Human Performance Technology

A Systematic Approach to Improving Human Capital Management

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University of Tennessee

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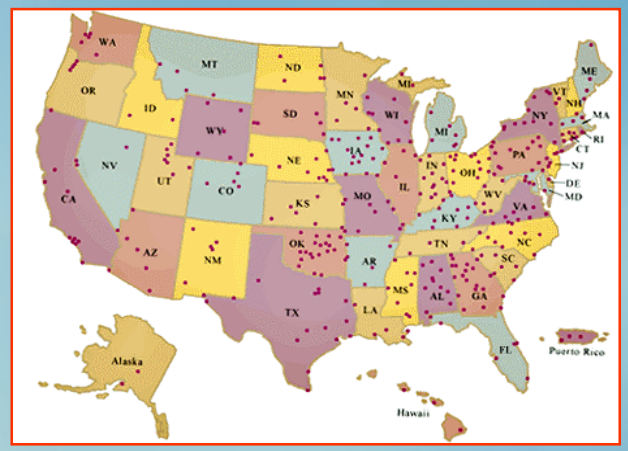
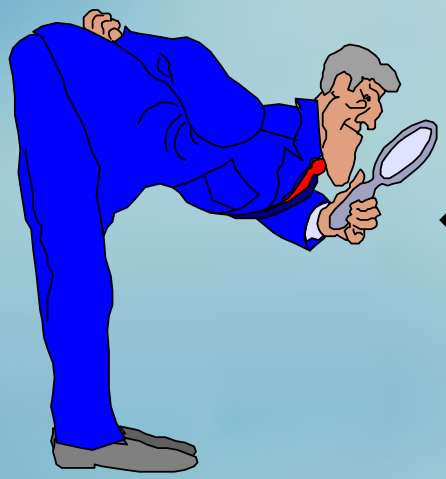
About UT CIS…

- Agency within UT Institute for Public Service
- Statewide organization; technical expertise
- Mission: strengthen the competitiveness of Tennessee manufacturers
- TN affiliate of the NIST Manufacturing Extension Program (MEP), a nationwide network



In 2002, HPT Program awarded Innovator status by southern growth policies board

Today We Will Examine…



- HPT model used to analyze & optimize human performance
- Link interventions to human capital investment

Three Types of Capital

- **Structural Capital**
  physical structures, intellectual property; methods
- **Customer Capital**
  goodwill; relationships
- **Human Capital**
  talent; skills; ability

- Bates Gruppen, Norweigan arm of Bates Worldwide
source: Fortune Apr. 30 2001

Exploring Human Capital

"The only irreplaceable capital an organization possesses is the knowledge and ability of its people. The productivity of that capital depends on how effectively people share their competence with those who can use it."

- Andrew Carnegie

The new economy

The most robust empirical finding about the new economy is that the return on investment in human capital has risen faster than the return on investment in physical capital.

- US Treasury Secretary Lawrence H. Summers, Hambrecht & Quist Technology Conference, San Francisco, May 10, 2000

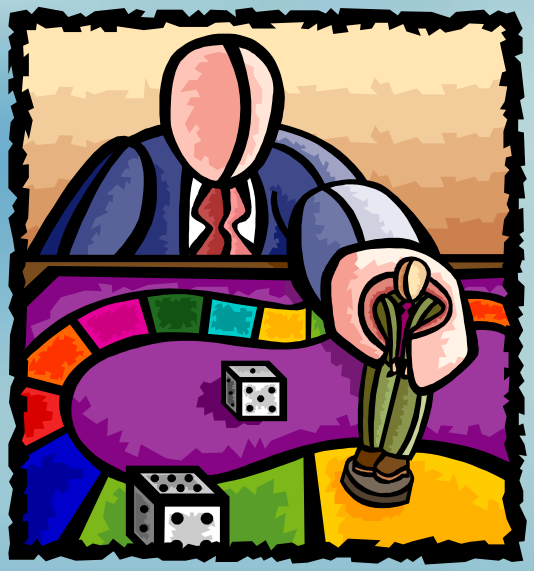
Why Be Concerned?

- Competitive labor market exists.
- Workforce is aging.
- Character of workforce is changing; policies and mindsets are not adapting.

Based on current demographic trends and labor force participation rates, the American workplace can expect to face a shortage of 27.9 million employees by 2031.

Sources: *The American Workplace 1998*, *Changing Face of the 21st Century Workforce*, and *Building America's Workforce for the 21st Century* (2001 report) via Employment Policy Foundation at www.epf.org.; Bureau of Labor Statistics

Crisis?

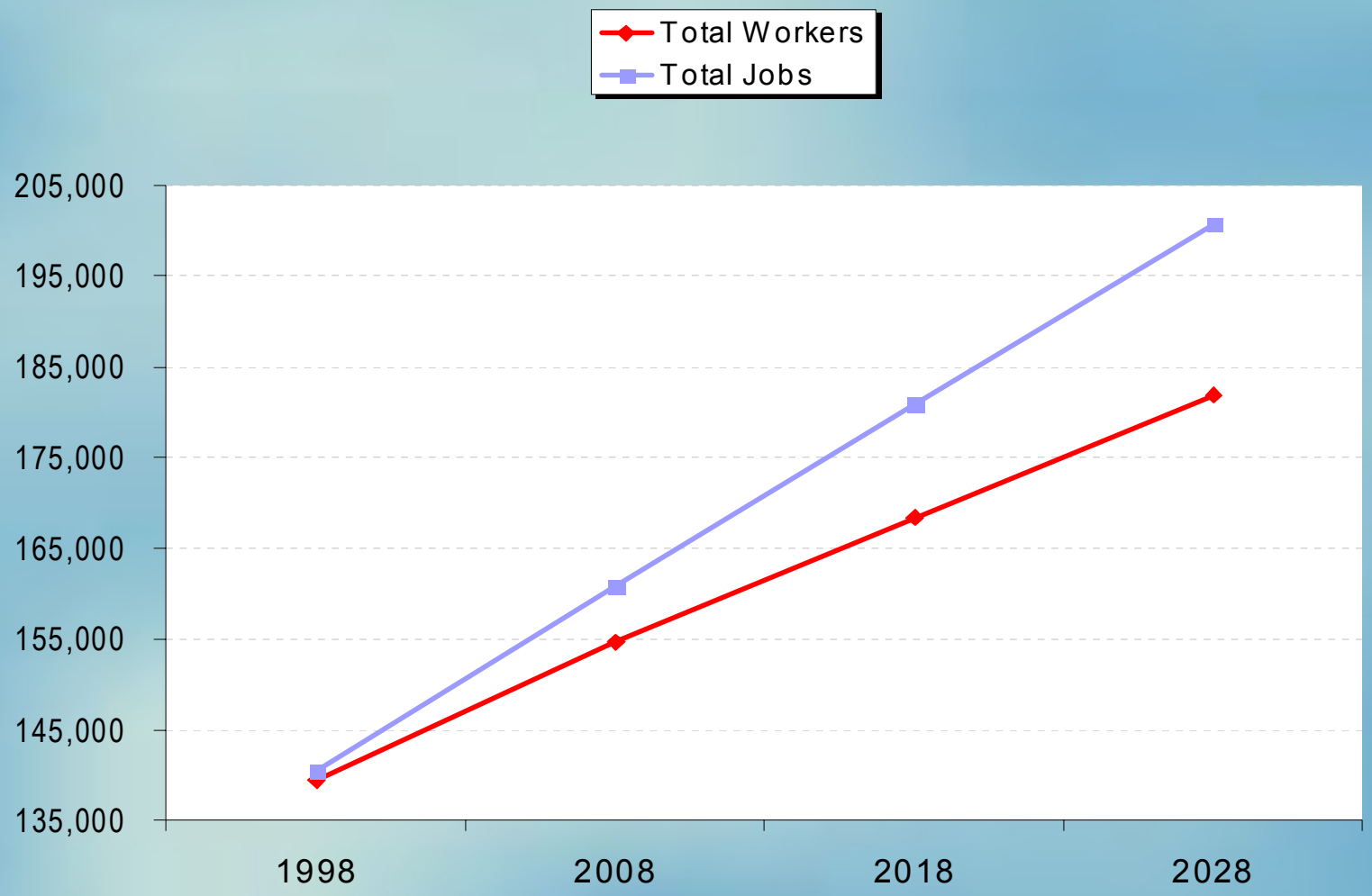


"As the baby boomers are reaching their retirement years and leaving the workforce, hospitals don't have enough nurses or medical technicians; the construction industry can't keep up with the boom in remodeling and new construction; school districts can't find enough teachers; and manufacturers are falling behind in the global marketplace because they can't find workers with the right skills for the high-tech factory.

"And, in spite of the downturn in the technology sector, **the forecast is for a continuing and growing shortage of high tech workers. Overall, by 2010 there may be a shortage of 4 to 6 million workers.** Businesses can't expand without skilled workers; the lack of workers inhibits their ability to compete globally and even to keep up with quality control."

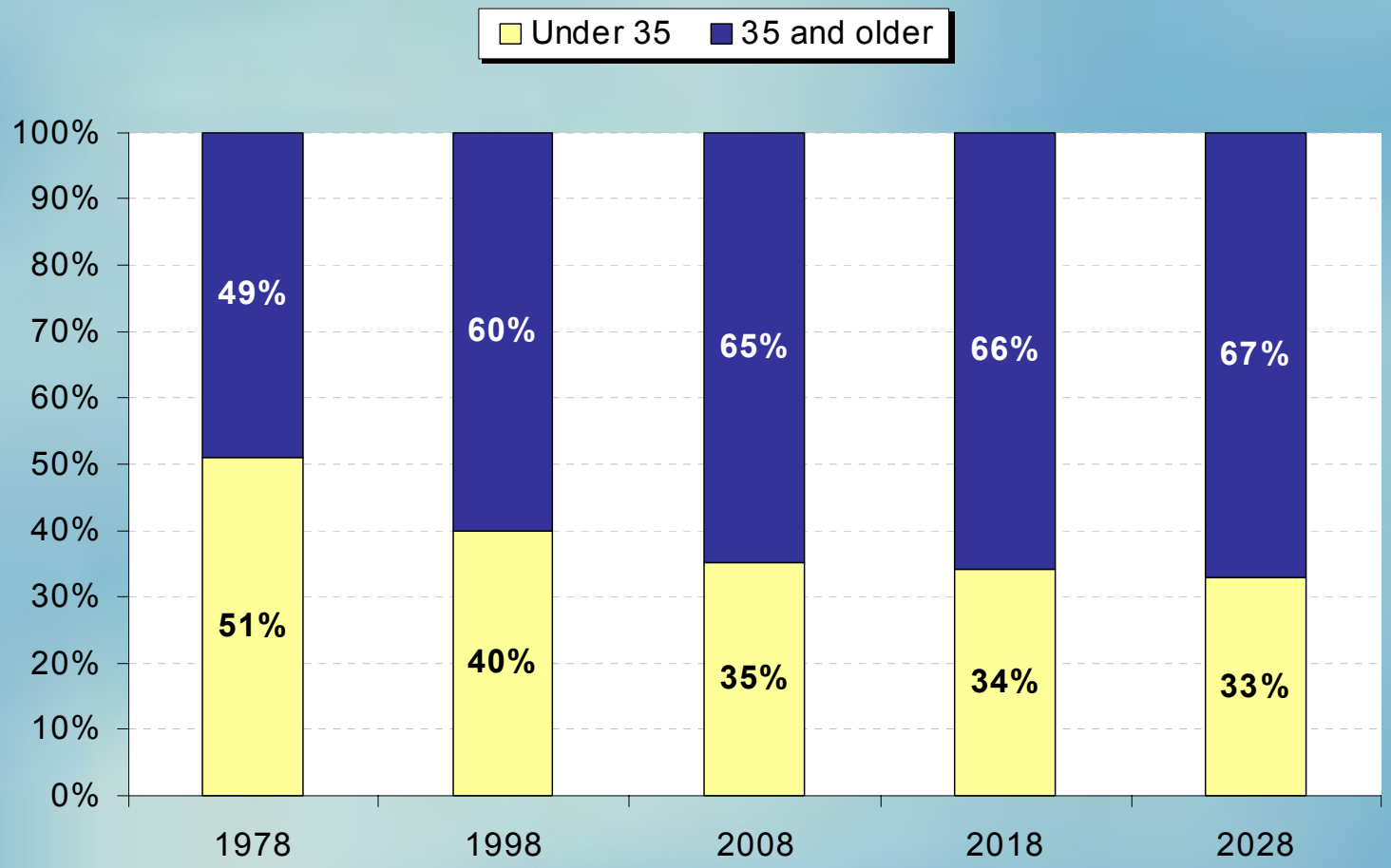
- Remarks by Assistant Secretary for Employment & Training Emily Stover DeRocco at the Job Corps Alpha Leadership Conference - July 22, 2002 - Washington, D.C

Growth in Jobs and Labor Supply, 1998 to 2028 (in thousands)



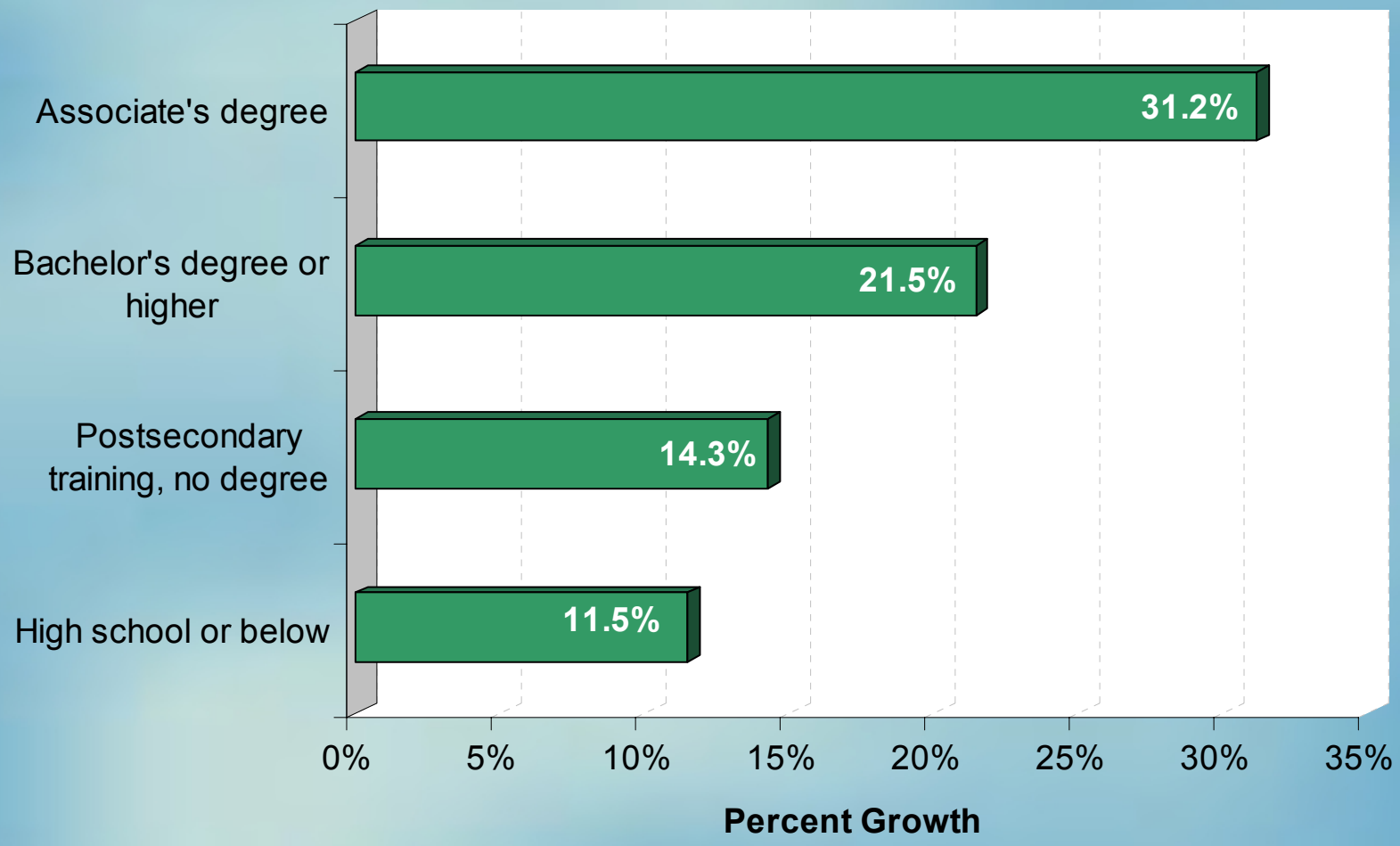
Source: US Census Bureau and Bureau of Labor Statistics, with analysis by National Alliance of Business

Projected WF Age Distribution



Source: US Census Bureau and Bureau of Labor Statistics, with analysis by National Alliance of Business

Projected Job Growth, 1998-2008, by Education Attainment Level



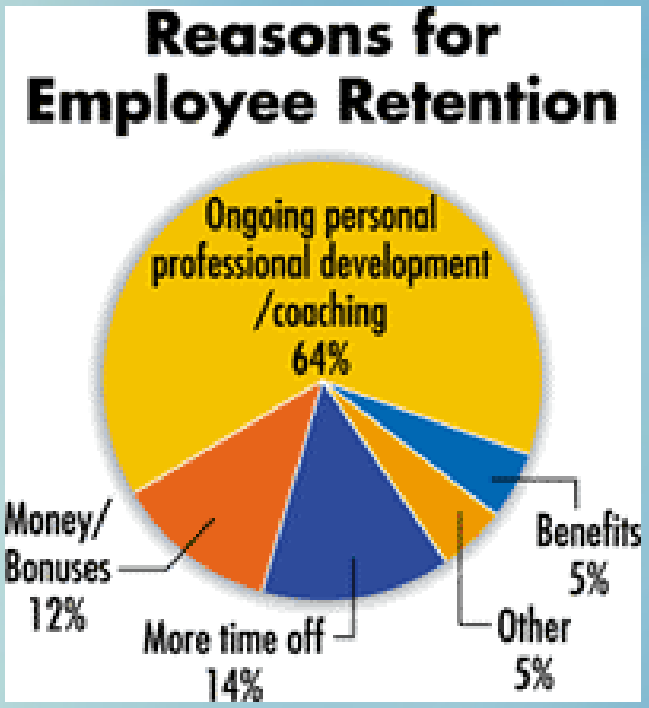
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Food for Thought

Survey of 198 food companies nationwide

Results reflect findings from studies of other industries

Ninety-two percent of respondents indicated that a $10,000 annual salary increase would not prompt them to change employers if they were receiving personal and professional development coaching.



Source: Food Engineering, reporting on a year 2000 survey conducted by TR Cutler, Inc., Ft. Lauderdale FL
http://www.foodengineering.org/articles/2000/1200/0012pan.htm#coaching

$ Wasted on Training

***About $5.6 billion to $16.8 billion is wasted annually on ineffective training programs* - USA Today**

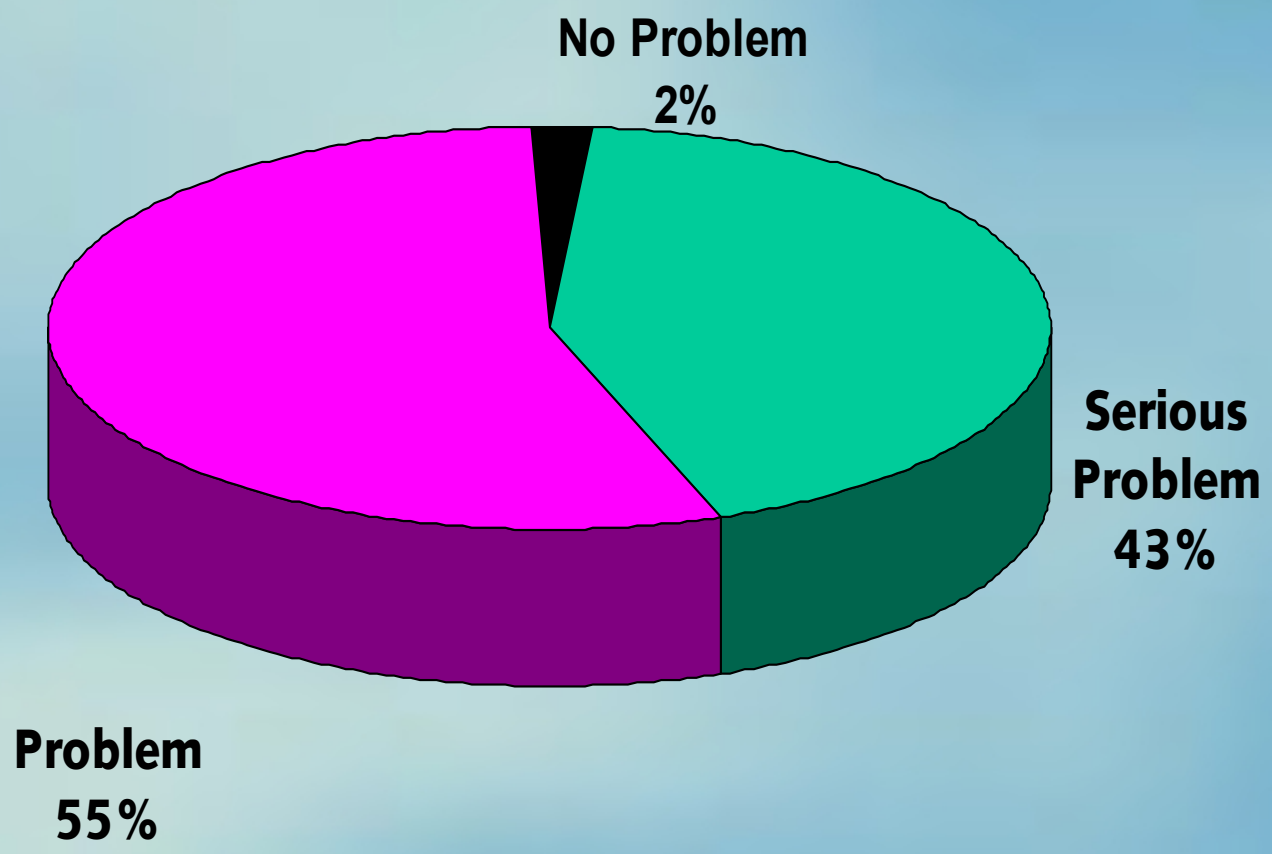
"American industry is spending billions and billions on training programs and doing no evaluation of their effectiveness. You have to measure it."

- Cary Cherniss, Rutgers University

- Source:* USA Today *10/07/1998

Productivity & Performance

Percentage of Companies Indicating Problems in Obtaining High Performance from Workforce



Source: ASTD, Conference Board

Sound familiar?

- Company is riddled with “morale” problems
- Wide gap exists between high performing employees and others.
- It’s difficult to attract & retain talent.
- Employees appear disengaged.
- New technology investment is not utilized to capacity.
- We’re committed to training, but don’t see results.

The Solution?

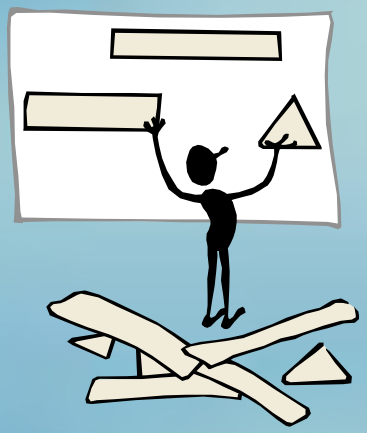
Seek a systematic, comprehensive, integrated response

Human performance technology

- A set of methods for solving problems related to the ***performance of people***.
- Applied to individuals, small groups, & large organizations.
- Systematic combination of three fundamental processes: 1) performance analysis, 2) cause analysis, and 3) intervention selection.

Source: International Society for Performance Improvement

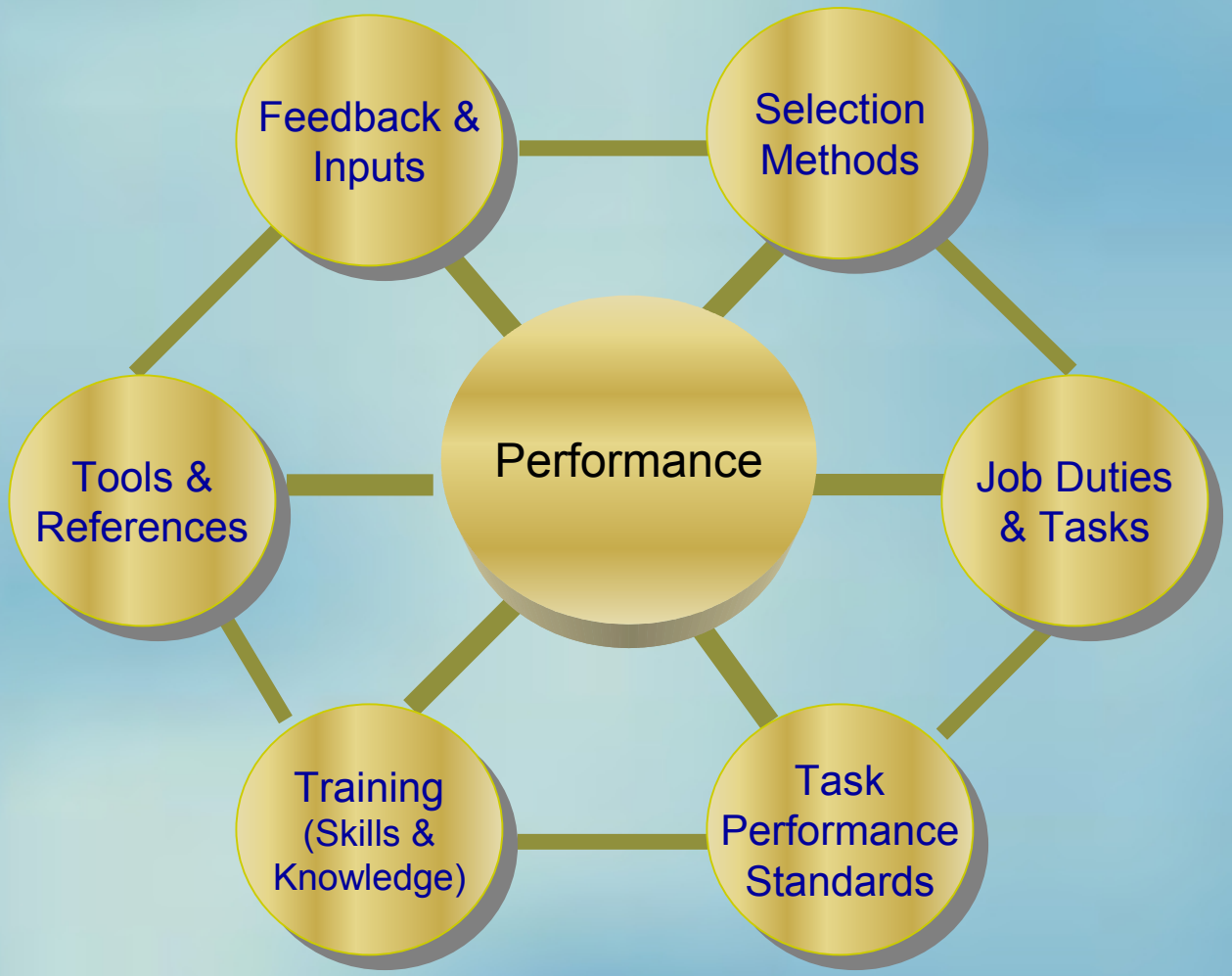
"Change, then digitize"



Well, the old truism "garbage in-garbage out" is still the first law of the information age. Digitizing means nothing if we're web-enabling flawed processes. Said another way, digitizing bad processes is not the answer. Change, then digitize.

- Denis Nayden, Chairman & CEO, GE Capital

Performance Wheel



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Selection Methods

Gettin' good players is easy. Gettin' 'em to play together is the hard part.
- Casey Stengel

Selection...

- Process(es) whereby candidates are selected for employment (includes those candidates new to the job and those employees seeking transfer or promotion).

  - New to the company
  - Promotion or lateral movement

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Turnover

Cost as % of Annual Salary

Entry level - hourly, non skilled	30-50%
Service/production workers - hourly	40-70%
Skilled hourly (e.g. machinist)	75-100%
Clerical/administrative (scheduler)	50-80%
Professional (sales, nurse, accountant)	75-125%
Technical (e.g. computer technician)	100-150%
Engineers (e.g. chemical engineer)	200-300%
Specialists (e.g. computer software designer)	200-400%
Supervisors/team leaders	100-150%
Middle managers	125-200%

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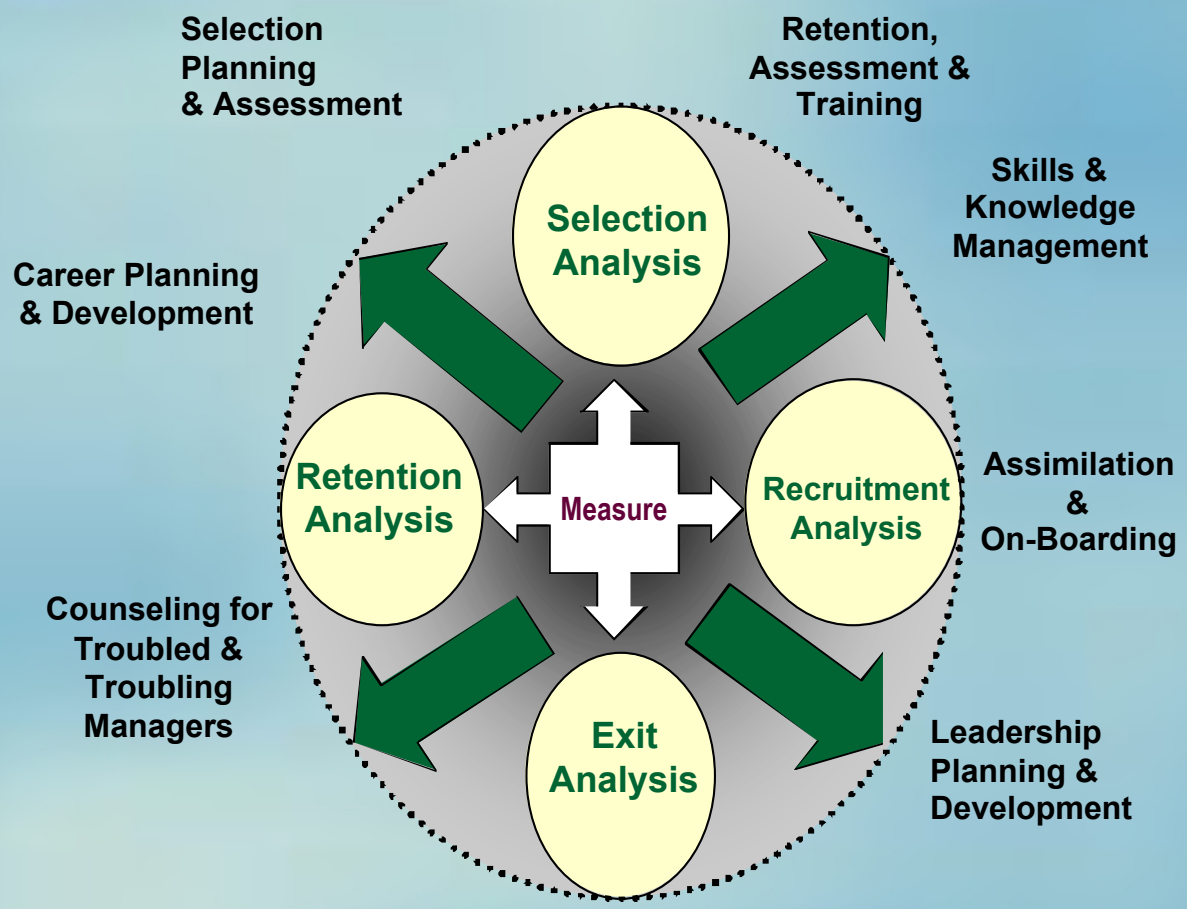
Selection ROI Architecture



Source: Work Institute LLC, Brentwood TN, © 2000

Selection - Effectiveness

- Cycle time from candidate status to hired status
- Number of interviews per job offer
- Measure retention rates
- Conduct exit analyses

Duties & Tasks

Definitive listing of the tasks (discrete units of work), organized into related groups (duties), performed by an individual within a specific job classification or within a specific process.

Duties & Tasks

- **Comprehensive listing of tasks:**
  - Pre-employment selection/training
  - Job-specific, equipment-specific training on-the-job (OJT) systems
  - Cross training systems
  - Performance evaluations / improvement
  - Continuous improvement & knowledge-sharing
  - Quality systems (ISO 9000) implementation
  - Pay-for-skills

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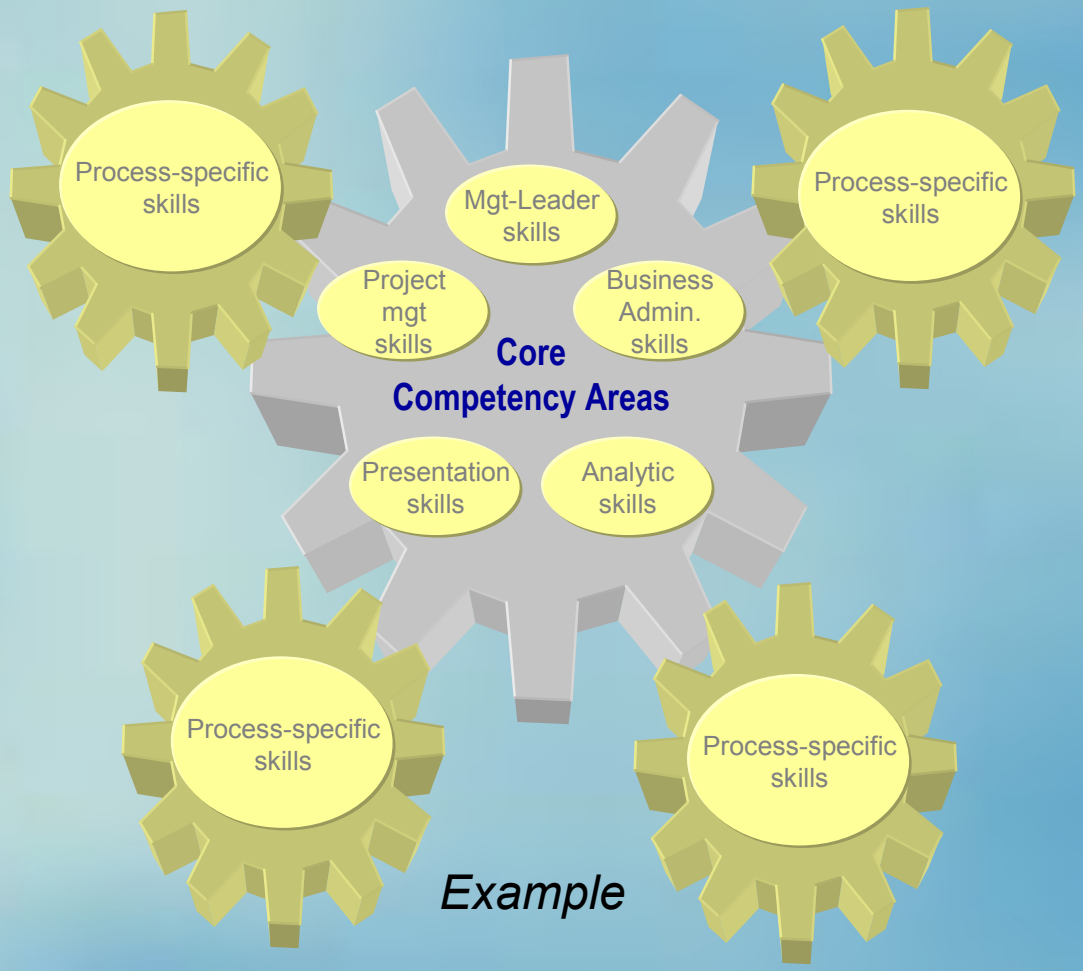
Analysis

To This….Process-oriented

From this…

Department	**Job Title** **Job title** **Job Title**
Department	**Job Title** **Job title** **Job Title**
Department	**Job Title** **Job title** **Job Title**

Functionally oriented



Example

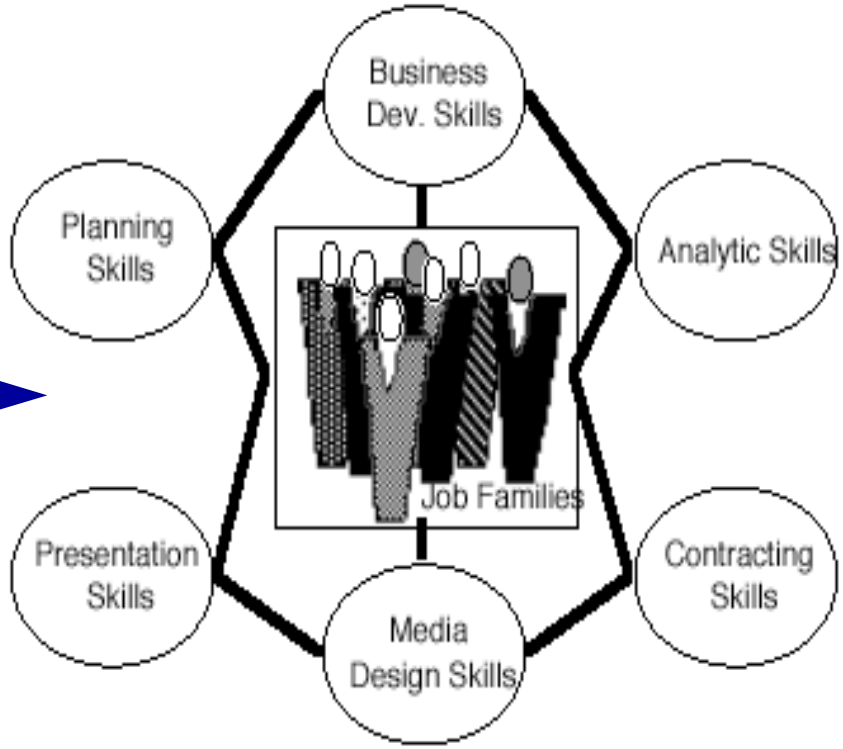
Example

MARKETING JOB ANALYSIS

From This. . .

- Pricing & Administration
- Consulting & Support
- Forecasting / Planning / Scheduling
- Market Development
- Market Research / Competitive Analysis
- Marketing Communications
- Product Marketing
- Telemarketing

To This. . .

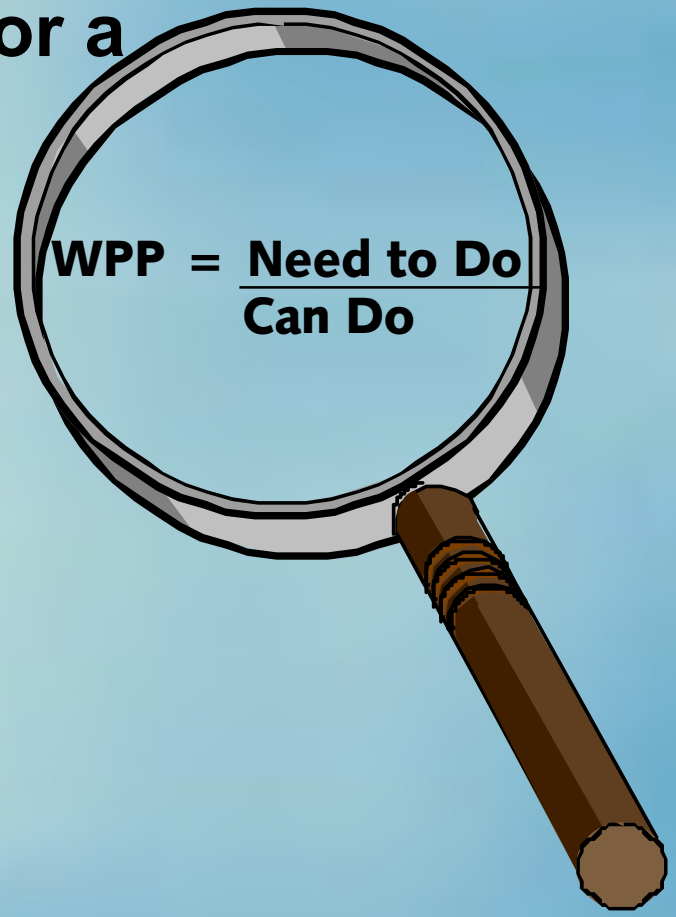


Before → **After**

Duties & Tasks

Serves as the foundation for a critical, new metric:

Workforce Performance Potential



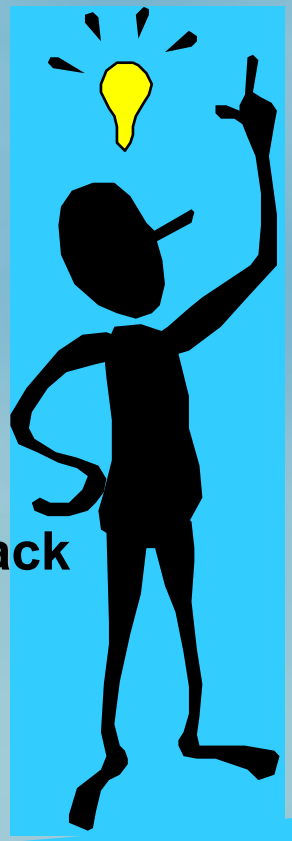
Task Standards

Baseball is 90% physical.
The other half is mental.

- Yogi Berra

Task Standards

- Crucial if you want to:
  - Train & qualify people
  - Measure competency
  - Inject self-corrective measures
  - Provide constructive, corrective feedback



Unconscious incompetence
Conscious incompetence
Unconscious competence

Conscious competence

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Training (skills & knowledge)

What's worse than training someone and having them leave? <u>Not</u> training someone and having them stay!

- Anonymous

Training

- Training can only address skill deficiencies: "Can't Do" <u>not</u> the "Won't Do"
- Must identify the performance gap(s)
- Must determine if & when training is appropriate
- Use a systematic approach, not a shotgun
- Must be measured (performance; results)

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Training's Link to 'World Class'

What is the average annual hours of formal training received by each plant employee?

a. ( ) Less than 8 hours	freq: 3	%: 5.45
b. ( ) 8-20 hours	freq: 28	%: 50.9
c. ( ) 21-40 hours	freq: 13	%: 23.63
d. ( ) More than 40 hours	freq: 11	%: 20.0

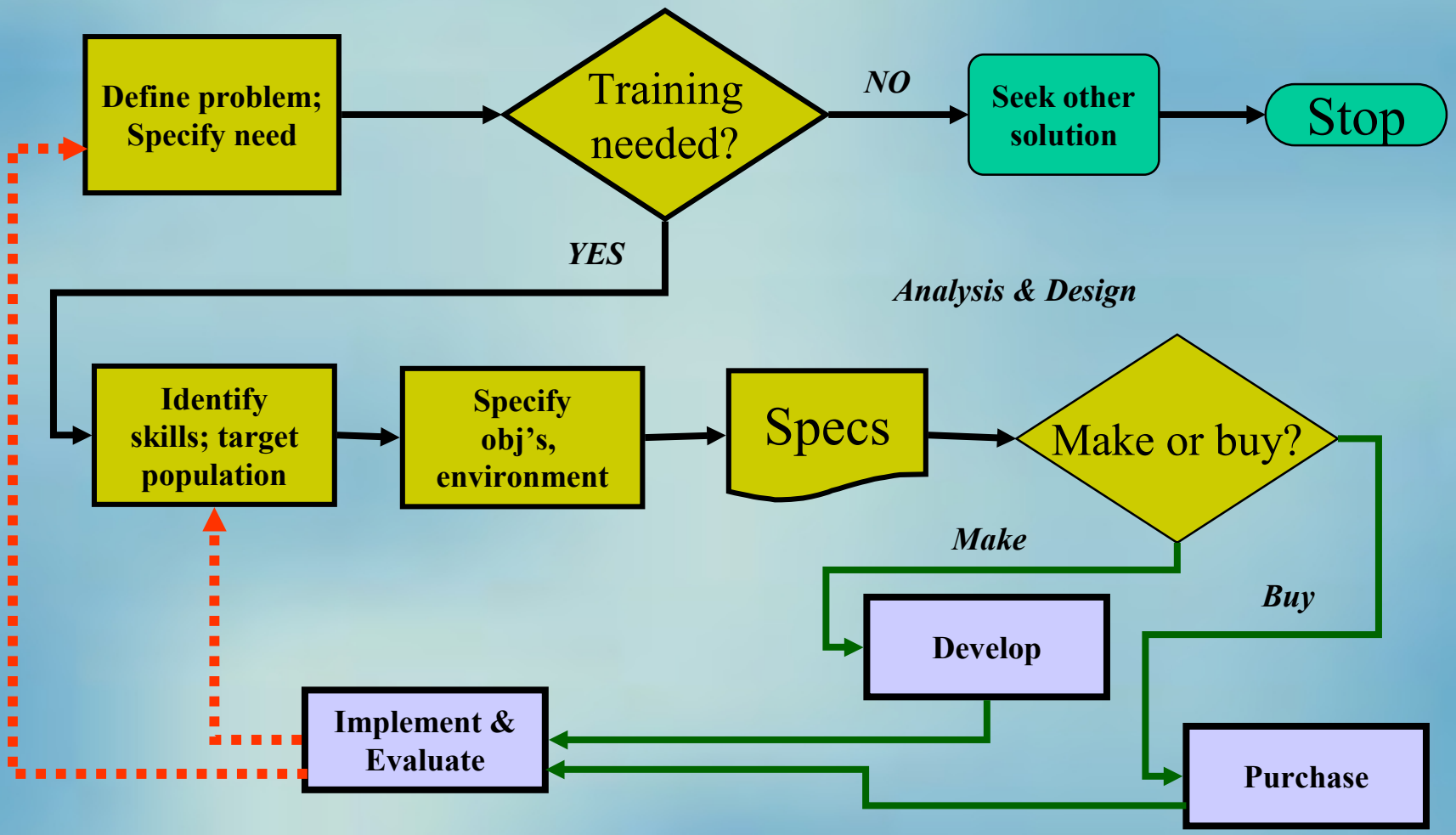
95% of "Best Plants"

>40 hours of training per employee = almost 30% higher Productivity

INDUSTRYWEEK.COM IW LEADERSHIP IN MANUFACTURING

Source: Industry Week 1999, 2000 census data

Training



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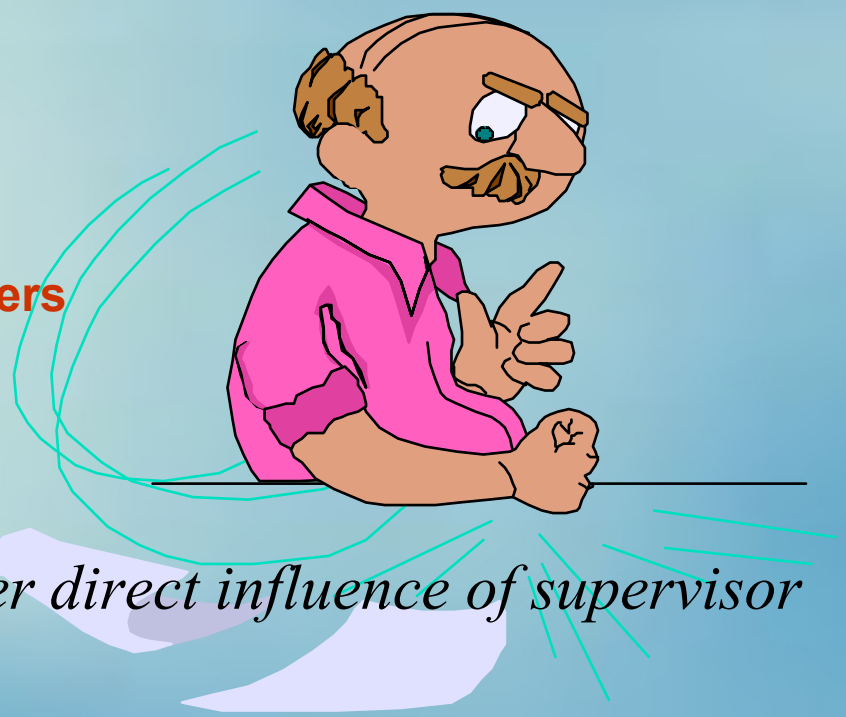
Training - Fix the process, not the people.

EMPLOYEES SAY THEY WANT:

1 - Full appreciation for a job well done
2 - Feeling "in" on things
3 - Help on personal problems
4 - Job security
5 - Good wages
6 - Interesting work
7 - Promotion and growth
8 - Management loyalty to workers
9 - Good working conditions
10-Tactful discipline



70% under direct influence of supervisor

Keeping Good People, 1997, Roger Herman

Tools & References

Doing a better job of providing directions to hourly employees can have a significant impact on retention -- perhaps improving it by 72%.

- Study sponsored by the Coca-Cola Retailing Research Council

Tools & References

- Job aids, performance support systems, and other *self-directed* tools minimize or mitigate process variations introduced by people.
  - If-And-Then Charts
  - Exploded views
  - Flowcharts
  - Step-by-step “cookbook’ procedures
- Usage of such job aids and SOP's can dramatically reduce "training" time and structured OJT development costs

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Tools & References

- Performance technologies represent a significant shift from classroom training.
- High-end learning systems / business simulators, self-directed learning technologies can reduce time-to-competency

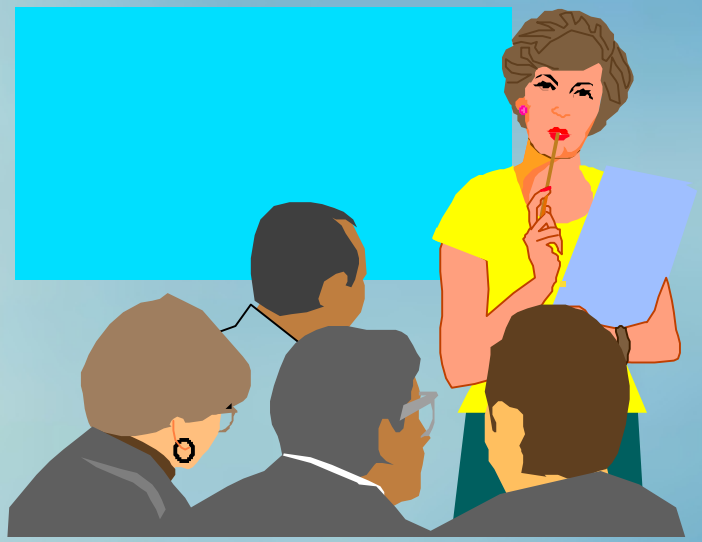
Source: Andersen Consulting

Feedback & Inputs

Processes, systems, or methods whereby performance information is conveyed to job incumbents individually and as a group. Methods whereby process improvement ideas are harvested and acted upon.

Feedback & Inputs

- Mechanisms used to provide feedback -- individual & team
  - Evaluate effectiveness
- Systematic methods to develop a high level of employee involvement
  - Process improvements
  - Cost savings
  - Promote empowerment



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Feedback & Inputs

What's 'World Class'?

- **Plants that are 75% - 100% empowered**
- **Median productivity is 20% - 60% higher in organizations where empowerment is > 25%**

Source: Industry Week 1999 census data

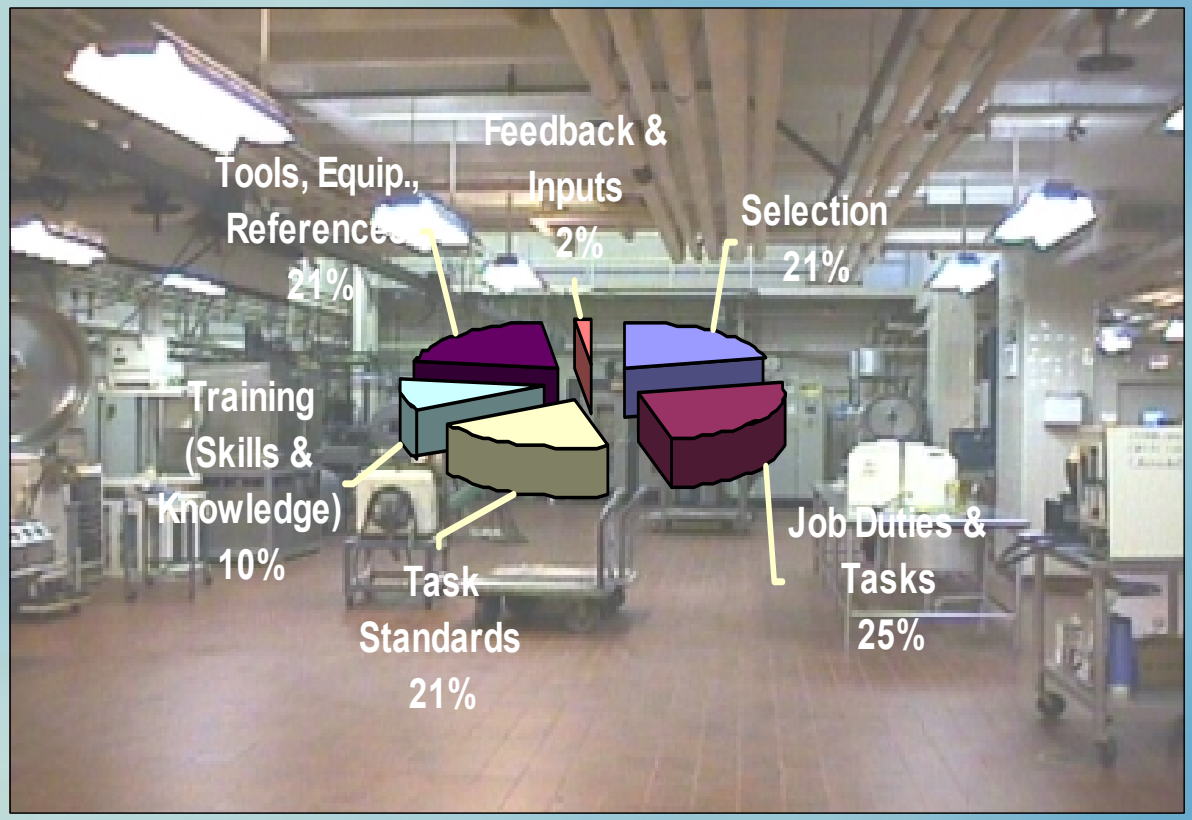
What can you do?

- Examine your own organization from a human capital & performance technology viewpoint
- Target the gaps
- Promote human capital strategy

The best thing to do the RIGHT THING.
The next to the best thing to do the WRONG THING.
The worst thing is to do NOTHING.

Build a strategic plan for performance

Seek a systematic, comprehensive, integrated response to performance problems



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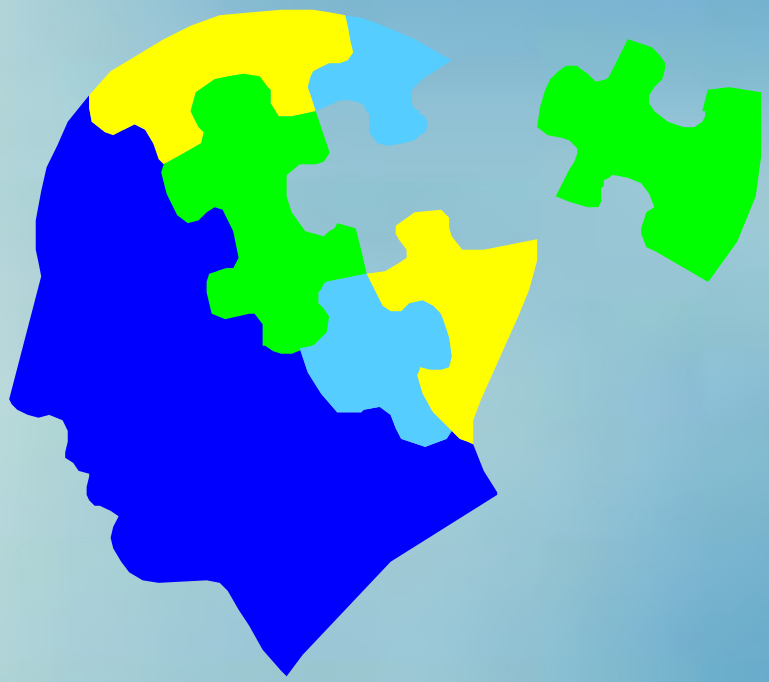
A Word of Advice

- **Training is one piece of the performance improvement puzzle.**



Focus on performance gaps. Use training to correct skill deficiencies.

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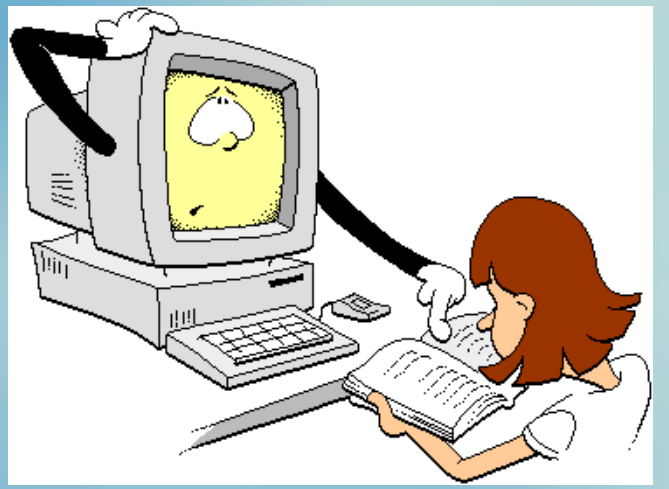
For more info...



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http://www.ispi.org

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