

Missouri Industry Competency Models- Aligning Skills and Curriculum to Demand

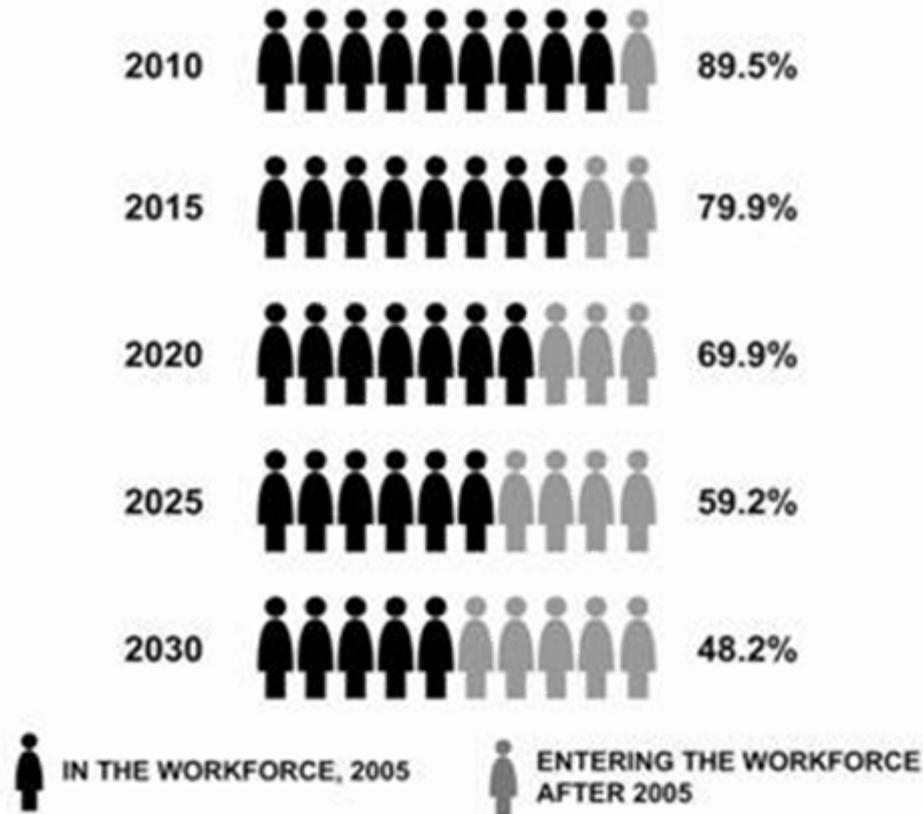
Mary Bruton | Missouri Economic Research and Information Center |
Missouri Department of Economic Development





What's the Issue?

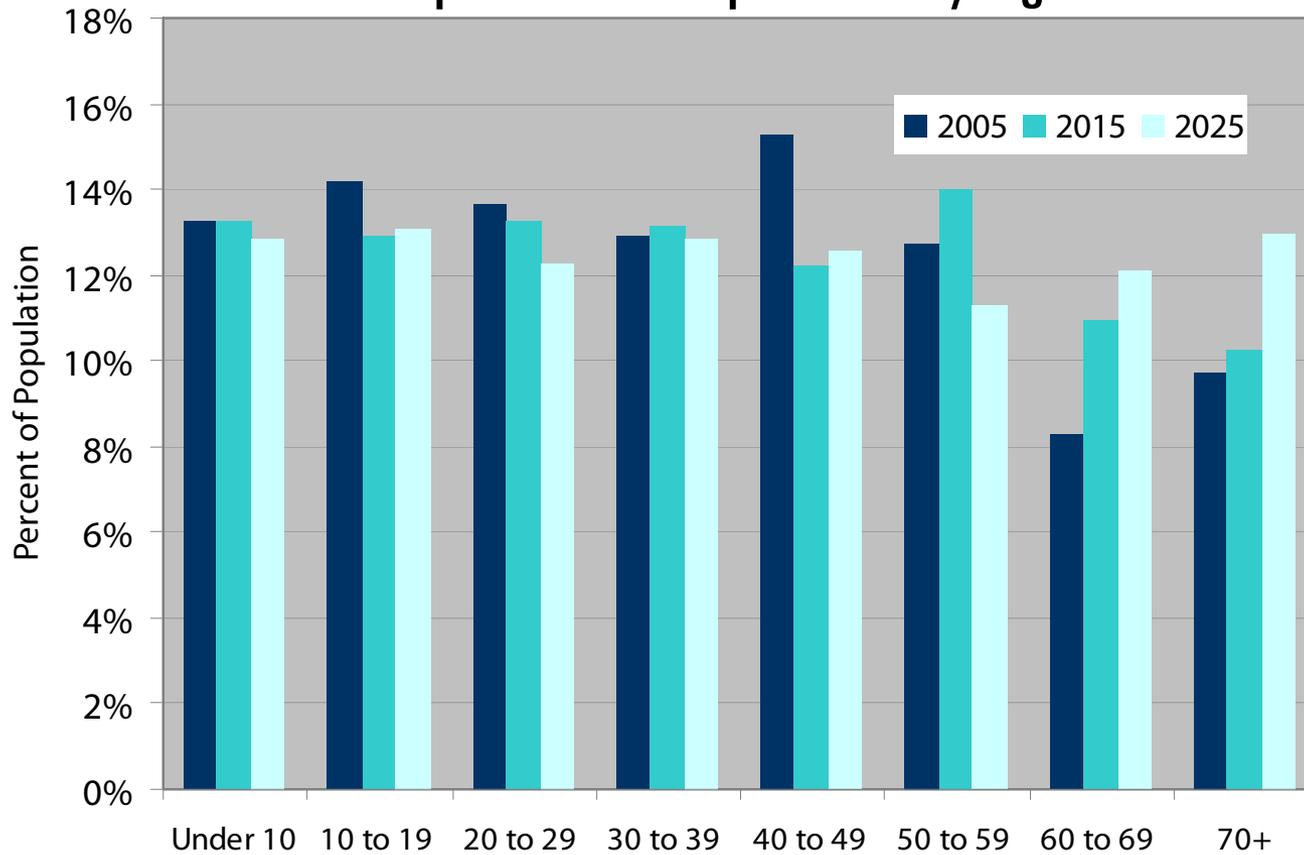
Percent of Tomorrow's Talent Pool Already At Work



Source: MERIC, US Census Bureau Population Projections

What's the Issue?

Change in Missouri's Population Composition by Age

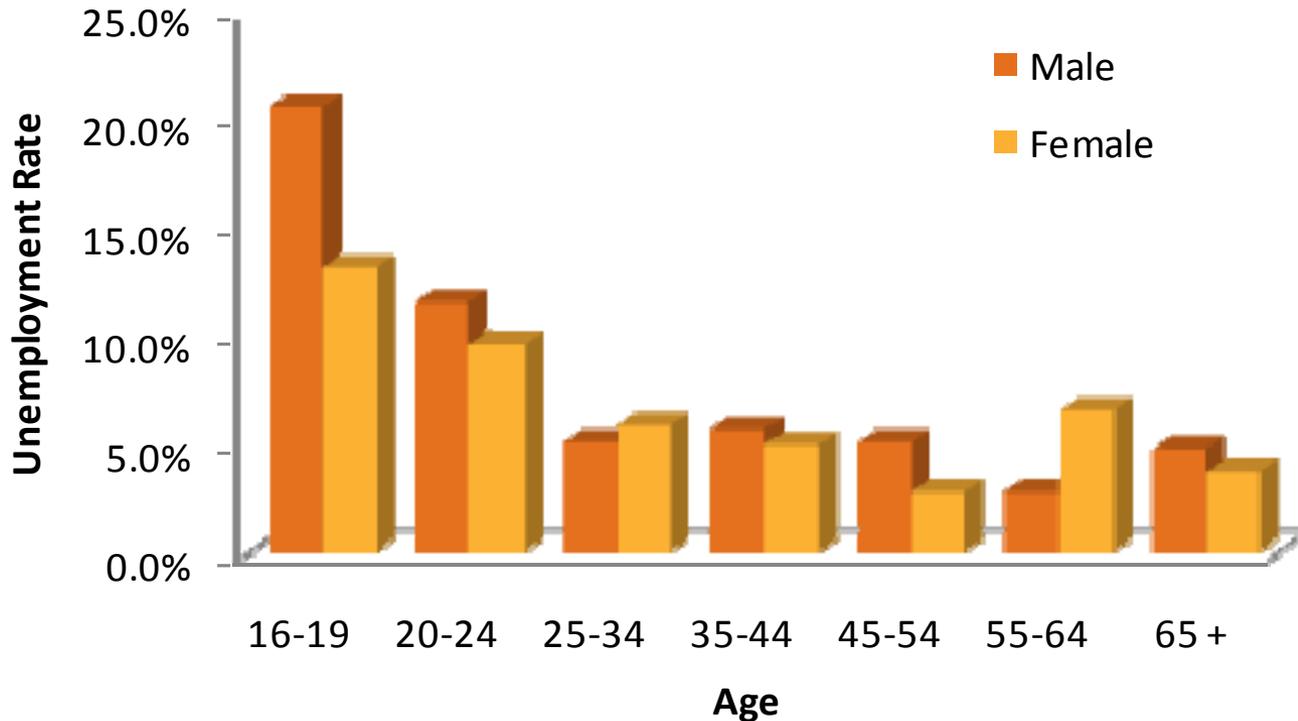


Source: MERIC, US Census Bureau Population Projections



Populations Impacted by Recession

2008 Unemployment by Age and Gender



Source: MERIC, US BLS — Local Area Unemployment Statistics

What are Potential Solutions?

- Collaborative solutions — industry, education, workforce system
- Dislocated workers must understand tasks and skill sets required for in-demand jobs in targeted industries
- Educators must have updated data on changing industry skill requirements
- Workforce system needs to align service delivery with industry demand for dislocated workers

Source: US DOL-ETA, Competency Model Clearinghouse



Purpose of Industry Competency Models

- Develop sector-specific competencies
- Develop competency-based curriculum and training models
- Develop industry-defined performance indicators and measurement criteria
- Develop position descriptions and hiring criteria for industry.
- Provide guidance for government investments in workforce preparation strategies.

Source: US DOL-ETA, Competency Model Clearinghouse

What is a Competency?

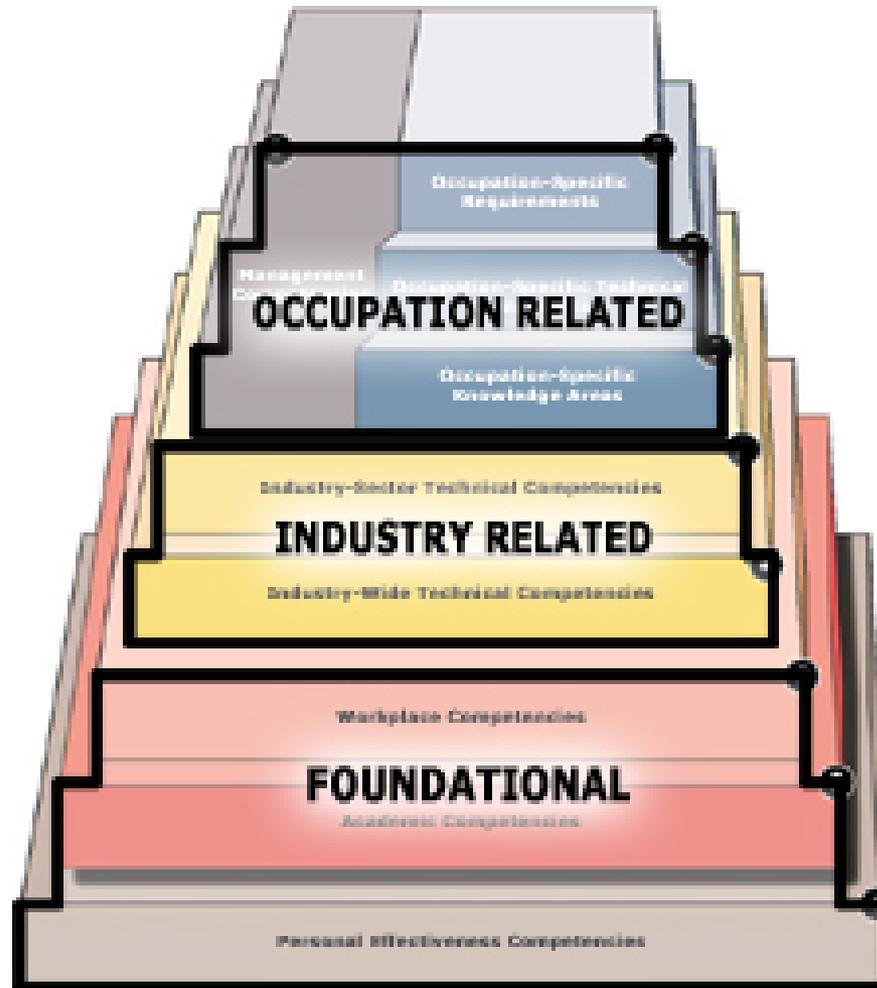
A competency is a specific, identifiable, definable, and measurable skill or characteristic that is essential for the performance of an activity within a specific business or industry context.

Some examples of Competencies are:

- Critical and Analytical Thinking
- Problem Solving/Decision Making
- Communication
- Teamwork

Source: US DOL-ETA, Competency Model Clearinghouse

Building Blocks



Source: US DOL-ETA, Competency Model Clearinghouse

Framework for Missouri

- 1 Competency Model for each Targeted Industry Cluster:
 - Information Technology
 - Life Sciences
 - Transportation/Logistics
 - Energy
 - Agribusiness
 - Automotive
- Qualitative literature review
- Quantitative analysis of O*Net and Occupational Clusters data
- Industry feedback survey and follow-up case study interviews with targeted employers
- Targeted employer focus groups

Information Technology Competency Model Report

Missouri Target Industry Competency Model Information Technology



MERIC

Foundational Competencies

In the Foundation competencies block covers basic educational competencies that are foundational setting along with cognitive functions and thinking styles. Typically these form the foundation for the Occupation and Industry specific Competencies. This tier is developed by mapping the survey results against O*Net and Education Clusters data.

O* NET DIRECTORY	EDUCATION CAREER CLUSTERS DATA	US DOL COMPETENCY MODEL FRAMEWORK
TIER 2 – Academic Competencies		
Mathematics	Science & Technology	Communication
Active Learning	Basic Computer Skills	Critical & Analytical Thinking

...then described in terms of behavioral attributes.

Attributes

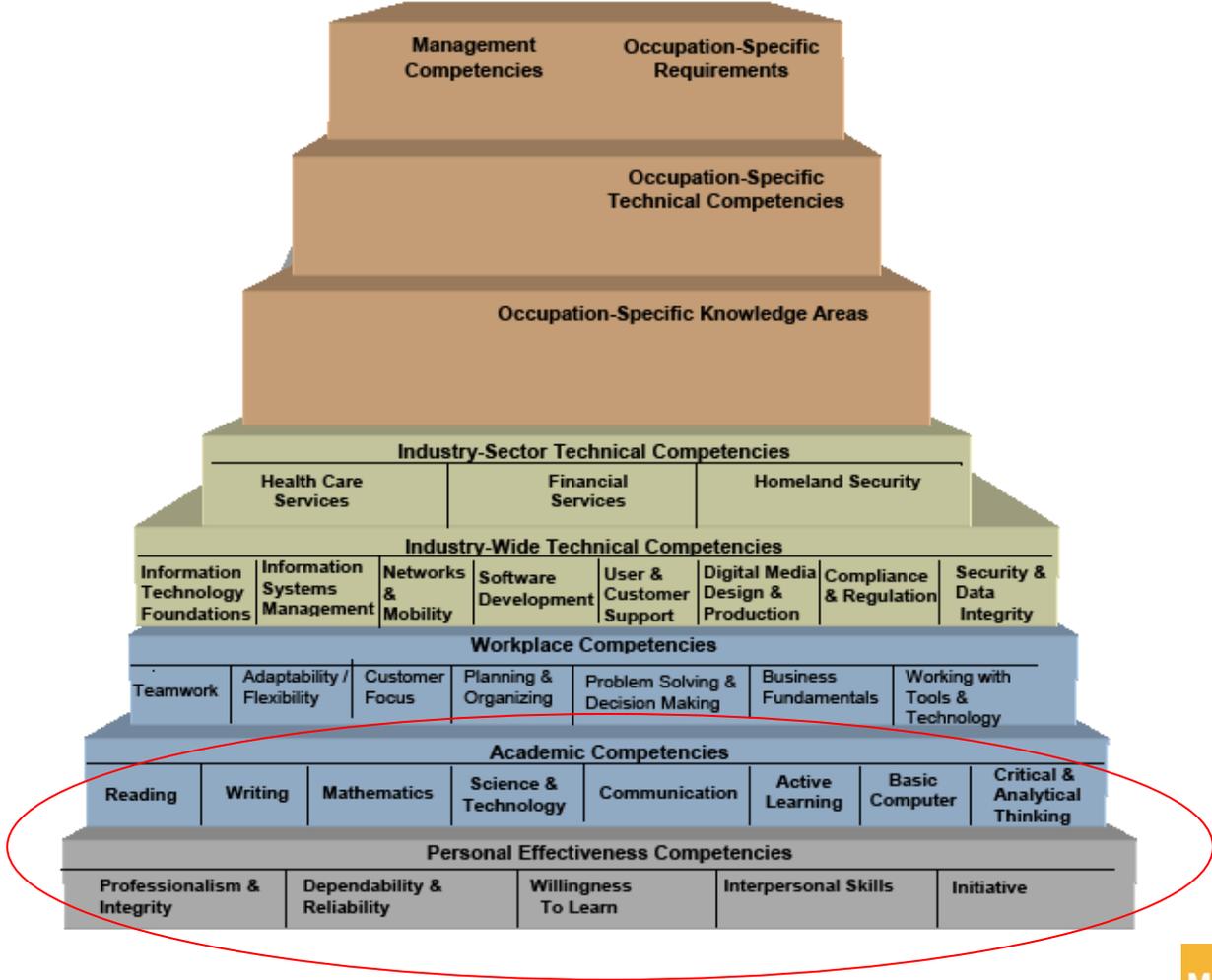
- ...write oral and written information in documents
- ...information from various sources to communicate with co-workers and clients or participants
- ...use reading strategies to learn meaning, technical concepts, vocabulary and follow instructions
- ...analyze details and facts, detect inconsistencies, identifies implied meaning, missing information and

Attributes

- ...to organize/collect, evaluate and present, written information
- ...punctuation and terminology to write and edit documents
- ...tables, charts, figures to support written and oral communication
- ...evidence, purpose, situation

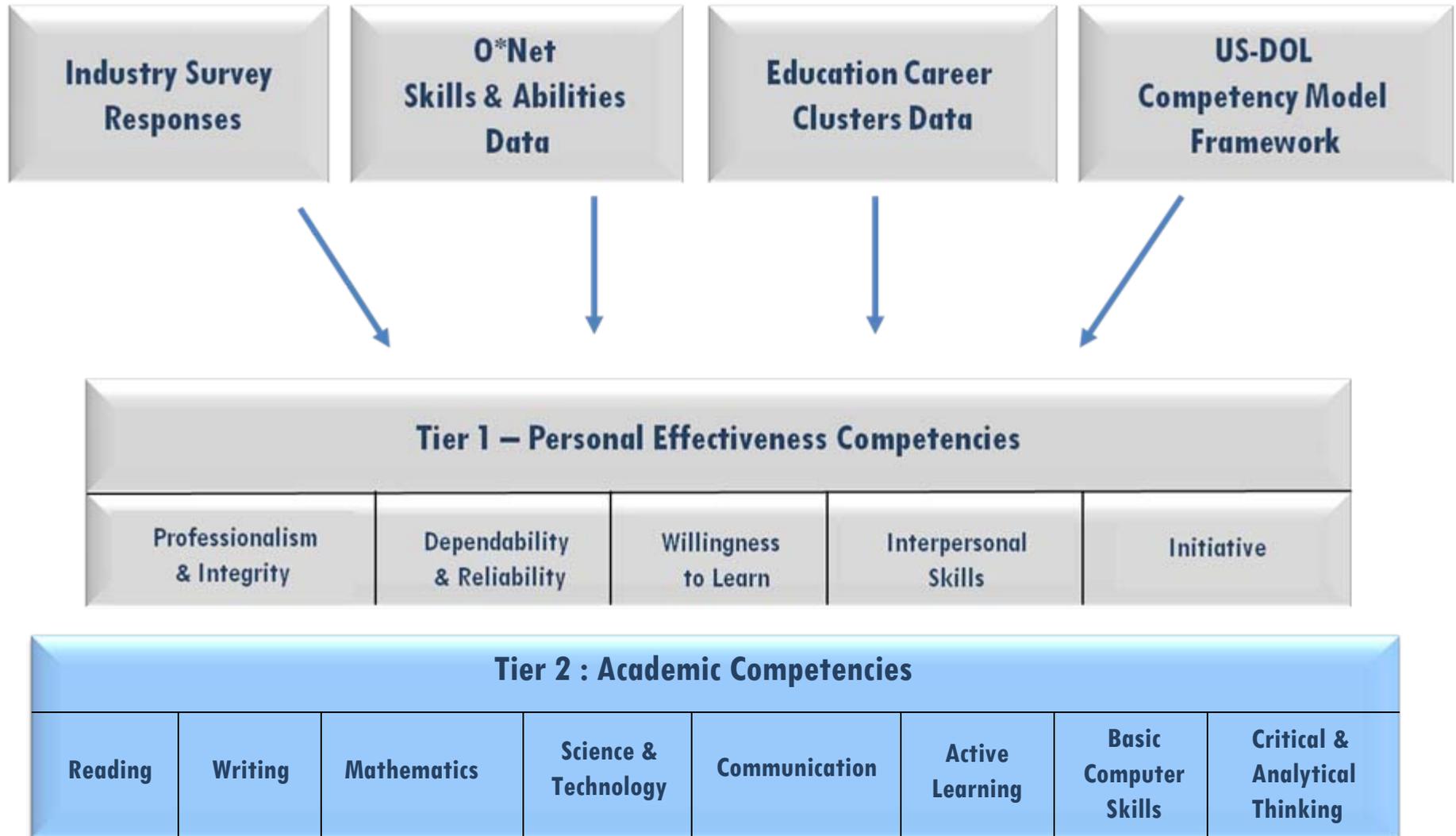
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Information Technology Competency Model

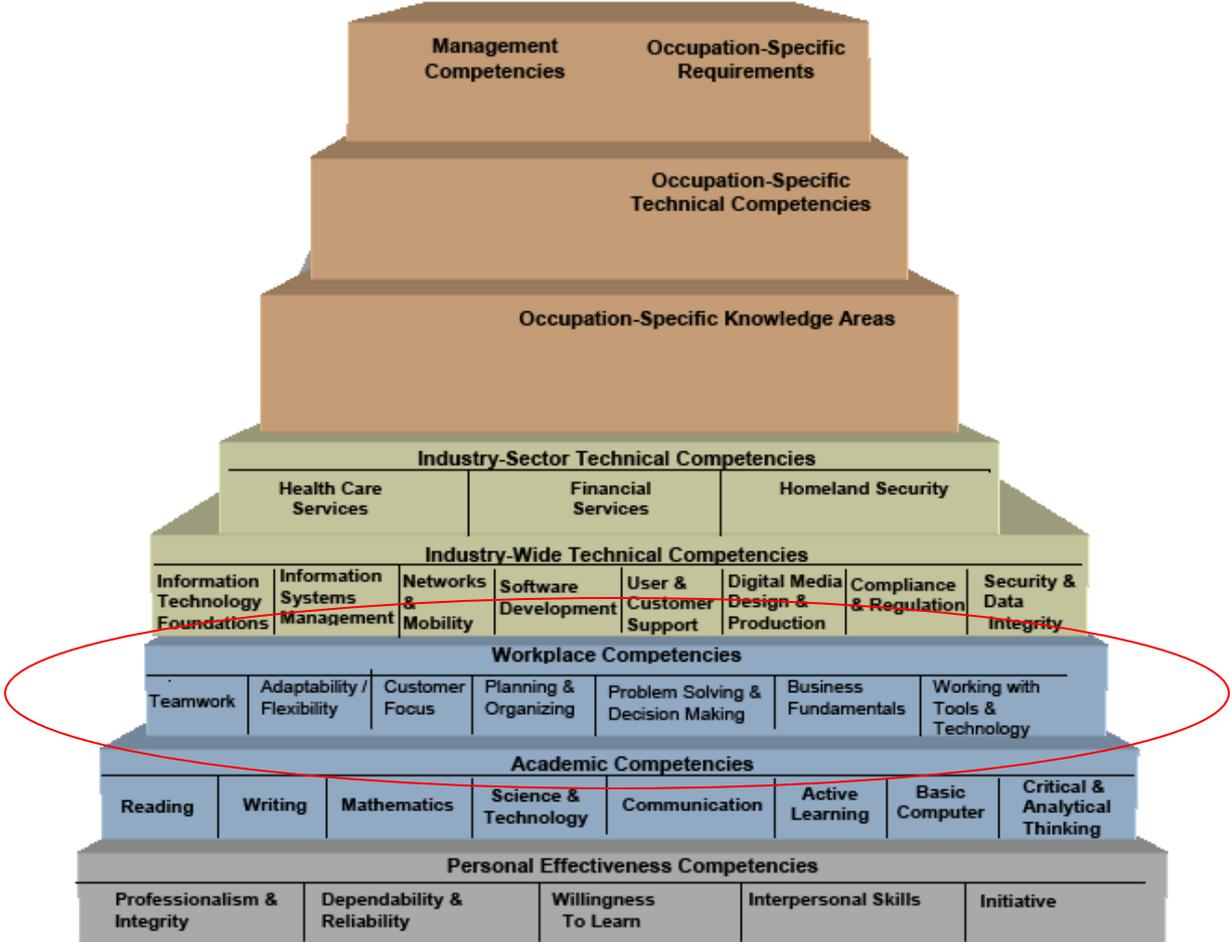




Tier 1 & 2 Sources



Information Technology Competency Model



Tier 3 Sources

**Education Career
Clusters Data**

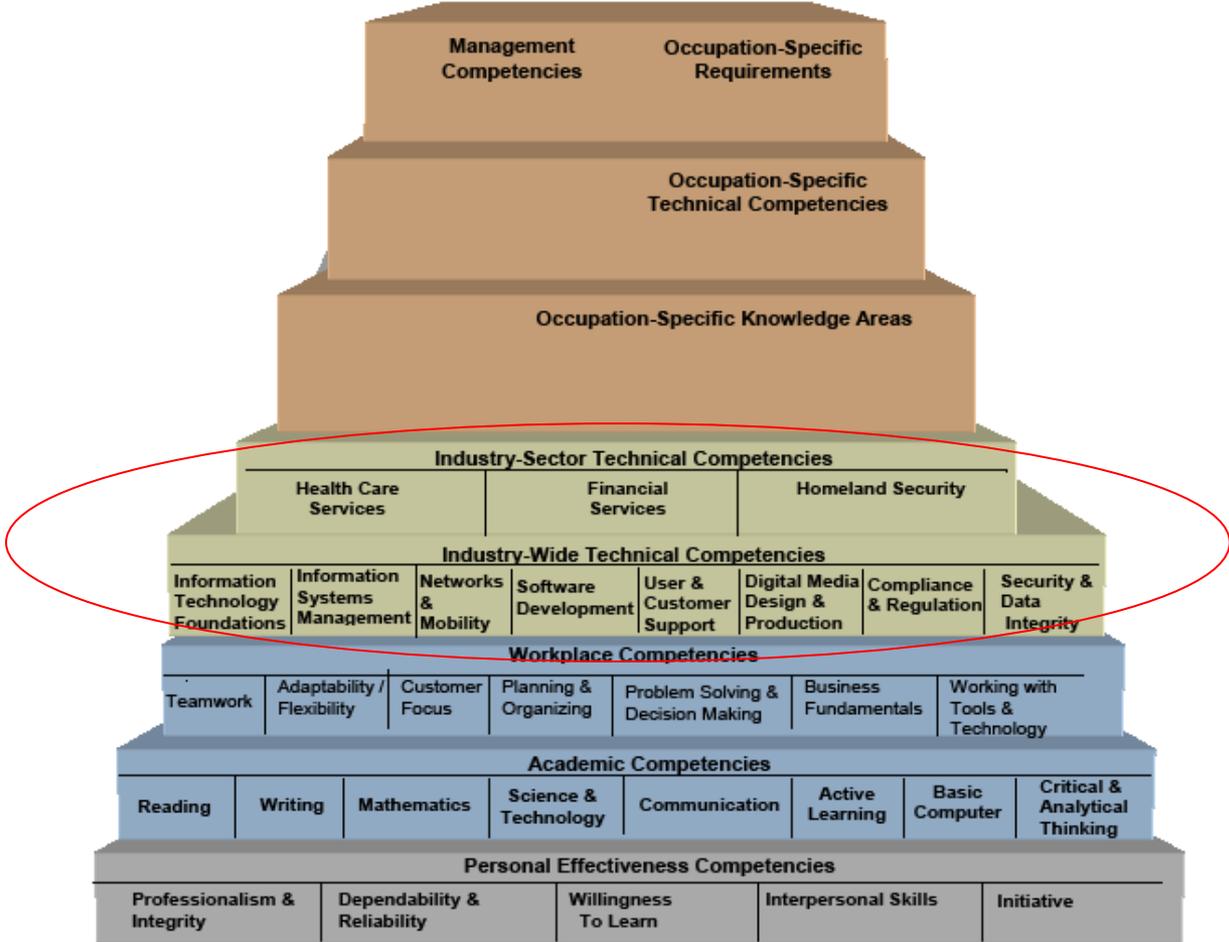
**US-DOL
Competency Model
Framework**



Tier 3 : Workplace Competencies

Teamwork	Adaptability/ Flexibility	Customer Focus	Planning & Organizing	Problem Solving & Decision Making	Business Fundamentals	Working with Tools & Technology
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Information Technology Competency Model





Tier 4 & 5 Sources

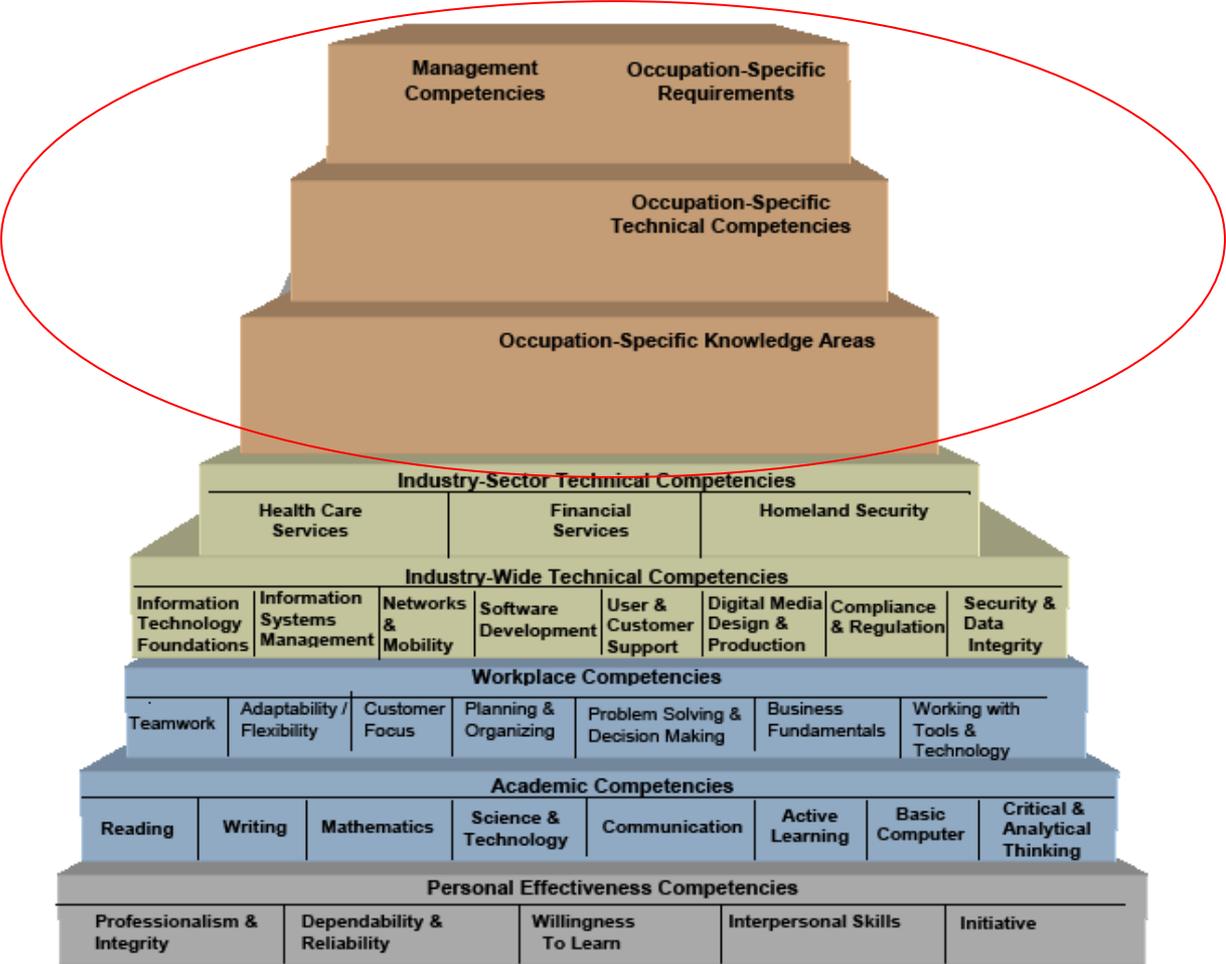
**Target Industry
Employer Focus Groups**



Tier 5 : Industry-Sector Technical Competencies		
Healthcare Services	Financial Services	Homeland Security

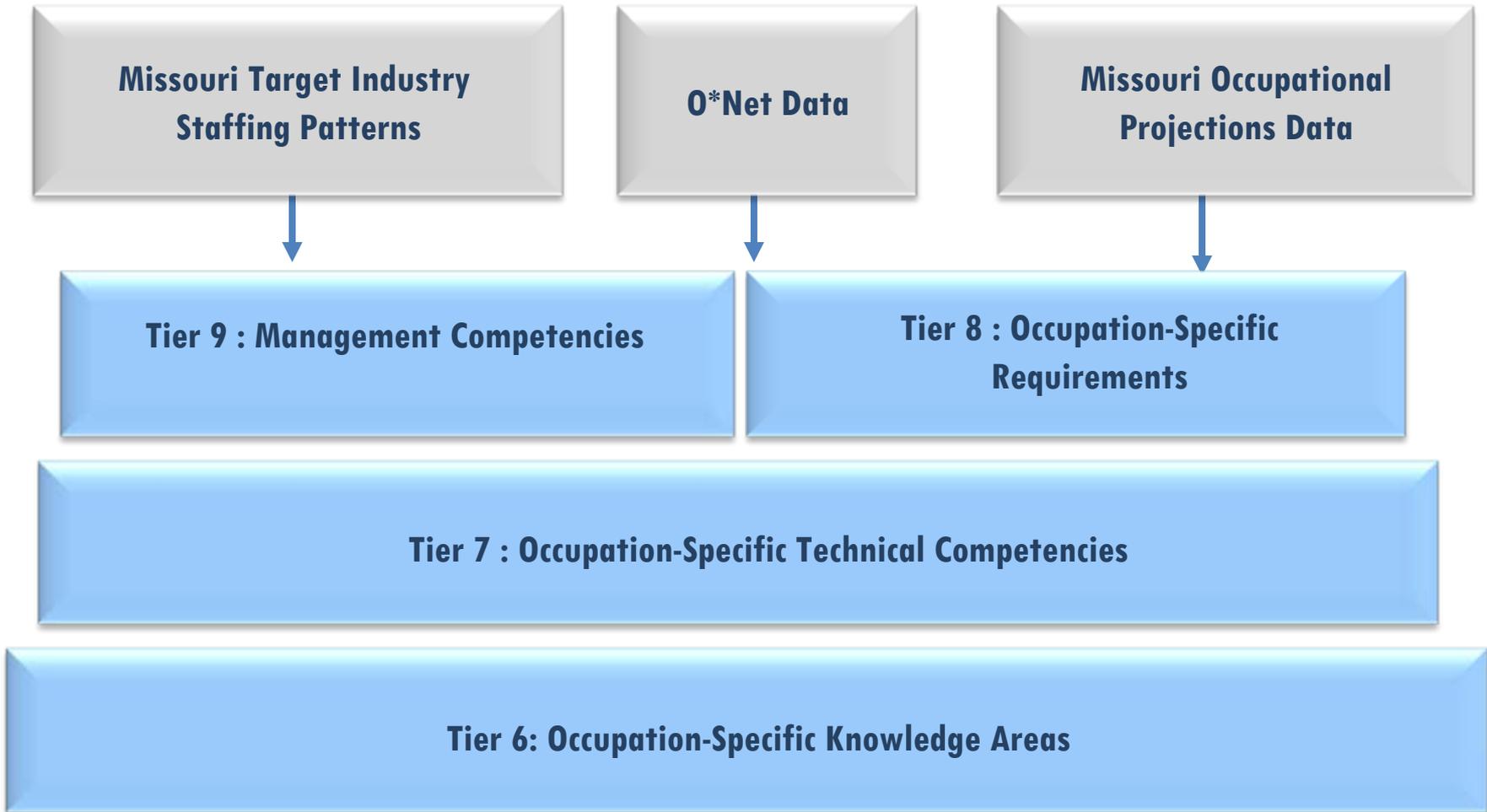
Tier 4 : Industry-Wide Technical Competencies							
Information Technology Foundations	Information Systems Management	Networks & Mobility	Software Development	User & Customer Support	Digital Media Design	Compliance & Regulation	Security & Data Integrity

Information Technology Competency Model





Tier 6-9 Sources



How are Models Used in Missouri?

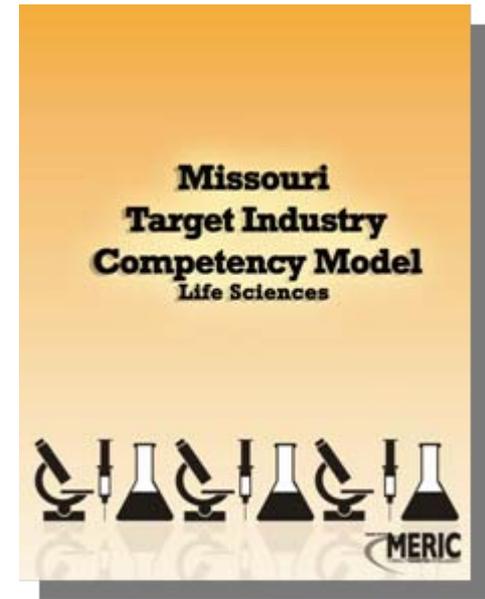
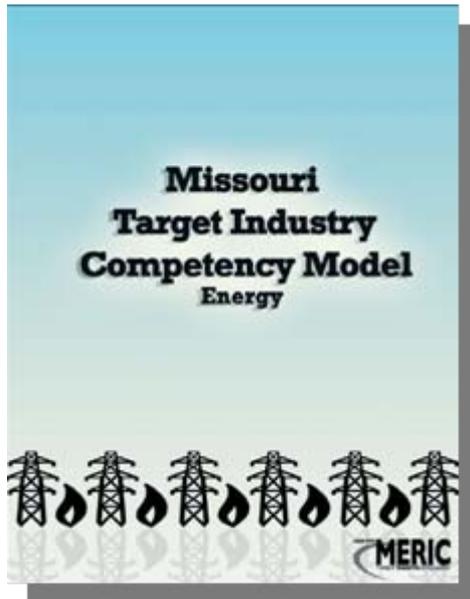
Moberly Area Community College

- Used for program assessment and re-development
- IT Faculty used the models to identify gaps in curriculum and course offerings
- Skills gap analysis and validation of existing curriculum

Missouri Department of Elementary and Secondary Education & Missouri Center for Career Education

- Used for re-development of existing competency profiles for Career education instructors
- Validation and gap analysis of measurable learner objectives (MLOs) and task statements for local curriculum development

Other Competency Model Reports



www.missourieconomy.org

How can Models be Replicated in Your State?

- Data readily available from your state LMI research office
- Use existing Industry Sector Councils/Organizations for data validation/collection
- Competency Model Clearinghouse -
<http://www.careeronestop.org/competencymodel/>

Thank you for your time



Department of Economic Development