

# The Information Technology Career Cluster



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## EDC: Building Bridges Between Research & Practice

- With 250 projects around the globe, EDC is one of the world's leading nonprofit education organizations.
- We conduct research and develop programs in such areas as early child development, K-12 education, health promotion, workforce preparation, learning technologies and institutional reform.



## Career Clusters

- Sponsored by the U.S. Department of Education
- Identify pathways from secondary school to:
  - two- and four- year colleges
  - graduate school
  - and the workplace

so students can recognize the relationship between what they learn in school and what they can do in the future.

- A grouping of occupations and broad industries based on a common core of competencies.

# 16 Career Clusters

- Agriculture & Natural Resources
- Architecture & Construction
- Arts, Audio Video Technology & Communications
- Business & Administration
- Education & Training
- Finance
- Government & Public Administration
- Health Science
- Hospitality & Tourism
- Human Services
- **Information Technology**
- Law & Public Safety
- Manufacturing
- Retail/Wholesale Sales & Service
- Scientific Research & Engineering

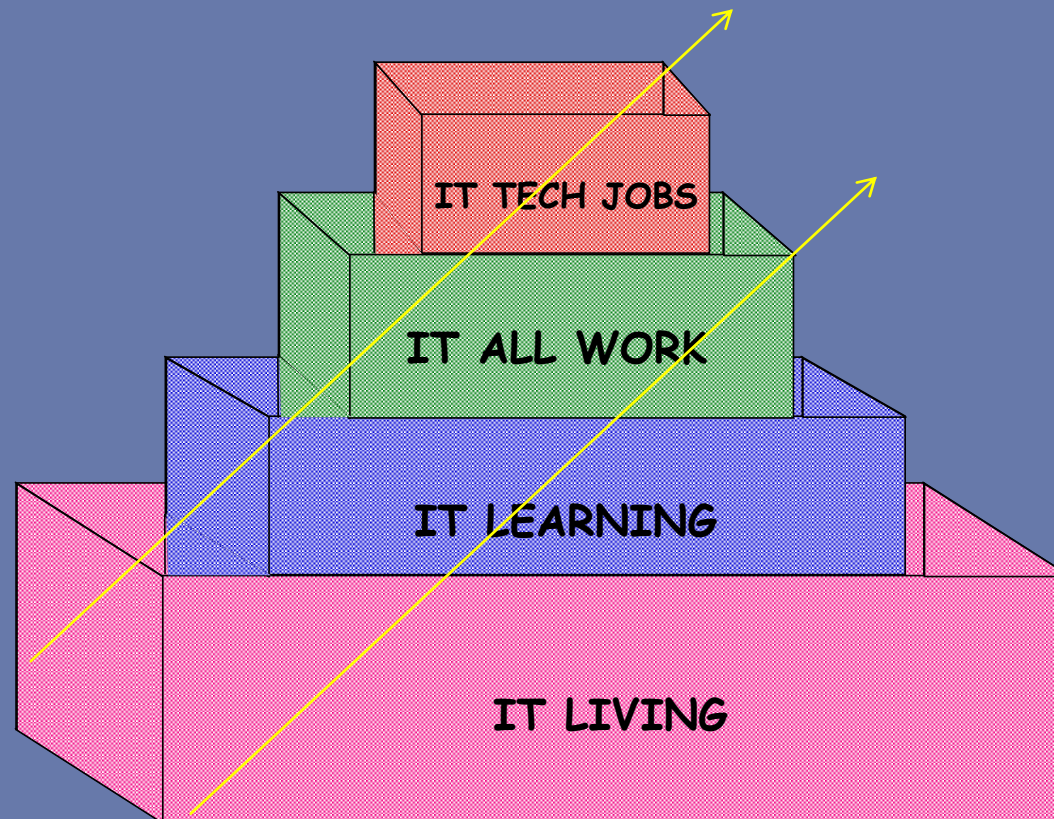
## The IT Career Cluster Initiative

- The **IT Career Cluster Initiative** is a partnership of:
  - Education Development Center, Inc. (EDC)
  - Information Technology Association of America (ITAA)
  - National Alliance of Business (NAB)
- Goal: to create a national model and career cluster curricular framework for IT careers:
  - that involve the design, development, support and management of hardware, software, multimedia and systems integration services.

# Pathway Pipeline Model

## Post Secondary Education and Work

**K-Life-long Learning**



# President Bush's Blueprint for Education: No Child Left Behind

## Administration Priority Increase Accountability for Student Performance

### Focus on What Works

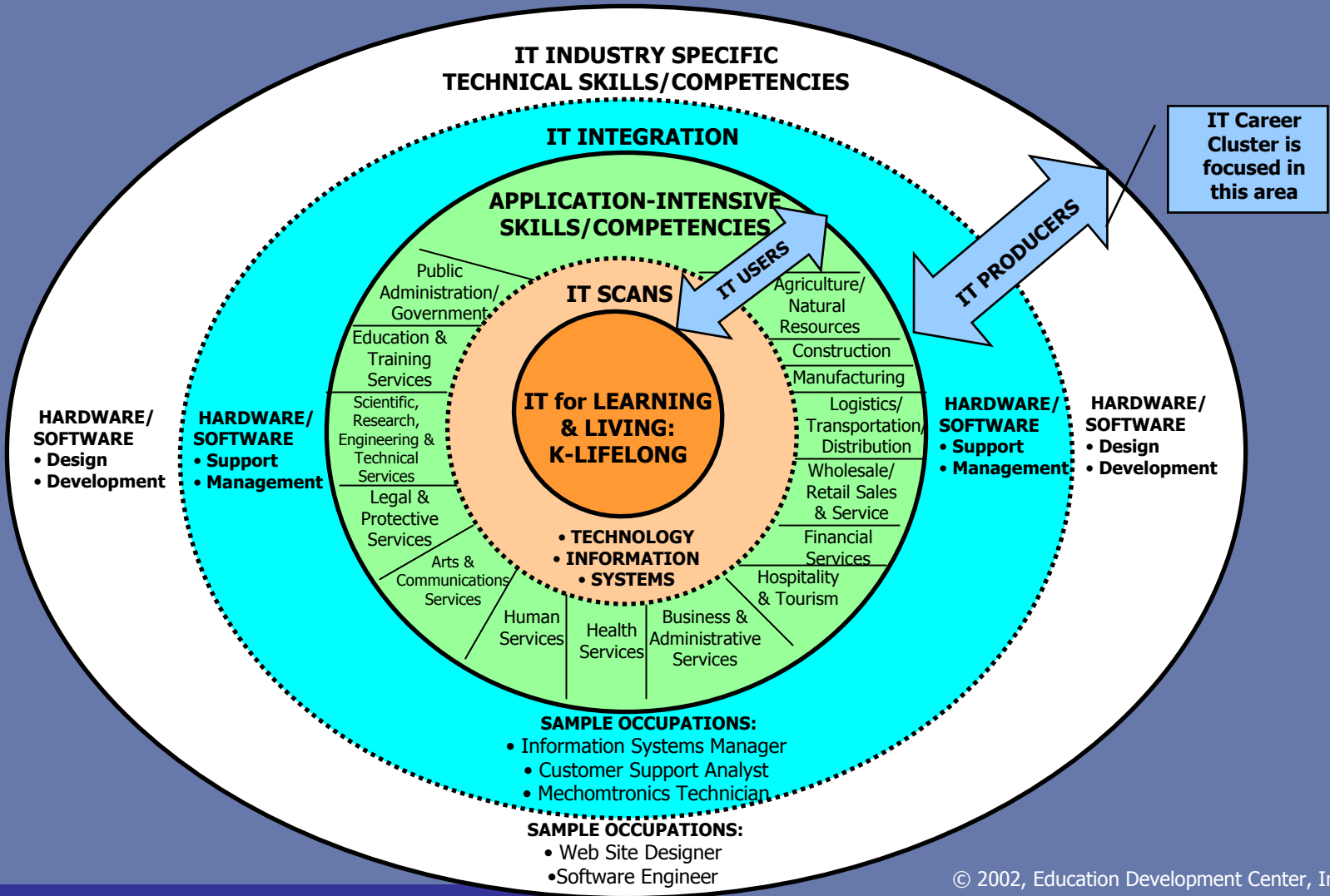
### Reduce Bureaucracy and Increase Flexibility

### Empower Parents

## IT Career Cluster Framework

- Authentic learning and assessment
- Common record-keeping system
- Standards-based (itWorks.Ohio, NWCET)
- Employer participation
- Communities of learning – Centers of Excellence (COE) Network
- Common language and framework
- Curriculum framework
- Definition of IT Careers
- Career plans

# Making Sense of IT for Learning, Living & Working



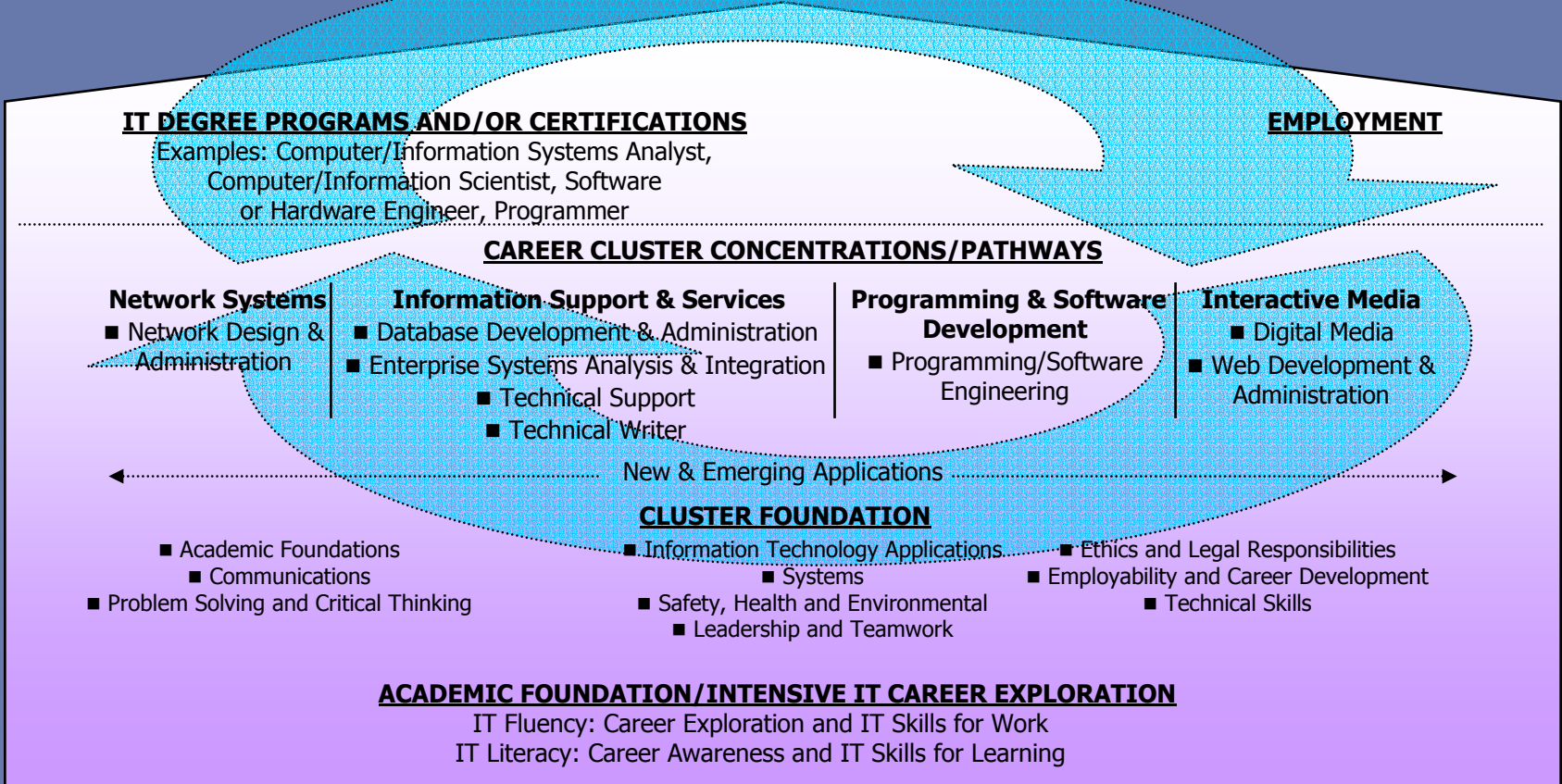
- IT careers involve the design, development, support and management of hardware, software, multimedia, and systems integration services. In addition to career opportunities in the IT industry, IT careers are available in every sector of the economy, from Financial Services to Manufacturing; Transportation to Education.

# The IT Career Cluster Model

## CAREER DEVELOPMENT/LIFELONG LEARNING

↑ Grades K-20

↑ Work Based Experience

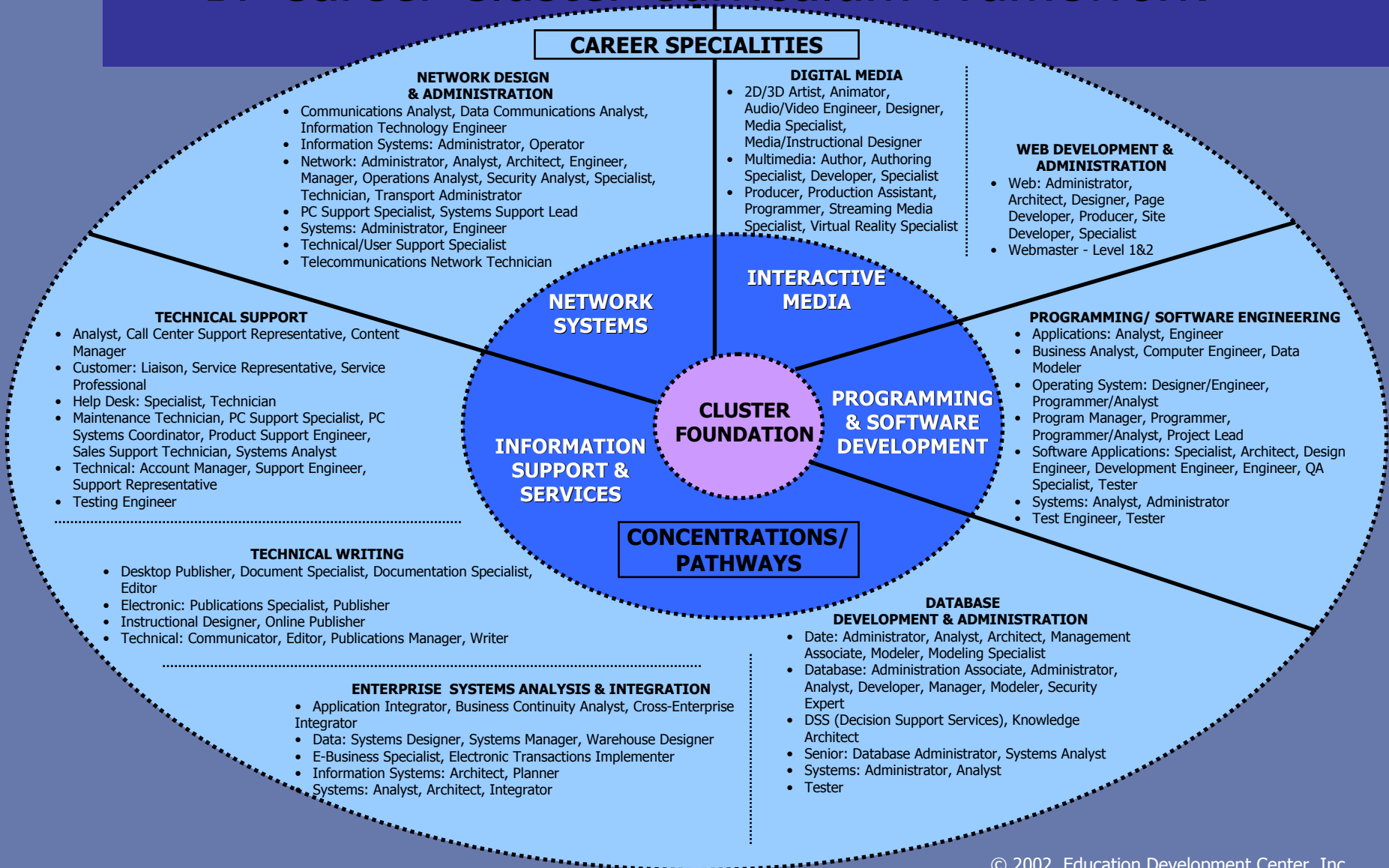


- SOURCES**
- IT Pathway Pipeline Model
  - NWCET Skill Standards for Information Technology
  - The Ohio Information Technology Competency Profile

Model revised 10-19-01 - Version 9 © 2001, EDC

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# IT Career Cluster Curriculum Framework



## Partnerships Are Key

- State Education Agencies
- Post-secondary Education (community college, university)
- Employers/Industry Groups (local, national)
- Pilot Sites
- Other relevant stakeholders (labor, professional organizations)

## Benefits of Partnerships

- Partnerships develop:
  - Curriculum guidelines
  - Academic and technical standards
  - Assessments
  - Professional development materials
- Gives business and industry a seat at the table ensuring that:
  - standards meet current and future industry needs
  - students/future employees learn the knowledge and skills necessary for multiple career options within each cluster
  - assessments/qualifications reflect a balance of technical and academic standards/relevant skills

# ITCC Consortium

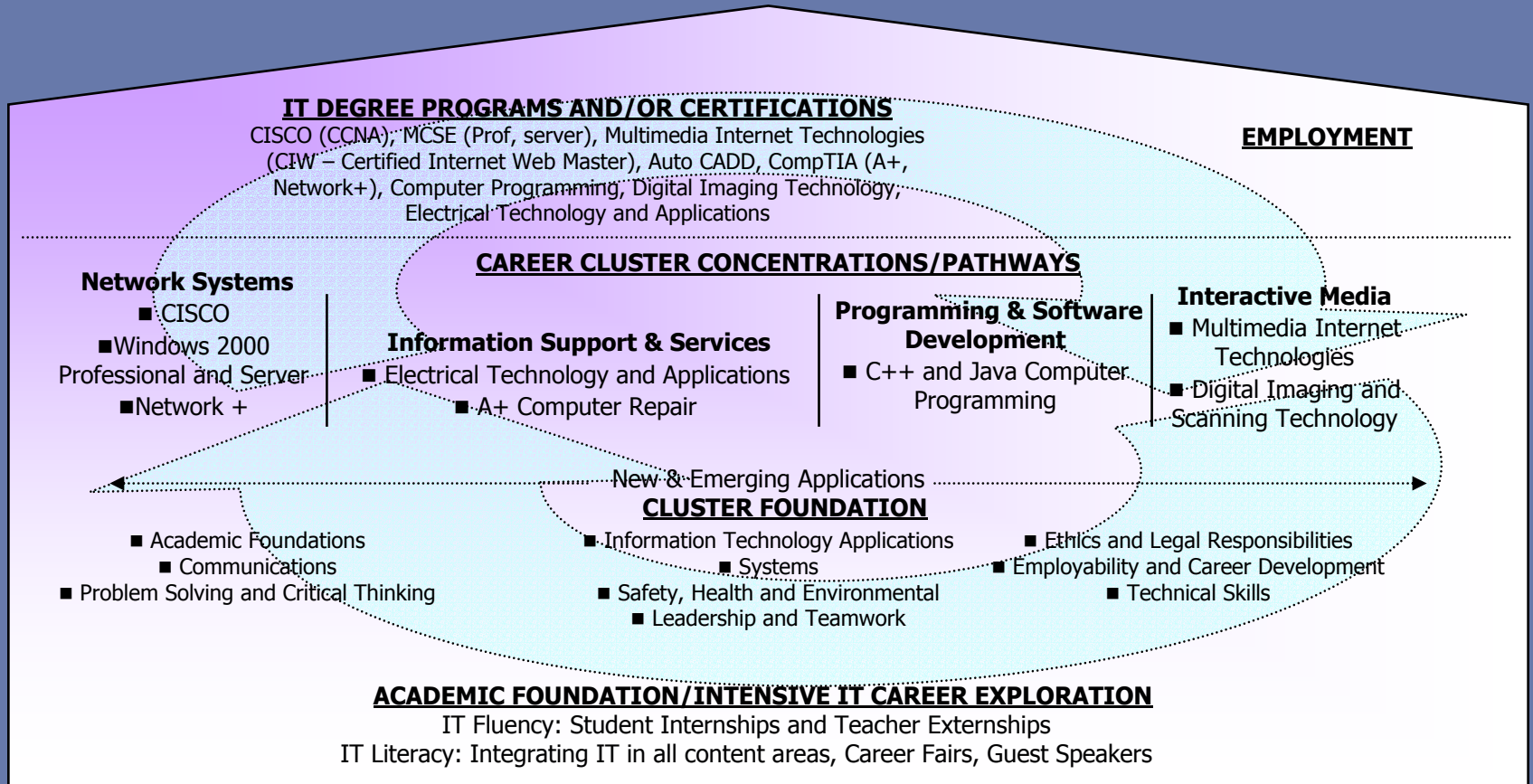
- States: Arkansas, Illinois, Maryland, Minnesota, Nebraska, New York, North Carolina, Ohio, Utah, Washington
- American Association of Community Colleges
- American Greetings Corporation
- American Society for Training and Development
- Applied Information Management Institute
- Brainbench
- Center for Occupational Research & Development
- The Chauncey Group International
- Chicago Software Association
- City on a Hill Charter School
- Complete Business Solutions
- CompTIA
- Convergys Corporation
- Devry
- DigiPen Institute of Technology
- ExplorNet
- IBM
- Institute for Women in Trades, Technology & Science (IWITTS)
- Intel Corporation
- ISTE
- Knoxville College
- Lab-Volt Systems, Inc.
- League for Innovation in the Community College
- Marathon Ashland Petroleum
- Microsoft
- NADSVTEc
- National Academy Foundation (NAF)
- National Skill Standards Board
- National Workforce Center for Emerging Technologies
- Oracle
- SAP America
- Technology Council of Central Pennsylvania
- Thinkquest
- Trinity Technology
- WomenFutures, Inc.
- World Organization of Webmasters

## Consortium States - Planning/Designing/Implementing

- Arkansas
  - **Bryant High School**
- Illinois
  - **Bloomington Area Vocational Center**
  - **Heartland Community College**
- Maryland
  - **Lake Clifton/Eastern High School**
- Minnesota
  - **Northwest Technical College**
- Nebraska
  - **Omaha South High School**
- New York
  - **Westinghouse Information Technology High School**
  - **New York City Technical College**
- North Carolina
  - **Guilford County Schools**
- Ohio
  - **Auburn Career Center**
- Utah
  - **Davis Applied Technology College**
- Washington
  - **Pasco High School**
  - **South Kitsap High School**

**DRAFT**

# Westinghouse Information Technology High School IT Career Cluster Model



- SOURCES**
- IT Pathway Pipeline Model
  - NWCET Skill Standards for Information Technology
  - The Ohio Information Technology Competency Profile

## Westinghouse Information Technology High School Business Partnerships

- Westinghouse High School business partners:
  - SIAC (Securities Industry Automation Corporation)
  - Cisco
  - Verizon
  - Time Warner
- Offerings
  - ◆ Advisory council participation
  - ◆ Student internships
  - ◆ Teacher externships
  - ◆ Funding for equipment, professional development, and student participation in IT competitions (e.g.; robotics)

# Westinghouse H.S. Robotics Competition Team



## IT Career Cluster Benefits: Industry Perspective

“Students who participate in the IT cluster at the high school level and meet the required standards – in information support and services, interactive media, network systems, or programming and software development – are better prepared than other students to enter the workforce and to continue their education at the post secondary level.”

*- John L. Hall, Senior Vice President, Oracle University*

## IT Career Cluster Benefits: Education Perspective

“Participation in this initiative has had a significant impact on our institution by helping us to recognize our own strengths - for which we were nominated for participation by our state - and to expand our vision and our services to our students. We have recognized IT skills that are embedded in the business and industry workforce that we had not previously identified as well as career opportunities that we had not incorporated into our program. I have also observed that once you begin moving in the right direction, the momentum seems to carry on from year to year, and that with a little focus and support will grow to meet the expectations we envisioned at the start of the project.”

*- Joe Osborne, Instructional Program Manager  
Davis Applied Technology College, Kaysville UT*

# Educator's Website for Information Technology

[www.edc.org/EWIT/](http://www.edc.org/EWIT/)

**ewit** educators' WEBSITE for information technology

- ▶ Who We Are
- ▶ Instructional Resources
- ▶ IT Champions
- ▶ Key Statistics
- ▶ Suggested Reading

*A Community of Education and Business Partners Reinventing IT Education for Learning and Working*

**A GREAT PLACE TO VISIT**

**American Federation of Teachers**

The American Federation of Teachers' web site assists teachers in using technology to enhance academic learning by providing recommended links to web sites for teachers to use:

- with their students as part of the academic program
- in their own professional development in technology

For more information, visit their website at:  
<http://www.aft.org/web/k12.html>

**IT Champions**

IT champions inspire others to continue their work in promoting IT learning and careers. [Find out](#) about people in your state, compare or around the country who are helping people to prepare for and succeed in IT careers. Or, [nominate an IT Champion](#).

**NEWSWORTHY**

**AOL Brings PowerUP to Philadelphia to Help Local Youth Succeed in the Digital Age**

*PowerUP Opens in the Bridesburg Boys & Girls Club to Provide Positive Youth Development Opportunities Through Technology*

Philadelphia, PA, July 26, 2000 - AOL, the world's leading interactive services company, and PowerUP, the leading national initiative dedicated to helping underserved young people succeed in the digital age, today launched a new program in the Bridesburg Boys & Girls Club to provide Philadelphia youth with technical skills and resources to help them succeed in the digital century. [More...](#)

## Technical Assistance Contact Information

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