

# *The Skills Challenge in Indiana*



INDIANA  
**WORKFORCE**  
DEVELOPMENT

Tuesday, July 18  
Regional Workforce Board/Operator Mtg.

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# Agency Mission, Values, & priorities

**Mission:** *IDWD works to ensure Indiana employers have a competitive and flexible workforce by providing all Hoosiers with opportunities and support to grow knowledge and skills for sustained employment in the global economy.*

**Values:** Integrity, Accountability, Innovation, and Excellence

**Priorities:** Grow jobs in Indiana  
Increase personal income of Hoosiers  
Deliver premiere customer service

Indiana's Vision for *Accelerating Growth...*

To exceed the national average  
in per capita income and  
average annual wages.

## Pro Innovation

Make Indiana a national leader for innovation and entrepreneurship in the global economy.

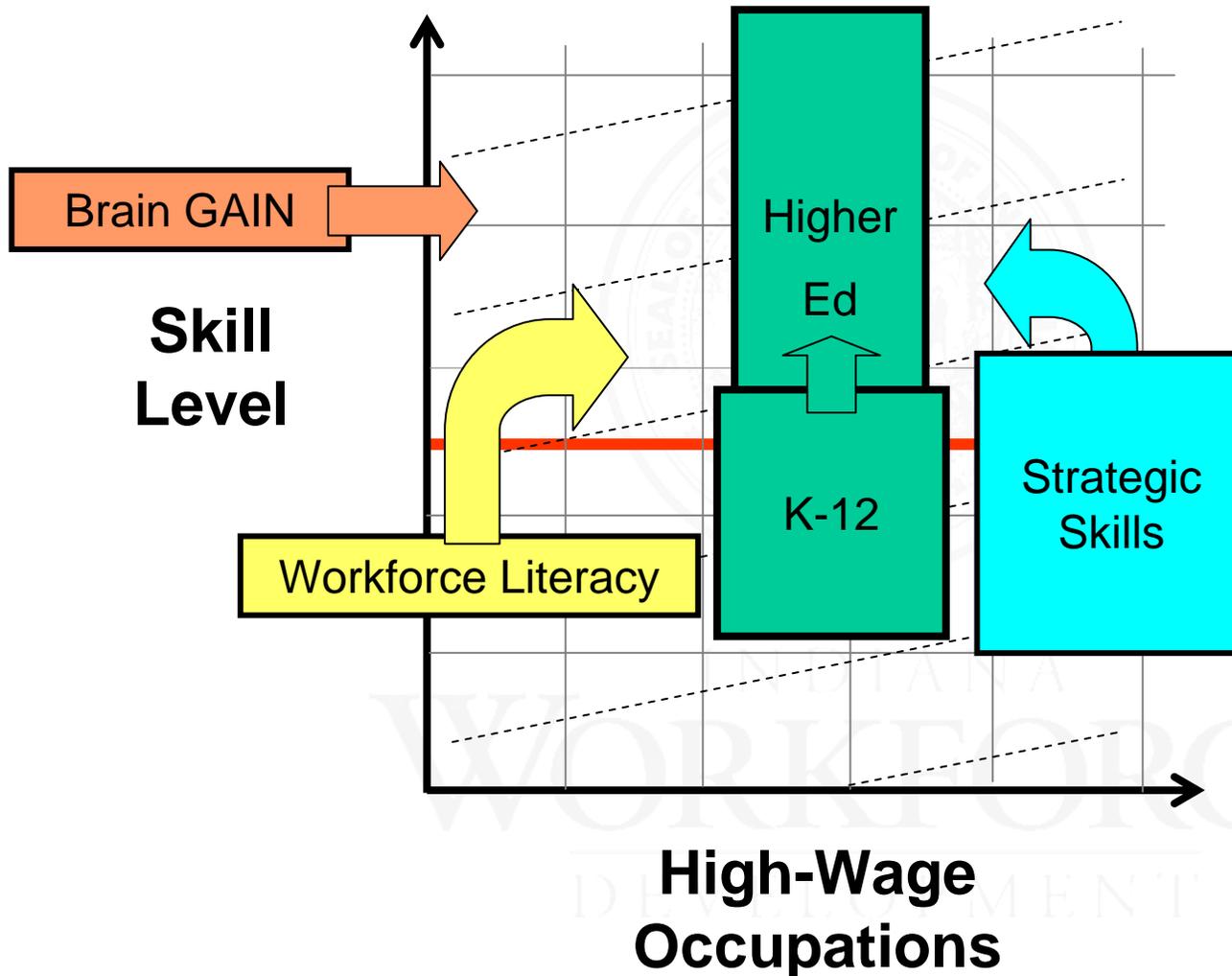
## Pro Talent

Create and retain a labor force whose productivity and flexibility is globally competitive and nationally superior.

## Pro Investment

Make Indiana one of the most investment friendly states in the nation.

## Conceptual Skills Model:



*Lift every Hoosier up at least one level.*

***Strategic Skills Initiative (SSI)***  
***Summary***

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## What:

\$23M two-year regional initiative designed to:

1. Identify skill and occupational shortages in high-wage industries
2. Determine root causes of shortages
3. Design and implement (competitively funded) solutions to address shortages

## When:

2.5 year initiative launched in June 2005

## Objectives:

- Prepare Hoosiers for good paying jobs
- Supply business with skilled workforce required for future growth/expansion
- Instill a demand-driven regional approach to workforce development

## Who:

Consortiums of workforce development, economic development, industry and education leaders across eleven economic growth regions.

## Core Principles:

Demand-driven, competition, accountability

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*Strategic Skills Initiative*

— Summary Report —



*Occupational  
&  
Skills Shortages*

*January 2006*

Prepared By: Indiana Workforce Development, Research and Analysis Division

# *A Snapshot of Indiana's Occupational Shortages and Critical Skills*

## *Brief Look at Report 1 Results*

# Statewide Shortage Summary

Top 15 High-Wage Projected Shortages			Total Regions with Shortage	Estimate d 2007 Shortage	State Average Wage
Rank	Industry	Occupation			
1	Health Care	Registered Nurses	9	1735	\$47,000
2	Manufacturing	Maintenance Workers and Technicians	5	786	\$32K - \$44K
3	TDL/Manufacturing	1st-Line Supervisors of Transportation and Production	7	636	\$47K - \$50K
4	Manufacturing	Welders, Cutters, Solderers, and Brazers	4	525	\$32,000
5	Manufacturing	Machinists (Metal & Plastic)	4	443	\$36,000
6	Manufacturing	Computer-controlled Machine Tool Operators, Metal and Plastic	5	328	\$32,000
7	TDL	Truck Drivers, Heavy Tractor-Trailer	3	294	\$36,000
8	Manufacturing	Team Assemblers	1	234	\$30,000
9	TDL	Sales Representatives, Whsl & Mfg,	1	200	\$50,000
10	Retail Trade	Electrical & Electronics Engineering Technicians	1	134	\$45,000
11	Manufacturing	Inspectors, Testers, Sorters, Samplers & Weighers	3	129	\$32,500
12	Health Care	Licensed Practical Nurses	6	125	\$34,000
13	Health Care	Pharmacists	2	122	\$81,000
14	Health Care	Respiratory Therapist	4	76	\$41,500
15	Health Care	Radiological Technicians	2	26	\$41,000

- **Emerging Industries/Occupations reported:**
  - Agribusiness: Regions 4 & 6
    - Technological advancements in biofuels and value-added research
    - Targeted occupations include Life Scientists and Business Operations Specialists
  - Adv Manufacturing: Region 9
    - Nanomanufacturing Specialists
    - Microbedded Systems Specialists
    - Fiber Optics Technicians
    - GIS Technicians
  - Life-Sciences & Health Care: Regions 2 & 11
    - Cytogenetic technicians
    - Tissue & Eye bank technicians
    - Genetic counselor
    - Tissue process technician
  - Scientific & Technical Professions: Region 8
    - Expected developments from Crane tech commercialization activities
    - Electrical & Electronic Engineering Technicians

***What skills appear to be in greatest shortage?***

Top Skill Shortages and Associated Wages by Region

	Active Learning	Active Listening	Critical Thinking	Complex Prob. Solv	Coordinat	Judgment Dec. Maki	Operation & Control	Reading Comprehe	Science	Speaking	Systems Evaluatio	Technol. Design	Time Mgmt.	Trouble-shooting	Mathe-Matics
Region 1	\$48,493	\$32,887	\$45,509		\$43,347			\$39,654	\$52,104	\$37,181					\$35,803
Region 2			\$46,929		\$44,733		\$29,676	\$41,310		\$39,460			\$40,958		
Region 3	\$49,895	\$34,148	\$46,306	\$54,672	\$43,726	\$54,916		\$40,282					\$40,391	\$39,892	
Region 4			\$45,849			\$53,377	\$45,764								\$34,277
Region 5	\$53,538			\$59,377	\$47,136	\$60,294	\$29,676			\$41,226		\$59,200	\$43,586		\$39,448
Region 6				\$49,442		\$51,080					\$86,257				\$32,280
Region 7	\$45,551	\$30,120	\$42,550		\$39,091			\$36,471					\$36,969	\$36,062	
Region 8		\$31,436	\$44,225		\$41,326			\$38,631		\$35,044			\$38,062	\$42,914	
Region 9	\$51,256	\$33,862	\$46,657		\$43,879	\$56,508		\$40,176	\$50,957	\$38,367			\$39,615		
Region 10	\$47,503		\$44,328	\$52,874	\$42,188		\$28,924	\$37,836	\$59,291	\$36,503			\$37,854		\$33,287
Region 11	\$48,545	\$33,092	\$45,309		\$43,005	\$53,232		\$39,290	\$47,761	\$37,731			\$39,654	\$38,362	

*(critical overlapping skills for Region's Top 5 shortage occupations OR skills critical to at least 4-5 of the region's shortage occupations)*

- **Critical Skills include:**

- Science, Mathematics, Reading Comprehension
- Critical Thinking, Judgment & Decision Making
- Active Learning & Writing
- System Skills (i.e., judgment, decision-making, system analysis, system evaluation)

*Strategic Skills Initiative*

—Summary Report—



**Root Causes**

*of Occupational and  
Skills Shortages in Indiana*

March 2006



Prepared By: Indiana Workforce Development, Research and Analysis Division

# ***A Snapshot of Indiana's Root Causes***

## ***Brief Look at Report 2 Results***

## 1. Education & Training Capacity

- Training slots not available in sufficient numbers
- Geographical location of facilities not aligned with labor shed location
- Training offered not aligned with industry needs
- Key occupations: RN's, LPN's, Resp. Therapists, 1<sup>st</sup> line supervisors/mgrs, Maintenance/Engineering Techs.

## 2. Career Awareness

- Perception of those industries/occupations in shortage are very much misaligned at secondary/post-secondary level
- Guidance at the secondary level is not aligned with market needs; oftentimes one-side (post-secondary track)
- True depiction of job demands oftentimes not communicated
- Key occupations: Virtually all manufacturing occupations and several health care related occupations

## 3. Employer recruitment and retention practices

- Many employers not pursuing active recruiting programs to bring people into occupations
- Inflexible working hours/arrangements and limited professional development opportunities
- Key occupations: Many of the manufacturing occupations identified as being in shortage

Indiana Department of Workforce Development  
Strategic Skills Initiative  
Economic Growth Region 6



Mitch Daniels, Governor  
Ron Stiver, Commissioner  
June 2006

**About SSI**  
Governor Daniels' \$23 million Strategic Skills (SSI) initiative aims to identify and alleviate job and skill shortages. The program will be carried out in Indiana's 11 economic regions through an ongoing process of identifying future shortages, determining the cause of those shortages, and developing solutions. Ultimately SSI will create jobs and increase personal income for Hoosiers.

**About Region 6**

- Population (Jul 2005) 544,853
- Labor Force (March 2006) 170,030
- Unemployment (March 2006) 6.4%
- Median Household Income \$20,363 in 2004

Source: www.hoosierdata.in.gov

**Counties in Region**

- Blackford
- Delaware
- Henry
- Rush
- Jay
- Randolph
- Wayne
- Fayette
- Union



INDIANA WORKFORCE DEVELOPMENT

Identified Solutions →

**Economic Growth Region 6**

Economic Growth Region 6 is comprised of nine counties. The SSI research & identification allocation awarded in September 2005 was \$263,131. The SSI solutions allocation awarded in June 2006 is \$2,114,082. Methods used to identify shortages, root causes and to develop solutions were executive interviews, business roundtables, online surveys and focus groups.

Key Occupational Shortages	Projection 2005-2007
Health Technologists and Technicians	42
Truck Drivers, Heavy & Tractor-Trailer	11
Business Operations Specialists	11
Life Scientists	11

**Emerging Industries / Occupations**

Agribusiness/Agriscience

Life Scientists and Business Operations Specialists

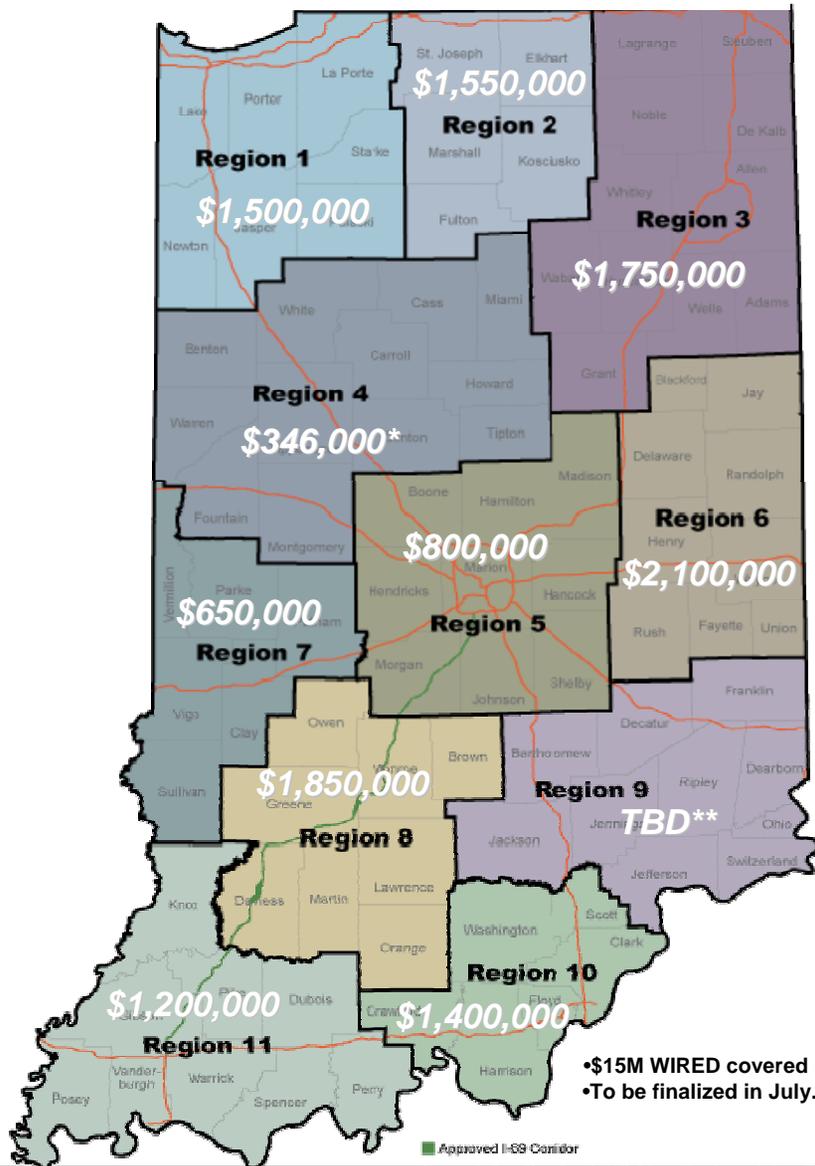
**Root Causes**

- Lack of Training Capacity
  - Shortage of qualified health care workers and lack of qualified training instructors
- Lack of Career Awareness
  - Lack of awareness of Healthcare careers and qualifications
- Other Issues
  - A lack of education in the workforce means applicants often don't possess required skills.

# *A Snapshot of Indiana's Solutions*

*Brief Look at Report 3 Results*

# Statewide Solution Summary



- \$15M WIRED covered majority of what they identified in SSI
- To be finalized in July.

## SSI Solutions Investment Summary

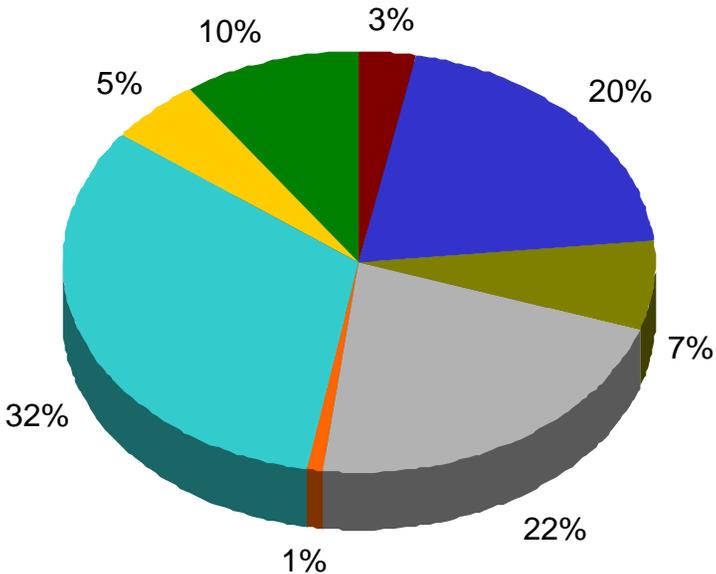
	Proposed	Funded
Solutions \$ Request	\$26,445,000	\$13,350,000
Number of Solutions	82	46

<b>Funded Solutions Statistics</b>	<b>2yr impact</b>
# of Hoosiers Training	<b>6300</b>
# Credentialed/Degreed	<b>3650</b>
# to Fill Shortage Occupations	<b>2350</b>

# Statewide Solution Summary

## Key Sectors/Occupations being funded:

- **Adv. Manufacturing** – Industrial Engineering Techs, Next-Gen Welders, Supervisory/Mgmt
- **Biotechnology** – Biopharmaceutical, Orthopedics, Nanotechnology, and Adv. Materials
- **Healthcare** – Registered Nurses, Allied Health Professionals, Radiological Technicians
- **Entrepreneurship** – Technology commercialization, steM connection
- **Agribusiness** – new venture creation, technology development, etc.



## *SSI Solutions Investment Summary: Region Specific*

<b>Region</b>	<b>Shortage</b>	<b>Solution</b>	<b>Outcomes</b>	<b>Award Amt</b>
<b>1</b>	<ul style="list-style-type: none"> <li>• Industrial mechanics</li> <li>• Transportation mech</li> <li>• Mech. Engineers/Tech</li> </ul>	<p><b>Veterans Talent Gain</b></p> <ul style="list-style-type: none"> <li>• Utilizing web-based technology to assist returning NW IN vets, as well as recruiting others from around country, in finding employment in shortage occupations</li> <li>• 8 NW IN. employers signed up with goal of having 20 by year two</li> <li>• 2 bases on-line; 5 more within 6-mos</li> </ul>	<ul style="list-style-type: none"> <li>• 35 Vets to placed in shortage occupations</li> </ul>	\$110,006
<b>2</b>	<ul style="list-style-type: none"> <li>• CNC machinists</li> <li>• Ortho cast technician</li> </ul>	<p><b>Orthopedic Skills Solution</b></p> <ul style="list-style-type: none"> <li>• Solution will deliver training in advanced bio-sciences material development; upgrade skills in machining/production of adv. orthopedic materials &amp; parts</li> <li>• Utilizing virtual reality for delivery of certain training modules; ITCC to develop new curriculum around nanotechnology, bio-chemical tech., and other adv. materials</li> </ul>	<ul style="list-style-type: none"> <li>• 388 enrolled in training</li> <li>• 280 certificates earned in welding, CNC, and polishing</li> <li>• 280 placed in shortage occs (w/in industry)</li> </ul>	\$928,171
<b>3</b>	<ul style="list-style-type: none"> <li>• Computer systems analysts</li> </ul>	<p><b>Adv. Business Technology</b></p> <ul style="list-style-type: none"> <li>• New curriculum to be developed by IPFW focused on next-generation information technology systems focused on logistics industry; specifically RFID.</li> <li>• Heavy concentration on experiential learning via company “case studies” to give students actual “look &amp; feel” of tech.</li> </ul>	<ul style="list-style-type: none"> <li>• 171 to be trained</li> <li>• 15 to be placed in emerging/shortage occs.</li> </ul>	\$214,234

## *SSI Solutions Investment Summary: Region Specific*

<b>Region</b>	<b>Shortage</b>	<b>Solution</b>	<b>Outcomes</b>	<b>Award Amt</b>
<b>6</b>	<ul style="list-style-type: none"> <li>• Business ops spec</li> <li>• Life scientists</li> <li>• Entrepreneurship</li> </ul>	<p><b><i>Agri-Venture Initiative</i></b></p> <ul style="list-style-type: none"> <li>• Solution will spark economic growth by encouraging and supporting plans to help ag-related businesses emerge, expand, or develop new tech/products</li> <li>• Dovetails with existing efforts to improve access to capital in R6 such as the Muncie Angel Network</li> </ul>	<ul style="list-style-type: none"> <li>• \$5M of new investment sought; \$2M received</li> <li>• \$2M in new revenues from expansion/creation</li> <li>• 12 new employment opportunities</li> </ul>	<b>\$977,795</b>
	<ul style="list-style-type: none"> <li>• Business ops spec</li> <li>• Entrepreneurship</li> </ul>	<p><b><i>Entrepreneurship Mentor</i></b></p> <ul style="list-style-type: none"> <li>• Solution will connect seasoned entrepreneurs with participants and inventors to facilitate tech. transfer and start-up of high-growth businesses</li> <li>• Working with BSU to provide 2-yr fellowships for cohort of students</li> </ul>	<ul style="list-style-type: none"> <li>• 9 new entrepreneurs retained in IN</li> <li>• 5 plans funded/business launched</li> <li>• 15 new employment opportunities in E.C. IN</li> </ul>	<b>\$278,282</b>
<b>8</b>	<ul style="list-style-type: none"> <li>• Team assemblers</li> <li>• Life-science manuf. skills</li> </ul>	<p><b><i>Biomanufacturing Institute</i></b></p> <ul style="list-style-type: none"> <li>• Customized training &amp; facilities centered around biopharmaceutical industry within region.</li> <li>• Significant emphasis on dislocated and underemployed individuals within region; raise basic skills to level compatible with levels required for industry employment</li> </ul>	<ul style="list-style-type: none"> <li>• 3 new customized, short-term training curricula</li> <li>• 1465 trained</li> <li>• 599 placed in jobs</li> </ul>	<b>\$1,252,700</b>

## Three Key “global” policy initiatives being tackled by teams:

1. Emerging Workers & Their Future in Advanced Manufacturing
  2. Registered Nurses: How to Stop the Perpetuating Shortage?
  3. Immersing H.S. Teachers in the Practical Application of their Theories
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## *Emerging Workers & Their Future in Advanced Manufacturing*

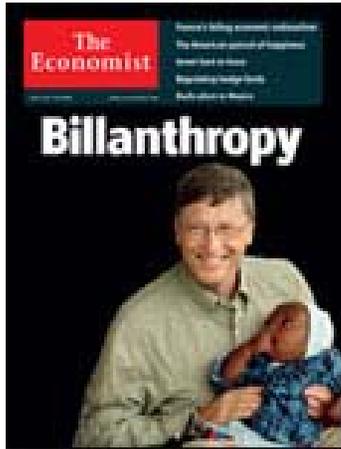
### ***Purpose:***

Actively address statewide issue around 21<sup>st</sup> century manufacturing and its disconnect with today's emerging workforce as it relates to the image of necessary skills and opportunity for advancement.

### ***Objectives:***

1. Accurately identify, debate, and target the key root causes behind the problem
  2. Successfully create 1-2 broad, statewide solution(s) that can be implemented on a regional basis aimed at accurately educating workers about opportunities in the industry
  3. Develop solutions that lead to additional or further policy efforts aimed at increasing level of experiential learning throughout our K-12 schools (specifically the high-schools in IN.)
  4. Leverage remaining SSI monies into much larger, more expansive solution(s) through private/industry contributions & match
  5. Implement a solution that can be effectively measured to gauge level and impact of success across the state
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## *Emerging Workers & Their Future in Advanced Manufacturing*



*The Economist* – 7/1-7/8

**Business** [Get article background](#) 

### American manufacturing **Lean and unseen**

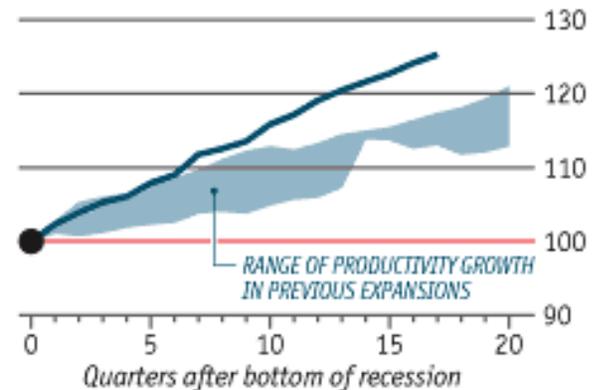
Jun 29th 2006 | DES PLAINES, ILLINOIS  
From *The Economist* print edition

**Unlike General Motors and Delphi, most of America's manufacturers are thriving**



### Rolling along

US manufacturing productivity  
Since Q4 2001, compared with previous expansions



Sources: Bureau of Labour Statistics;  
Federal Reserve Bank of Chicago

- Net Profits up by 9%/yr since 2001; Capital-equipment & durable goods (CAT), aerospace (Boeing), [Japanese] automotive suppliers all strong post-recession.
- Productivity: '95-'00 = 4% growth/yr; 2000 – present = 5.1%/yr
- America's advantages: Innovation, flexibility, and risk-tolerance

## *Registered Nurses: How to Stop the Perpetuating Shortage?*

### ***Purpose:***

Actively address global issue around global registered nursing shortage throughout the state of Indiana through development and implementation of innovative, sustainable solutions addressing the root causes.

### ***Objectives:***

1. Openly debate, challenge, and discuss key root causes for the shortages; whether those derived during SSI R&ID phases or independent causes brought forth by team members
  2. Identify, develop, and implement one to two nation-leading policies/efforts to address the shortage over the long-run (i.e. harnessing the growing Hispanic population, efforts focused on retiring boomer RN's and their "re-entry" into workforce, etc.)
  3. Evaluate existing solutions being funded (on an ongoing basis), via SSI, to assist us in determination of best-practice solutions that can be replicated throughout the state
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## Registered Nurses: How to Stop the Perpetuating Shortage?



**IGNN**  
Illinois Government News Network

www.illinois.gov

Rod R. Blagojevich, Governor

**State Links**

- News
- Illinois Facts
- Living
- Working
- Visiting
- Learning
- Business
- Public Safety
- Technology
- Government
- Help
- Home

**IGNN: Governor's Office Press Release**

The Governor's Office News page provides access to all press releases from the Governor's Press Office, addressing topics such as education, budget issues, Illinois resources, public safety, health care, and much more.

**IGNN Links**

- Sign up for an e-News Subscription
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- Lt. Governor's Office
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- Budget/Fiscal
- Business
- Children/Families
- Culture
- Economic Development
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- History
- Infrastructure
- Safety/Security
- Technology
- Tourism/Recreation
- Transportation
- Workforce/Jobs

**OFFICE OF THE GOVERNOR**  
ROD R. BLAGOJEVICH - GOVERNOR

**NEWS**

**FOR IMMEDIATE RELEASE**  
July 11, 2006

**Gov. Blagojevich signs critical nursing law**  
*Measure will help stem nursing shortage; ensures adequate level of frontline healthcare providers as baby-boomers age*

**Legislation also creates a scholarship program to help retain forensic scientists at state DNA testing labs**

SPRINGFIELD — Governor Rod R. Blagojevich today signed a new law that will allow Illinois to recruit, train and retain nurses that will

**Illinois Gallery**

**AMBER ALERT**

- IL's CSSI effort has led to statewide legislation being signed into law
- Key areas of focus:
  1. Increase # of faculty
  2. Improve affordability for students (scholarships, fellowships, and grants)
  3. Improve working conditions through new Center for Nursing
- \$3.5M to launch
- IL has been fairly aggressive on RN shortage front

## *Immersing H.S. Teachers in the Practical Application of their Theories*

### ***Purpose:***

Effectively expose IN's secondary high-school teachers, in the area of STeM+E (Science, Tech, Engineering, Math, and Entrepreneurship), to industry-based application of the theories and concepts they are teaching.

### ***Objectives:***

1. Provides means by which teachers can identify industry (i.e. discipline) related best-practices and incorporate them into curriculum
  2. Increase the rigor and relevance of many of the career and technical education related disciplines being delivered throughout IN. by means of meaningful and engaged work experience
  3. Assist regions and local areas with developing relationships between specific teachers and key industry representatives in an effort to "institutionalize" the interactivity between industry and the classroom.
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*Questions?*

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