



# Aligning Technology & People:

Getting best value from NSRP R&D projects

Crosscut Initiatives Panel

Update 2010



# Crosscut Panel's Five Roles

## 2005 Strategic Investment Plan

- ▶ Workforce development and retention
- ▶ Education and training
- ▶ Organizational development and culture change
- ▶ Technology transfer
- ▶ Human resources management

These functions “cut across” other areas in shipyards – design, production & business processes

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### VIDEO LIBRARY

Listen to what people working in the industry are saying.


Learn while you earn! Watch a video about apprenticeship.

Get a feel for some of the different jobs found in a shipyard.

## RESOURCES

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### STUDENTS

#### WHO AM I?

- Career Communications, Inc.  
Not sure what you want to be when you grow up? Take a career interest inventory to get started in the right direction.

#### WHERE CAN I START MY CAREER?

Shipyards offer you rewarding and challenging careers and are located throughout the United States. Click on the links below to find out what shipyards are located in your region of the country.

- Atlantic
- Great Lakes & Inland Waterways
- Gulf Coast
- Northeast
- West Coast

#### HOW MUCH CAN I EARN?

Shipyards offer competitive wages. Your education and skill levels determine how much you make. Below are a few examples of what you can expect to earn working in today's shipyards:

- Foremen and computer-aided draftsmen earn between \$35,000 and \$60,000 a year.
- Skilled craftsmen such as welders, riggers, electricians, machinists, and carpenters earn between \$42,000 and \$45,000 annually.
- Naval architects and engineers make \$51,000 to \$95,000 each year.

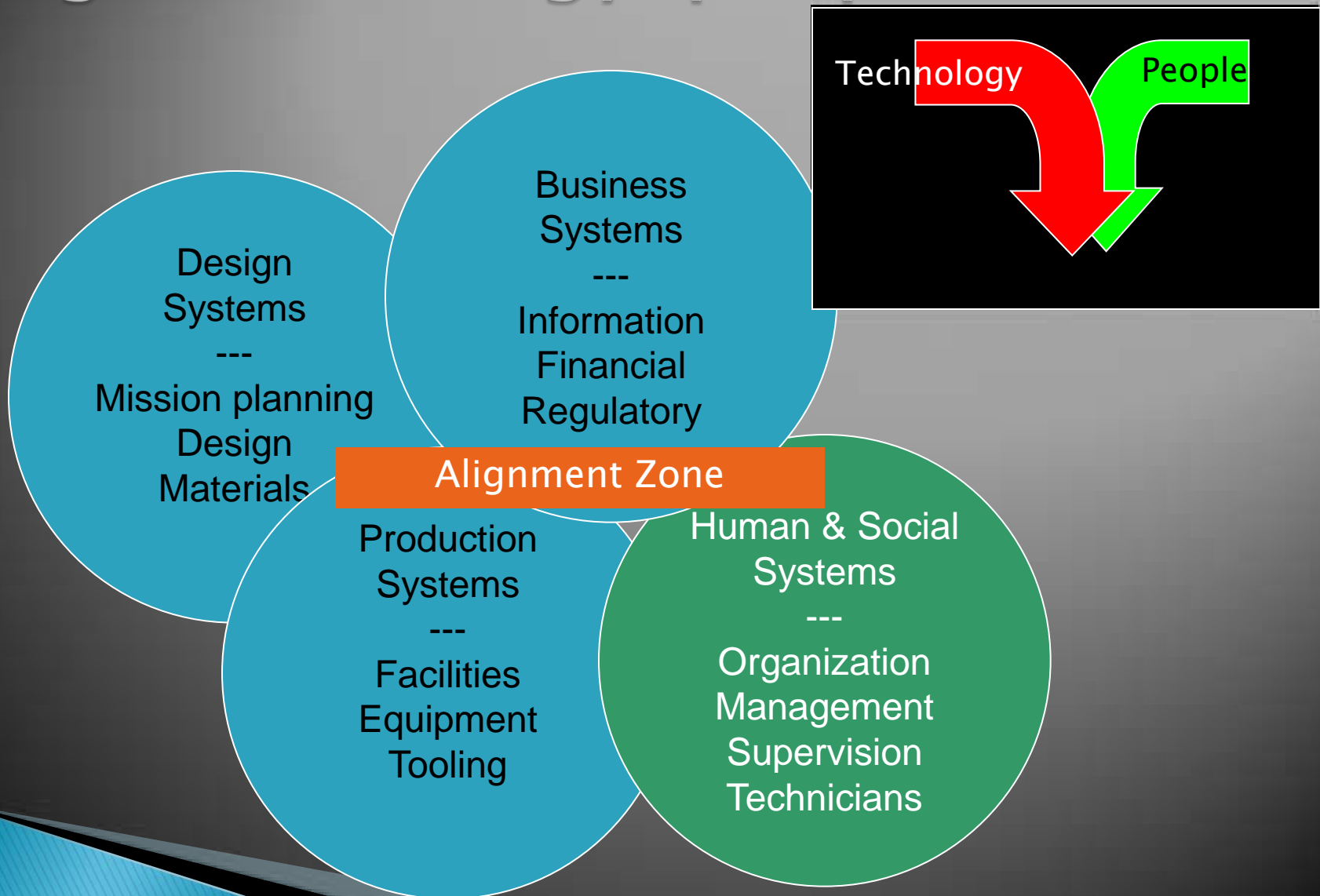
Visit the sites below to search for jobs where you live.

- Career One Stop  
Job search tools and additional resources
- Monster.com  
Job search tools and additional resources

#### CAN I MOVE UP ONCE I START WORKING AT A SHIPYARD?

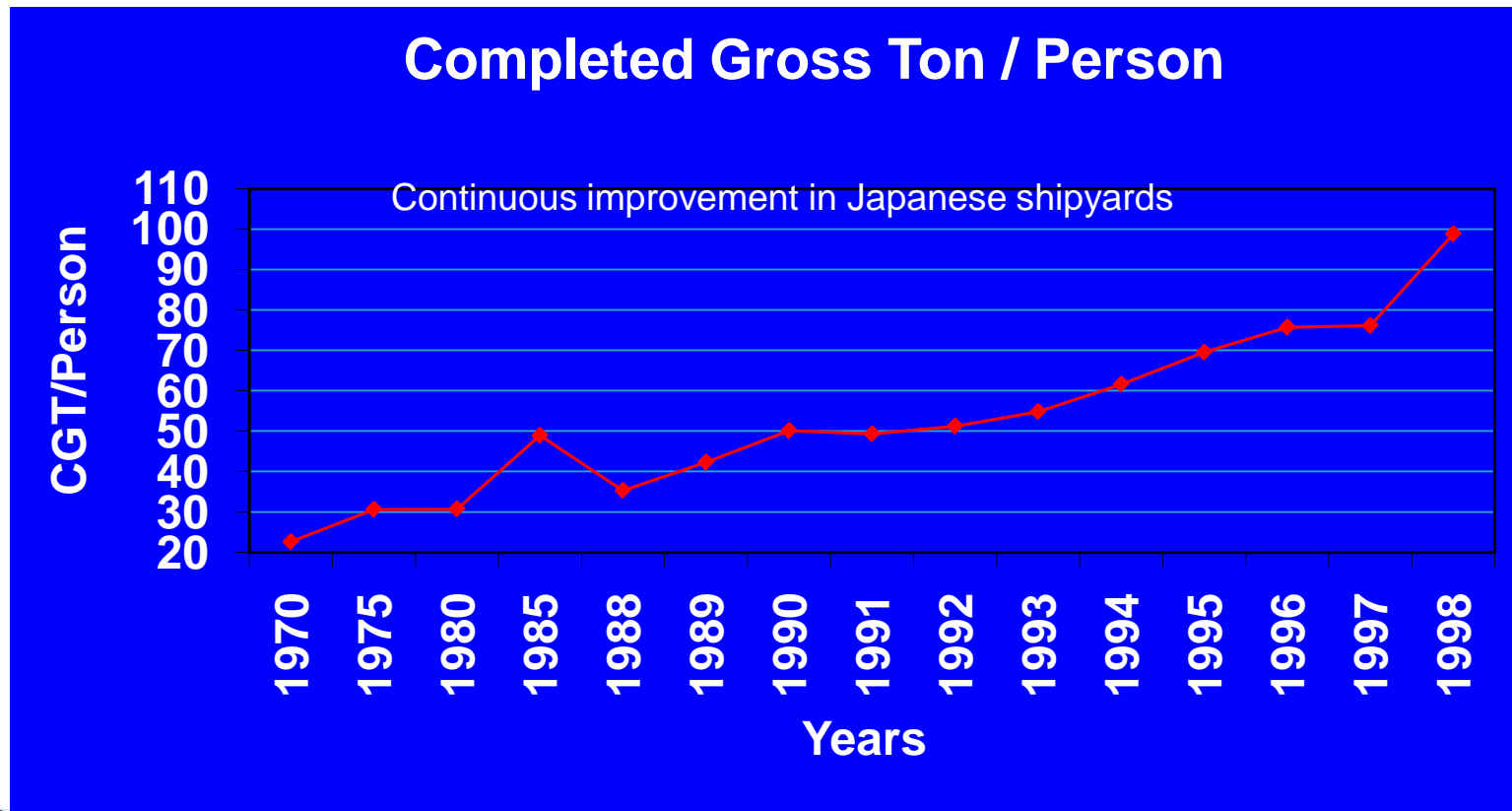
The shipbuilding and repair industry offers a variety of career paths and

# Align technology-people



# Result of technology–people alignment

- ▶ Are people a profit center or an asset investment?



# Project Needs


## ▶ NAVSEA Goals

- Total Ownership Cost Reduction
- Improved quality – products & services
- ‘Green’ fleet and facilities

## ▶ Industry improvement

- Delivery, quality, cost

# Project design for business value

- ▶ Technical projects meet customer demand:
    - Production/Delivery
    - Quality
    - Cost
  
  - ▶ People qualities: managers, supervisors, technicians
    - passion
    - skill
    - discipline
- 

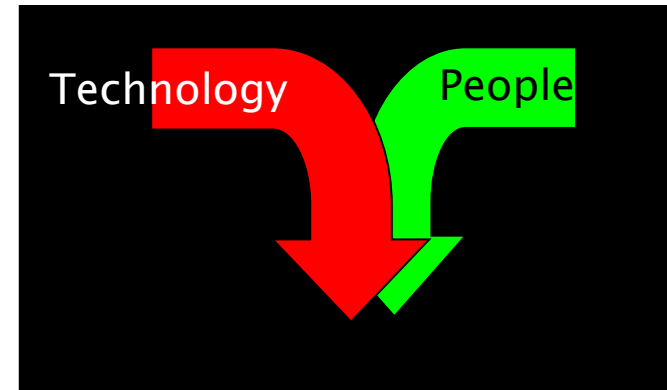
# Human factors can inhibit technology

- ▶ Executive issues
- ▶ Cultural issues
- ▶ Management issues
- ▶ Implementation issues
- ▶ Technical issues.



# Technology transfer and change management

- ▶ Design with transfer & change in mind
- ▶ Get buy-in from individuals, groups, companies
- ▶ Develop more effective education and training
- ▶ Help expand implementation in & across shipyards



# Tech Transfer Problems



## ▶ Excuses

- “We are too busy right now.”
- “This doesn’t apply to us. We are different
- “We are too big/small.”
- “It wouldn’t work here.”

## ▶ Negative statements

- “We are going to lose our jobs.”
- “The change is an excuse to get rid of people.”
- “We’re better off the way we are.”
- “This place is bad and will stay that way.”
- “This is just another stupid idea.”

# Tech Transfer & Change Management



- ▶ **Workforce Impact Domain**
  - Human factors in job design
  - Job enlargement probabilities
  - Job training & organizational impact evaluation
  - Personnel training requirements

# Tech Transfer & Change Management



- ▶ **Organizational Impact Domain**
  - Organizational acceptance
  - Organizational processes maturity levels
  - Predictability, effectiveness, control and continuous improvement
  - Traditional improvement methods & process maturity

# Tech Transfer & Change Management



- Individual & Group Behavioral Change Domain
  - Psychological & motivational applications
  - Cultural determinants toward quality
  - Industrial psychology factors of performance problems
  - Essence of leadership & supervision

# More information

- ▶ The work of technology transfer and change management is mostly listening, teaching and coaching.
- ▶ Contact Crosscut/Human Factors
  - Larry Gebhardt – Alaska Ship & Drydock, Inc.
  - Dick Boutwell – Northrop Grumman Newport News

