



Central Illinois Center of Excellence  
for  
Secure Software

“An idea whose time is now!”

**SKILLS INITIATIVE SPOTLIGHT PANEL**

November 7, 2014



# Summary

- Excellent progress to-date thanks to your support
- Challenging work remains to be done
- German model gaining momentum
- Industry-led steering committee
  - AIS, Dell, Illinois Mutual, CEFCU
  - ICC, Workforce Alliance CI, GACC Midwest
- Community college consortium
- Standard academic curriculum and apprenticeship curriculum development in-progress



# The Problem

- Increasing number of cyber attacks resulting from defective/insecure software
- Unmet needs for workforce capable of developing software which is secure from cyber attacks
- Increasing unemployment and underemployment of college graduates
- Vanishing middle class jobs



# The Opportunity

Workforce  
capable of developing software  
that is secure from cyber attacks



# The Solution

## Central Illinois Center of Excellence for for Secure Software

### CICESS



# Goals

- One of the largest available skilled workforce for secure software
- One of the largest concentration of world class education providers with core common standard curriculum offerings
- Define and implement a standard competency-based, registered apprenticeship program with uniform guidelines
- Make Central Illinois the destination choice for exciting career
- Make individuals successful



# CICESS Initiative - 1

- First in the nation industry-led Central Illinois Center of Excellence for Secure Software
- Standard Software Assurance Curriculum developed by Carnegie Mellon University (CMU) under grant from the Department of Homeland Security (DHS)
- Taught by consortium of 9 community colleges in 2+2 model with full transfer of credit to 4 year institutions



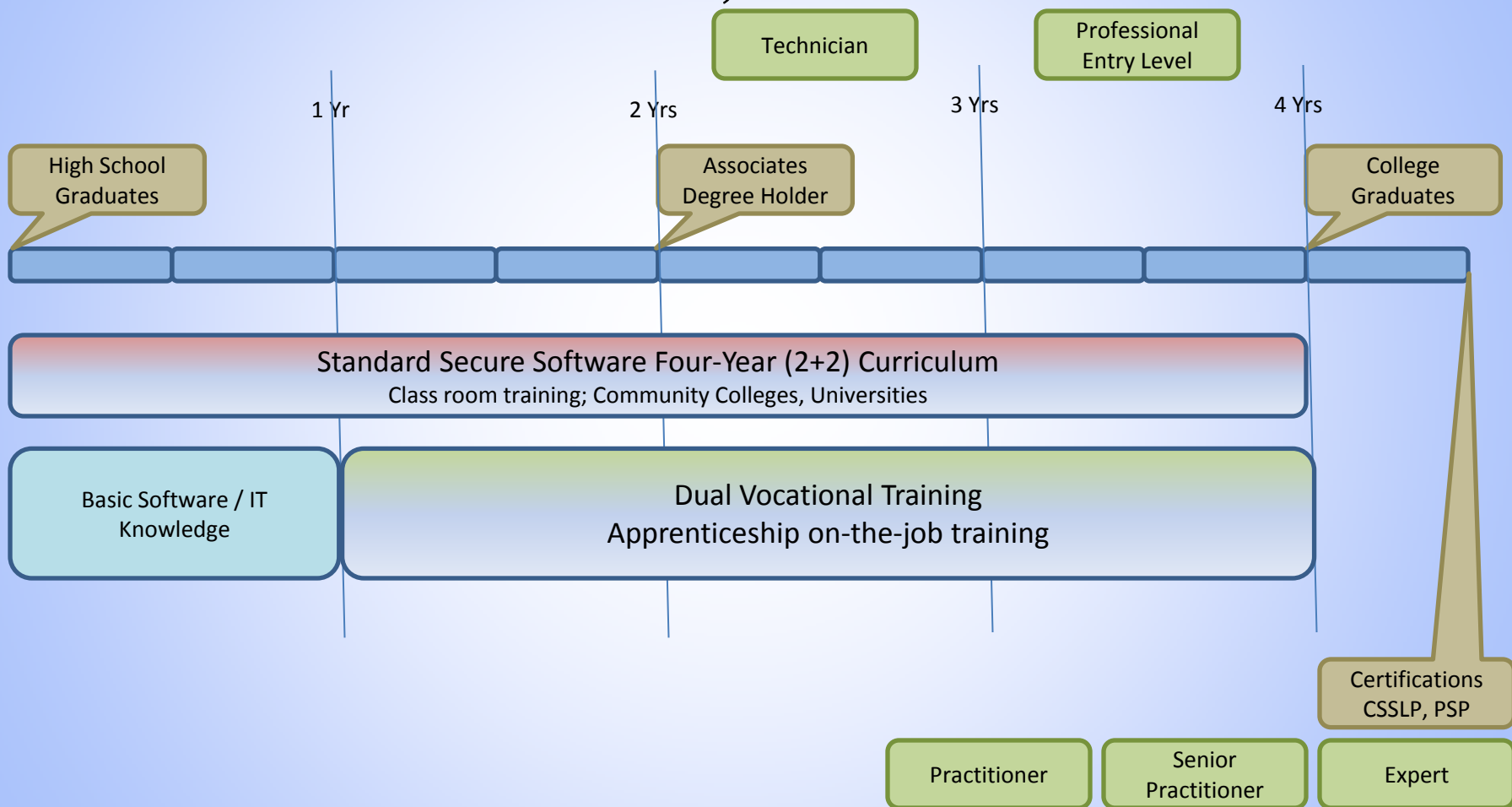
# CICESS Initiative - 2

- Apprenticeship based on the German dual vocational training model tailored to what will work for us
  - Directly connecting education to a job
- Industry steering committee to design the program details and oversee implementation
- Anticipated future funding via Department of Labor grants and other sources





# Workforce Trained, Apprenticed, Mentored, and Certified





# Timeline - 1

- Community core group formed
  - September 27, 2013
  - Monthly meetings
  - CMU, ISC2, DHS participation
- Community college summit
  - April 11, 2014
  - DHS, NSA, DoD, GACC Midwest participation
  - Consortium of 9 Colleges led by ICC
- Regional summit
  - May 30, 2014
  - Industry-led initiative – AIS, Dell, Illinois Mutual
  - Steering committee – Industry, ICC, WACI, GACC Midwest



# Timeline – 2

- By year-end 2014
  - Industry input for academic and apprenticeship curriculum and instructor training
  - Plans for company management training
  - Apprenticeship program defined and implementation plan finalized
- Spring 2015
  - Program announced to the general public and recruiting begins
  - Community colleges begin teaching secure software course content
- Fall 2015
  - Community colleges begin teaching standard curriculum for Software Assurance AA degree
  - First batch of recruits in the CICESS dual vocational program



# Steering Committee Charter

- Facilitating additional employers to participate in the program
- Collaborating with workforce alliance and other job creation initiatives in the community
- Identifying and mapping the necessary skills and competencies for secure software development
- Providing assistance with standard curriculum development and program design for classroom and on the job learning
- Establishing standard assessment, credential, or certification that will ensure skill formation
- Leveraging experience of other implementations of Dual Vocational Training Models
- Establishing uniform guidelines for recruiting, compensation, job placement and retention
- Developing strategies and plans to promote secure software careers to job seekers, counselors and the community at large
- Creating and maintaining annual performance metrics such as planned vs. actual outcomes, completion rates, employment results etc.



# Milestones

- Establish standard academic curriculum
- Establish apprenticeship curriculum
- Individual employers register with the Apprenticeship program
- Design program for classroom and on the job learning
- Establish uniform guidelines for recruiting, compensation, job placement and retention
- Identify and map skills and competencies
- Establish standard assessment, credential, or certification that will ensure skill formation
- Create and maintain periodic performance metrics such as planned vs. actual outcomes, completion rates, employment results etc.  
(frequent: instructors and companies; instructors and students)



# Community College Consortium

- Black Hawk College
- Carl Sandburg College
- Danville Area Community College
- Heartland Community College
- **Illinois Central College**
- Illinois Valley Community College
- Lincoln Land Community College
- Richland Community College
- Spoon River College



# Four-year Institutions

- Bradley University
- Illinois State University
- University of Illinois - Springfield
- Eureka College



# Contact Information

Girish Seshagiri

(703) 426-2790

Girish.Seshagiri@Ishpi.net

[www.advinfo.net](http://www.advinfo.net)