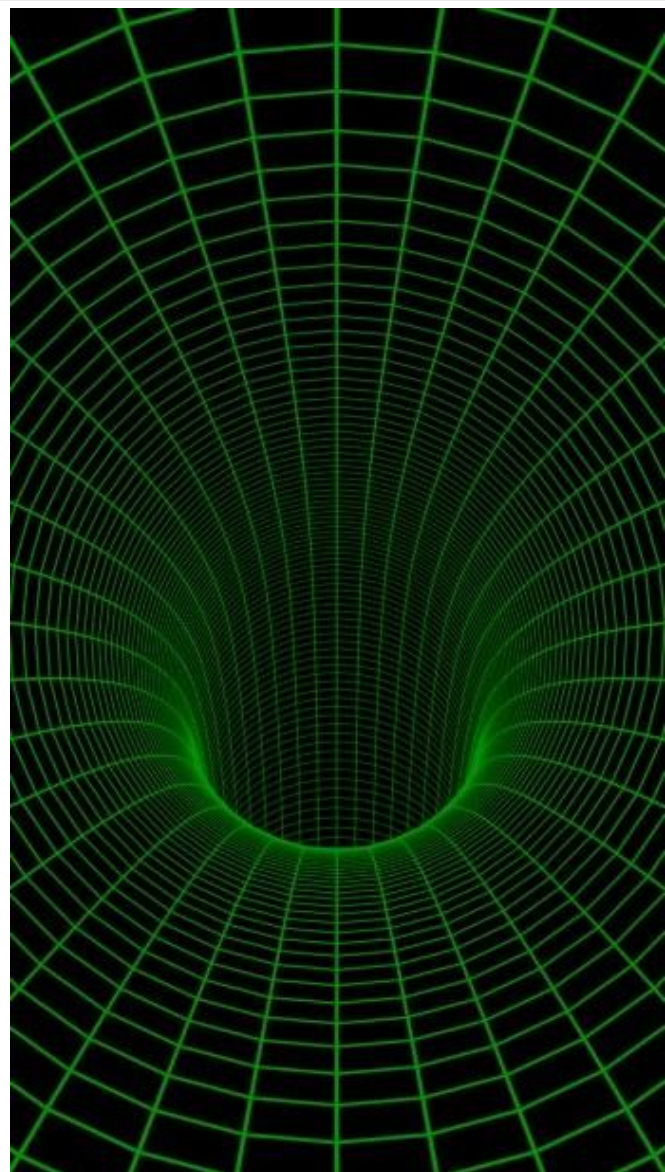
- Technical Skills
 - Understand communication links
 - Operating systems
 - Applications
 - Security fundamentals
- Taught through:
 - Structured classes
 - Self-paced labs
 - Experiential learning
- Results in:
 - Basic, consistent training
 - Certificate of completion
 - Continuing education credit



- Understand attacks
 - Vulnerabilities
 - Types of attacks
 - How to attack
- Taught through:
 - Hands on lab experiments
 - Individual and small group exercises
- Results in:
 - Understanding the system
 - Getting beyond a text book
 - Certificate of completion
 - Continuing education credit
- Understand defenses
 - Risk management
 - From external
 - And internal

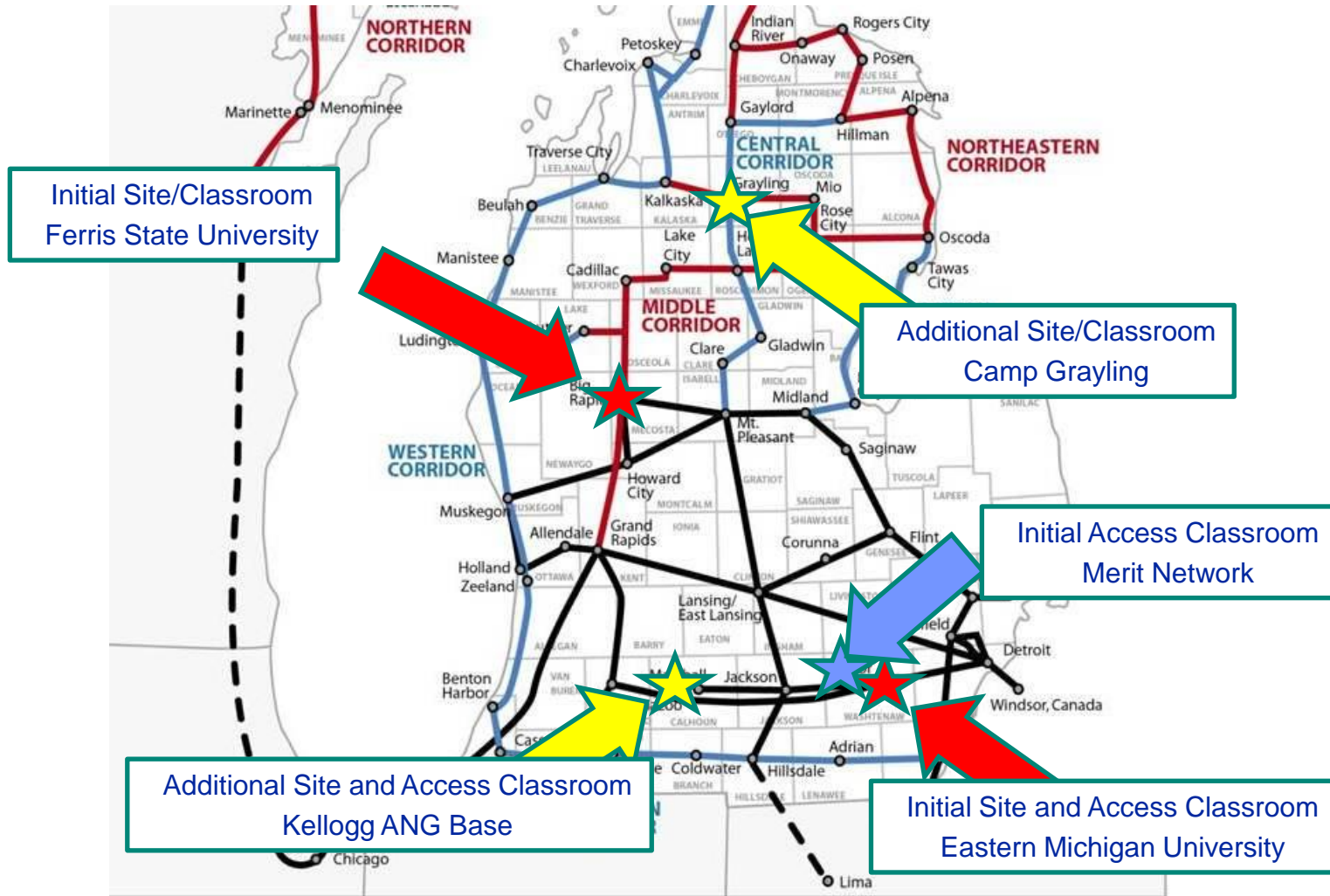


- Outthink adversaries as a team
- Find attacks
 - Internal and external traffic
 - Focus on the most valuable assets
- Defend
 - Understand system vulnerabilities
 - Assess and mitigate risk
 - Completely remove intrusions



- An unclassified, logically-isolated system overlaid on the Merit Network
- Initially 2 sites, 1000 nodes,
 - scalable to much 100,000 nodes
- Models very complex networks with virtualized and actual systems
- A cybersecurity program
 - Staff, events, and professional services that help users leverage the Range for cybersecurity excellence
 - A public/private collaborative effort to develop and refine cybersecurity best practices and techniques
 - Training geared to specific industries and products
 - Based on NIST's NICE framework





- Education
 - Higher Education uses the Range as a regular component of course work
 - Research platform
 - Special K-12 programs, and competitions
- Commercial
 - Operators
 - Ex: Utilities, Manufacturing, Finance, Health Care
 - Vendors
 - Hardware, Software and Security
- Government
 - Federal, State, Local
 - National Guard
- Residential
 - Access from a secure facility
- Blended
 - Access from remote facilities with constraints
- Distance
 - Unrestricted secure access



- Platform as a Service
 - Secure sandbox
 - Tools
 - Libraries
- Turnkey
 - A complete course/exercise ready for execution
- Training
 - Crawl, Walk and Run level training
 - Complete training experience – with a Red Team
 - Structured and instrumented to achieve specific learning objectives



- Cyber security is one of the major security challenges facing the nation
- The majority of these challenges will be met by civilians working for private companies
- Effective preparation demands
 - Exercises against live adversaries in a safe but realistic environment
 - Working as a team, preferably the company team
 - Continually building upon knowledge and experience
- There are no other large unclassified ranges coupled with a “center of excellence” in existence or contemplated
- Based on a public-private partnerships and leveraging many assets unique to Michigan
- Complements efforts of Federal Government

