NSRP ASE Crosscut Initiatives Panel Project

Industry Image Improvement (Sizzle Sells the Steak)

Final Report

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- goships.com survey spreadsheet

1. Project Summary.

The Industry Image Improvement Project (IIIP) was proposed and sponsored by the Crosscut Initiatives Panel. After project selection for funding, Alaska Ship and Drydock, Inc. served as the prime contractor. The project designed, produced, and evaluated samples of three 30 second video clips, described as 'commercials,' and a web portal, www.goships.com as promotional tools for communicating and improving the shipbuilding and repair industry image. A secondary use of project data is related to organization development and culture change within the industry.

The promotional clips, and their testing within the shipbuilding and repair community, provided some additional background about how to deal with the looming demographic changes and challenges to workforce development and begin to tease out viable answers to the core question, "Who will build and repair our ships in 2010 and beyond?"

The project gathered a broad range of shipbuilding and repair information, related web links, still photographs, video clips, narrative stories of shipyard employees and other useful information

The video commercials, web site, and their review/consideration process, serve as a lever for deciding if investment in an integrated media-marketing communications strategy makes sense. Lessons learned and recommendations for next steps are provided.

2. Project Background and Rationale.

This section of the IIIP final report is a summary of a realistic business case for improving industry image. There is a need and readiness to "Do It."

Need to "Do It"

In the earliest debate around America as a secure nation, Jefferson tended to perceive a continental nation protected at its boundaries, while Hamilton perceived an island nation projecting power and commerce to engage with the world. Those of us who have a Hamiltonian outlook can help insure that the national shipbuilding and repair industrial base remains strong and productive. Jeffersonians need the same industrial base for national commerce and coastal security.

Careful analysis and thinking has created the will to build a 313 ship Navy that can meet foreseeable national security needs. A similar will is pointing America to:

- energy independence that needs a robust tanker fleet and offshore energy extraction;
- homeland security with adequate Coast Guard assets;

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¹ Chief of Naval Operations (CNO) Adm. Mike Mullen called June 14, 2006 for the development of a new maritime strategy to guide the Navy through the challenges of globalization and the war on terrorism.

- means to move people and goods between ports and along our waterways,
- ocean research and seabed use, and
- a fair share of US built and flagged commercial vessels to compete in the global marketplace.

The idiom, "Where there's a will, there's a way" raises a challenge for our industry and our customers. The linguist tells us the idiom means, "If you want something badly enough, you can find the means to get it." The cash means is limited. GAO analysts claim that the government purse has a \$4 billion shortfall, so that the 313 ship Navy can't be done in US shipyards. US Naval War College students question why US warship hulls aren't built in Asian shipyards for outfitting in US shipyards.² Similar naysayers want to overturn the historic Jones Act to get access to "cheap" foreign commercial vessels and crews if the US industry can't meet global prices. In the past, Americans have rolled up our sleeves and said, "We can do it." In America, the person who says, 'It can't be done' is often interrupted by someone doing it. The someones are people – in our shipyards and stakeholder organizations – who need an industry image compelling enough to join, stay, work, and get results.

Readiness to "Do It"

Since the Berlin wall came down in 1989 marking the Cold War's end US shipyards have invested some \$5 billion in capital assets. In addition, ongoing SNAME initiatives, Gulf Coast Region Maritime Technology Center since 1994, MARITECH defense conversion legislation in 1995, and expansion of the National Shipbuilding Research Program in 1998, have brought investment for research and development focused mostly on ship design, process systems, and production technology. Global benchmark studies³ completed in 2006-2007 suggest fifty areas for continued improvement and rank companion investment in workforce and organization improvements in the top categories. These recommendations include some politically sensitive areas, such as adjustments to the US "customer factor" that like Wal-Mart shoppers who want more for less; changing some historic work rules that are frankly un-lean; and building improved collaboration between fragmented trade and technical associations and defense-commercial shipyard segments. While these changes may be hard, they are achievable and demonstrated by other profitable American businesses such as Southwest Airlines, a unionized firm, and Toyota that effectively compete in the US marketplace. The impressive work by Associated General Contractors and the Construction Industry Institute reveal lessons that have helped their industry remain competitive.

 $^{^2\} Globalization\ of\ Navy\ Shipbuilding-A\ Key\ to\ Affordability\ for\ a\ New\ Maritime\ Strategy,\ by\ Robert\ J.$ White. Published in Naval War College Review, Autumn, 2007, Volume 60, Number 4, pages 59-72

³ First Marine International (FMI), Findings For The Global Shipbuilding Industrial Base Benchmarking Study, Part 1: Major Shipyards, Written for the Office of the Deputy Under Secretary of Defense for Industrial Policy (ODUSD(IP)) and the Center for Naval Shipbuilding Technology (CNST). January, 2006, Part 2: Mid-tier Shipyards, February 2007

National Shipbuilding Research Program Role

The National Shipbuilding Research Program publishes a Strategic Initiative Plan⁴ to guide research and development efforts. The 2005 SIP contains guidance on initiatives for workforce development and for organization development and culture change – two topics that overlap in the IIIP Project. The following pertinent extract is from the Crosscut Initiatives section, of the NSRP SIP pages 119-124 of the SIP.

A critical element in the transformation of the industry is the shipbuilding and ship repair workforce. The U. S. shipbuilding and ship repair industry shares much in common with other U.S. manufacturing and construction industries. The productivity of many U.S. manufacturing and construction industries is directly related to the level of skill of the workforce employed in that industry. More than 50% of U.S. employers say they cannot find the skilled workforce required. This is particularly true for entry-level positions. It is estimated that U.S. businesses, in general, spend up to \$30 billion to train and retrain their workforce. The shipbuilding industry is no exception. In fact, the U.S. shipbuilding industry has lost approximately 150,000 skilled employees since the late 1980's mostly due to the stagnant market. This has caused the shipbuilding industry to experience a "generation gap" of skilled employees.

A successful transformation of the industry must address the factors in existing shipyard cultures that negatively impact and influence the workforce. These factors limit the implementation of needed technology and process changes. They limit the industry's ability to compete for and retain skilled and quality workers.

To address the industry's people and organization needs, this major initiative includes five sub-initiatives:

- Education and Training the programs and technologies that enable existing and future shipbuilding and ship repair employees to acquire needed knowledge, skills and experience.
- **Technology Transfer** the process of sharing and transferring technology and expertise gained from research program results and best practices within the shipbuilding and ship repair industry.
- Workforce Development and Retention the programs and activities needed to attract, develop, and retain qualified personnel to support shipyard operations.
- Organizational <u>and Cultural Change</u> the activities that support modifying/altering workplace values, behaviors, and organizations to enable changes in processes, tooling, and technology in the shipbuilding and ship repair industry.
- **Human Resources** the programs and technologies that support the people services within the shipbuilding and ship repair industry.

Table 1: Difficult Challenges and Key Issues in Crosscut Initiatives

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Difficult Challenges	Key Issues	
Education and Training	The industry's workforce training is under-funded. The industry has	
_	limited school and industry partnerships. Workforce has weak process	
	improvement, information technology, and basic soft skills. Industry	
	lacks training technology implementations.	
Technology Transfer	Key information supporting technology transfer not always available.	
	Limited incentives, processes, and resources in shipyards to encourage	
	adoption. Current business models and contracts not structured to reward	
	technology adoption.	
Workforce Development and	The shortage of skilled shipyard employees, the aging of existing	

⁴ Available via the NSRP web portal, www.nsrp.org

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Retention	employees, and the ability to retain skilled shipyard personnel is essential to the health and success of the industry. Where will the workforce to build and repair ships come from in 2010?
Organizational and Cultural Change	The values, behaviors, and organizations required to accept and sustain change are not pervasive in shipyards. Leadership is not well prepared to lead change. Tools and metrics to support continuous improvement are not commonplace.
Human Resources	Industry needs competitive compensation/rewards, and methods for handling regulations and benefits costs. Industry is weak in handling diverse workforces, supporting employee quality of life, and building effective labor relationships. HR departments need updated approaches.

Workforce Development and Retention

One issue common to most U.S. shipyards is the shortage of skilled employees and the aging of the existing craft production workforce. Shipyards are discovering that there is a critical shortage of skilled employees in the current economic environment of the United States. The U.S Shipyards have a poor image with the general public, educators, parents and students. Additionally the ship building and repair business cycle compounds this poor image. Traditional methods of attracting, hiring, and maintaining a viable workforce are becoming less effective for the U.S. shipyards. The number of skilled individuals is decreasing and the pool of candidates willing to train is shrinking.

The retention of skilled, experienced shipyard personnel is essential to the health and success of the industry. Turnover of skilled, experienced employees at all levels continues to be a tremendous cost issue to the shipyards. Shipyard Human Resource professionals must also work closely with each area of the shipyard to identify new skills that are needed (international business, manufacturing technology, process engineering, competitive marketing and procurement, etc.) and develop plans to bridge the missing skill sets. U.S. shipyards lack career development process and systems. Few employers have identified career paths for engineers into production and vice versa. The U.S. shipyards are negatively impacted by poor working conditions, an aging workforce, and have great difficulty in retaining a skilled workforce. There is significant competition and loss of skilled employees. The shrinking U.S. Navy budget to build and repair the Navy fleet has caused severe reductions in the workforce of shipyards that have primarily served the Navy as their main customer, and many of these employees have moved to other industries. The U.S. shipyards must find a way to retain skilled workers.

Organizational and Cultural Change

A critical element in the transformation of the U.S. shipbuilding and ship repair industry is the ability to adapt to change. A company or organization's willingness to abandon tradition and embrace new technology and processes are key elements to the industry's future success. Successful implementation of new technologies and processes depends on each shipyard's capability to implement cultural change throughout its organization. The industry historically has been slow to adopt change, and inadequately prepared to bring about change in shipyard culture. Recent NSRP results suggest that the industry has grown more receptive to change and has a growing awareness of shipyard cultural impacts, but the values, behaviors, and organizations that are required to enable the transformation of the industry are not yet commonplace.

The most important factor in changing an organization and its culture is leadership's capacity to understand the nature of change and their role in change. Leaders must embrace the necessity of change as well as the technology of change. The industry has been characterized by an inadequate preparation of leadership to lead and sustain change, and by an inadequate quantity or depth of leadership who understand change.

To transform the industry, leaders must design their organizations to take advantage of new technologies and processes appropriate to their shipyard settings. Creating a culture that embraces change requires realignment of the interdependent systems within shipyards. Change can include empowering employees, opening new forms of communication, recognizing and rewarding performance, developing internal partnerships to improve performance, and educating employees on the business and business challenges. It also can include expanding external partnerships to involve customers and suppliers in change, and engaging other shipyards with common interests in change.

Adequate mechanisms to support these concepts are not yet pervasive within the shipbuilding industry as required to support the needed industry transformation.

Technology is evolving rapidly, and the global business environment is changing as new tools fundamentally alter the world economy. Continuous process improvement is necessary to exploit constant improvements in technology. Change is therefore not a single project exercise, but rather a continuing discipline. U.S. shipyards, having understood the need for change, must be able to manage change, measure the effectiveness of new technologies and business processes, and continually improve processes based on stated metrics and goals. Adequate mechanisms do not exist within the industry to support continuous improvement.

Studies Encourage Industry Image Improvement

Crosscut Initiatives Panel workforce development and industry image studies begun in 2003 were shared at a workforce summit conference held September, 2005 in

Washington DC. Testimony and data reveal the growing difficulty attracting and retaining the number and skills of workers who can become competent shipbuilding and repair technicians, engineers and managers. A 2006 RAND study⁵ raised workforce issues. In this report shipbuilding executive Mike Petters summarized issues he faces by noting that most of his company's workforce is either less than 35 years of age and has less than five years of experience or more than 45 years of age with more than 20 years of experience. That is, the industry faces issues related to both an aging workforce and "green labor." Crosscut surveys reveal that nearly half of senior shipbuilders would not recommend the industry to their children. Industry benchmark studies cite cyclic work, perceived safety and demanding conditions as negative

September 12, 2006. Marine Log and other sources.

Signal International (www.signalint.com), a fabricator of offshore drilling platforms and other marine equipment, will hire 590 workers, including 220 welders, from India, says John Sanders, corporate program manager.

The company's decision to hire offshore workers followed intensive recruiting efforts in Pascagoula, Miss., and Orange, Texas, where the company's facilities are located, Sanders says. The company's effort included such recruiting methods as newspaper advertisements, company website postings and billboards, and resulted in one new employee being added. The failure of that program provided part of the documentation Signal needed to gain approval from the United States Department of Labor to recruit foreign labor, and for that foreign labor to receive H-2B work visas.

Once the company gained the necessary approval, it sent superintendents to India to conduct interviews and skills tests of future workers. Those workers will travel to the United States, where their skills such as welding will again be tested and certified.

factors. The RAND study states, "As a consequence of this age structure in its

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⁵ Arena, Mark V. et al., Why Has the Cost of Navy Ships Risen? - A Macroscopic Examination of the Trends in U.S. Naval Ship Costs Over the Past Several Decades, RAND Corporation report MG-484, 2006

workforce, the industry faces the prospect of a wave of retirements in about a decade with relatively inexperienced workers to take the place of these older workers. Compounding these problems is the fact that recruiting for the skills required in the shipbuilding industry is challenging, and therefore vacancies are not easy to fill. Shipbuilding is tough work, and the requirements for labor are driven by unstable demand. Young workers may look to high-tech or other service industries as an alternative career path with better compensation and more favorable working conditions. One shipbuilder claimed that a skilled electrician would make much more money and have better working conditions in residential construction than in shipbuilding."

In the face of this apparent lemon it is time to make lemonade. Those of us who build and repair ships are proud of what we do. Other shipyards agreed to share some of their current image libraries. The short video clip of Northrop Grumman Ship Systems repair and delivery of USS Cole shows the excitement of our work. The Northrop Grumman Newport News welding career promotional contains other compelling testimony.

Many young people entering the workforce and career shipbuilders do not want "Dilbert" jobs in cubicles. They participate in "extreme" sports that can be connected with the "extreme" work and variety of which we are proud. We need tools and techniques to lift our spirits and attract young people and job changers to savor the "sizzle" then come and eat the "steak" of valuable shipbuilding and repair careers.

3. Industry Image Description.

There is no specific definition of industry image in business literature. Reputation is the opinion (more technically, a social evaluation) of the public toward a person, a group of people, or an organization. It is an important factor in many fields, such as business, online communities or social status.

Industry image synthesizes the perceptions and impressions of its organization members and by the public as a result of interaction with the organizations and the way the organizations presents themselves. Organizations have traditionally focused on the design of communication and advertising materials, using logos, symbols, text, and color to create a favorable impression on target groups, but a variety of additional activities contribute to a positive corporate image. These include PR programs such as community involvement, sponsorship, and environmental projects, participation in quality improvement schemes, and good practice in industrial relations.

Roadblocks to Industry Image

There is no national effort to improve the shipbuilding and repair industry image for investors, customers, current or prospective employees, or the public at large. A complete media marketing campaign that would develop advertising, career sales promotion, public relations, personal selling and direct marketing is outside the scope of a panel project; however, steps toward building shipyard leader awareness of recruiting and retention issues, one small subset of industry image impact, must begin now.

Children as young as five years old begin to eliminate career possibilities when authoritative adults or media convince their young minds, "I don't want to be one of those"

Our industry is fragmented. Some fragmentation is caused by geographic distribution along 88,000 miles of ocean coastline and 30,000 miles of navigable rivers. There are over 125 American shipyards. Some fragmentation is caused by different government agencies having responsibility for vessel construction and operation such as US Navy (the largest segment by budget), Army watercraft, US Coast Guard, NOAA, etc. Other fragmentation is caused by different commercial industry segments such as Jones Act, offshore, luxury yachts, and large port cargo. Although our industry is relatively small, with at best about 100,000 people employed in shipyards, we have fragmented trade associations. Our industry is supported by labor organizations and specialists in finance, law, insurance, materials, logistics, environmental-safety-health regulations and more. Think about the different trade and professional associations, product and service providers and their supply chains. What government agencies represent the many and varied fragments of our industry?

Our industry has non-standard terminology and skills. We lack a clearly understood path for career entry and development. Other industries such as health care, construction, and computer networks have well developed career ladders, skill standards, certification steps, and other commonality that enables entry, upward job mobility and geographic-employer job portability.

Building on the Past

The need for industry image improvement and collaboration across fragmentation within the industry is not a new concept. The IIIP considered the knowledge and experience from previous design-build-operation of the Crosscut Virtual Resource Center (VRC) that operated between 1999-2003. (MARITECH ASE Project 2000928 A Shipbuilding and Ship Repair Virtual Resource Center for Crosscut Initiatives, \$935K ASE funds)⁷

VRC implementation met the overall goals identified for the project. Two services were implemented which specifically supported personnel who are not professionals in crosscut areas. These services included the Crosscut Contacts and the Proposers and Managers Guide. Five services were implemented which specifically supported the industry's crosscut professionals. These services include Abstracts and Bibliographies, Crosscut Discussion, Crosscut Links, School/Industry Models, and the Training Course Library. Personnel who are not professionals in crosscut areas also could benefit from these services. Three services were implemented which specifically addressed collaboration and communication across the industry, and support the transfer of new

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⁶ Maritime Business Strategies, LLC http://www.coltoncompany.com/

⁷ A Resource Center for Crosscut Initiatives: A Collaborative Effort of Avondale, Bath Iron Works, Cascade General, Electric Boat, NASSCO, Todd Pacific, and UMTRI Author: Davis C. A. Source: <u>Journal</u> of Ship Production, Volume 17, Number 3, 1 August 2001, pp. 161-168(8)

technologies and teaming among industry members and partners such as schools. These services included Recruiting Materials, Virtual Teaming & Workshops, and buildships.com. The Resource Center successfully provided online information sources while facilitating needed human collaboration (e.g., Abstracts & Bibliographies and Crosscut Contacts). In addition, a specialized online resource environment was produced that could serve as a model for other industry initiatives. Critical lessons learned from the Virtual Resource Center were included in the VRC final report of April 1, 2003⁸. The VRC had superb technical (web and database) support but depended solely on cost-share volunteers to develop and maintain content. The VRC was revitalized in early 2007 as a web presence via the www.nsrp.org web portal but suffers from the same weakness: adequate web support but no committed professional content managers.

Past Industry Image Products emerged from VRC work by Crosscut Panel volunteers aided by shipyard cost share in the early 2000s. Specific examples include:

- Industry brochure
- Poster
- Presentation
- Commercials
- Video clips

These products in electronic file formats are in Appendix E, a DVD. None of these products gained traction in the broader shipbuilding and repair industry.

4. Industry Image Project Design

The project work scope, Appendix A, was to pair experienced shipyard workforce development experts with modern and young media-marketing-communication experts who know how to design and deliver "sizzle" that can appeal to young and old alike then design and build some sample image clips. Modern US and global marketing and communications firms know what sells cell phones, films, and political philosophy. Application of commercial marketing principles to public good such as weight loss, AIDS safety, and motorcycle helmets can also lead youth and job changers to contemplate alternatives and explore shipbuilding and repair careers as alternatives to financial, retail, and other service work. Marketing in the Internet Age requires awareness of where the target audience gets information and shares it with their friends.

The project tasks were to:

- Gather examples of existing shipyard imagery that illustrate the variety and
 excitement of our work along with contrasting imagery of routine, dull work.
 Subcontract to the Seattle-based team but provide liaison assistance with
 participating shipyards to donate film clips and ideas, and encourage other
 shipyards to participate as part of cost share.
- Create new imagery to fill imagery gaps. Subcontract to the Seattle-based video production team but include cost share such as access to shipyards for filming,

⁸ VRC Final report http://www.nsrp.org/projects/vrc_deliverables.html

real shipbuilders as feasible to participate, insurance while working on shipyards, etc.

- Synthesize existing and new imagery, music and other audio into several 15-30 second pilot advertising clips suitable for TV, web, etc. Subcontract to the Seattle-based team who has video editing technology but provide cost share in terms of in-process review of products to help converge on pilot clips.
- Test market the pilot clips in participating shipyards for employees, their families and friends to get feedback on their value in: influencing incumbent workforce morale, attracting young people to explore the industry; and generally creating a more compelling mindset toward shipbuilding and repair. Determine if shipbuilders, families and friends would share clips by e-mail, between videocapable cell phones, and other innovation. Develop an introduction and background information, and survey. Prime contractor, with the cost-share help of NSRP panel members in shipyards will accomplish this work.
- Gather results of the film clip surveys and report.

Research in developing the proposal for IIIP Panel Project funding revealed that when pricing a television or web commercial, there is need to weigh the costs of two separate things: (1) the cost of producing the commercial, and (2) the cost of airing it.

It has been estimated that the average cost of producing a 30-second national TV commercial is nearly \$350,000. But it is understood that like any other form of advertising, a commercial can be as simple or as complicated as desired. Not surprisingly, the cost to produce the commercial goes up as the quality and complexity of the commercial increases.

Small- to medium-sized businesses and the IIIP cannot afford to invest \$350,000 in a single commercial. But, decent quality commercials can be produced for low cost. The best place to start is with freelancers or small production agencies.

The IIIP budget of \$25,000 was allocated: \$20,000 for commercial design and production; \$4,000 for basic web design as a commercial "airing" channel, for survey design and market testing; and \$1,000 for technical leadership labor.

5. Designing and Producing Short Commercials

Story-Boarding and Producing Commercials

Principals of the IIIP subcontractor Studio Trifusion LLC, a small video production firm in Seattle, Washington, had past professional experience with firms such as: MySpace social network; Publicis, Inc., the fourth largest global media-marketing firm; Yahoo web portal; video game development and marketing; and market branding firms. In addition,

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⁹ Gaebler Ventures, 156 N. Jefferson Street, Suite 301, Chicago, IL 60661

the team had skills and technology in digital still and video photography, audio, post-production editing, after-effects, and related technology and had produced several short commercials.

Studio Trifusion LLC principals studied the shipbuilding and repair industry. They had done some training video and graphics work for SENESCO Marine and Alaska Ship and Drydock, Inc. so were learning about the industry. Some of the team participated in the Crosscut Initiatives Panel meeting in July, 2006, heard a presentation on industry image needs, included in Appendix E, and suggested an approach to commercial design aimed at younger people.

A range of shipbuilding and repair industry documents were provided to the subcontracting firm to give them additional background and information. These included:

- links to the www.nsrp.org web portal with some direction on things to look for
- links to the www.nsnet.com web portal with focus on the pictures library with substantive input from Lou Chirillo.

Todd Pacific Shipyards conducted an extensive tour of their facilities for the subcontracting firm with focus on realistic jobs at in-door and outdoor work stations. A set of photographs and extensive discussion were released to the IIIP as a result of this tour as part of the industry cost share.

In addition, as part of industry cost share, Northrop Grumman Newport News provided copies of some of their commercials, and access to other instructional and promotional media to help the IIIP team see some high-end production results.

Subsequent conversations led to a spectrum of concepts, some way outside the IIIP budget, others too simplistic for attraction of a younger audience. For example, the comparison of "extreme" sports and jobs is worthy of future development so that the image of a rock climber could morph into the image of a shipyard worker doing high work. Likewise, the image of a spelunker (cave explorer) could morph into the image of a shipyard worker in tanks or void spaces. Other comparisons between related work more common to public awareness, such as cranes at building construction sites contrasted with amazing heavy lift cranes at shipyards could create a "shock and awe" factor.

The Studio Trifusion LLC team presented several concepts to consider. One key emphasis was on imagery that could appeal to women and minorities. Another key emphasis was to contrast routine, low-pay, limited career path jobs with potentials in for lucrative and interesting jobs in shipbuilding and repair. A series of storyboards were developed along with their time and budget feasibility estimates.

Child first experience



Girl questions what she will do with her life



Girl at work



This is my story





Child first experience



Girl questions what she will do with her life



Girl at work



This is my story





Dad shows daughter parts of ship.



Girl shows friend parts of ship



Boss Shows girl



This is my story





Comparison - bored at burger







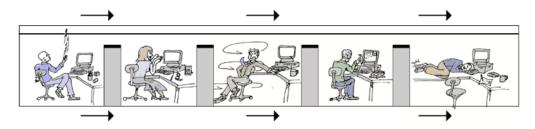








Comparison - bored at the office





Comparison - bored at home















The "My Story" concepts and the "Bored at..." concepts were shared with Crosscut Panel members at the January, 2007 meeting in Biloxi. Design and production of the My Story commercials were perceived as more expensive than the routine job comparison commercials. Representatives of the Alabama Technology Network decided to focus some resources emerging from a Federal Katrina grant aimed at shipyard workforce

development to gathering "My Story" information described more fully in the collaborative web page development, section 5 of this report.

IIIP resources for commercial design and production were then committed to three short commercials, Bored at Home, Bored at the Office, and The Diner. The work and budget included line items for producer and director, performers, production staff, locations and studio, production equipment, media storage, sound, editing and finishing. It became much clearer why good commercials are so expensive when the market value of talent and their time plus technology are synthesized on a project.

The Studio Trifusion LLC team was able to obtain industry cost share contributions from a local resident for the "bored at home" commercial; from the University of Washington for the "bored at the office" commercial and from a local diner for the "diner" commercial.



Cost factors in commercial production:

- Scenes from "The Diner"
- shoot location rental insurance
- auditioning and selecting actors
- makeup artists
- equipment, costumes, props
- logistics
- rehearsal, directing and filming
- sound recording
- post-shoot editing and compositing









Drafts of the commercials were shown to Crosscut Panel and NSRP Executive Control Board members in June, 2007. Some adjustments recommended wire included in the finished work. Copies of the finished commercials are included in Appendix E DVD.

6. Designing and Producing a Web Interface

Research by the IIIP Technical Lead with advice from Studio Trifusion LLC principals led to the early decision to actually obtain a web site domain name and hosting on which to air the draft commercials.

An increasing number of job seekers and changers use web-based resources. Example web-based employment advertising is published on sites such as careerbuilder.com, monster.com, and others. Most states have web-based job search/opportunities through their one-stop job service centers. Some specific marine-oriented employment services are available such as maritimejobs.com. Some web sites are targeted to specific

populations for recruiting such as helmetstohardhats.org targets military persons to consider employment in the construction industry.

Despite the broad range of web-based employment services, there is little information on the shipbuilding and repair industry. Discussions were conducted with high-school and community college educators and career counselors, and equivalent people at job service centers. Even in major shipbuilding regions, these folk revealed that non-industry people don't have resources to advise job seekers and changers to consider shipbuilding and repair jobs or careers. Specific 'Google' searches using the search terms in quotations produced the following results.

- "shipbuilding careers" 32 hits
- "shipyard careers" 75 hits
- "automotive careers" 48,800 hits
- "manufacturing careers" 52,900
- "construction careers" 75,500

The research question is evident. Can a career-oriented web portal assist key target audiences to learn about the shipbuilding and repair industry then favorably make job or career decisions?

As a result of this research, the IIIP technical lead considered domain names that might be available. A former NSRP-sponsored site buildships.com domain name remains owned and unavailable. A complex name such as buildandrepairships.com was considered cumbersome. The domain name goships.com was acquired (2-year ownership) and 3-year hosting provided.

A placeholder home page was put in place, shown on page 18. Collaborative effort with Crosscut Panel members resulted in the choice of a basic web portal design that would be somewhat similar to the National Association of Manufacturer's "Dream It – Do It" national campaign with regional focus on job and career opportunities.

The IIIP contracted via Studio Trifusion LLC to have a web designer prepare a draft banner, navigation system, and standard page coding (CSS) that would be relatively easy for others to modify and adapt for specific target audiences. The portal design included a horizontal and left-vertical navigation system along with icons aimed at six key target audiences including: students, career changers, employers, job service centers, employers, parents and educators.

The portal page design and hosting also included capability for streaming video and other interactive and dynamic imagery. Only a small portion of portal capability is developed because of project budget limitations.

A collaborative cost share effort resulted in obtaining initial content and links to further information for many of the web pages, although the site remains under construction at the time of this report.

Web hosting included several features that were tested in a limited way. These include:



Initial www.goships.com home page design.

- A still and video clip gallery system
- A learning management system for open self-study entry-level preparatory quizzes such as "do you know how to read a tape measure?" and simple information courses
- A survey and polling system
- A collaboration "wiki" system

Collaborative Page Design and Content Development

The plan and budget for the Industry Image Improvement Project did not include content development for the goships.com web site. As the project proceeded, it became apparent that having initial content may help draw participation to create the content, arrange and evaluate its different forms. At the January, 2007 Crosscut Panel meeting a call for content support was made. The content requested was:

- realistic jobs in shipyards with emphasis on people doing work
- identification of persons including women and minorities whose "my story" could be developed
- examples of shipyard advertising for employees or other ways shipyards portray their own image locally
- links to authoritative shipbuilding and repair industry information that could partially populate pages



Left: Realistic job photo gallery example - Northrop Grumman Ship Systems Machinist 2 Michael A. Diaz.

Other photos and video clips were provided by: Alaska Ship and Drydock, Inc., Todd Pacific Shipyards, Signal International LLC, Bollinger Shipyards, Bender Shipyards, Atlantic Marine, Northrop Grumman Newport News, and SENESCO Marine.

Prior to the start of the Industry Image Project the Alabama Technology Network (ATN) hired Audrey Smallwood to manage a federal Katrina-funds grant in part aimed at recruiting

employees for Gulf Coast shipyards impacted by the storm. Katrina hit shipyards in August, 2005. During the recovery, shipyards had difficulty getting back their own workforces whose housing had been damaged or destroyed. The text box on page 7 tells a sample story of an impacted shipyard, Signal International LLC. During this time the Gulf States Shipbuilding Consortium (GSSC) was formed and began operating. Some consortium member employees serve with the Crosscut Panel.

ATN asked for permission to use their own funding to help develop the goships.com web site. NSRP rules do not allow co-mingling of funding so three decisions were made to allow collaborative work. First, ATN provided additional funding via the IIIP's subcontractor's web designer to more fully develop a common navigation system that could be applied in a regional context; second, ATN separately contracted with a videographer whose raw and edited imagery could be adapted to the goships.com goals; and third, ATN agreed to provide ATN and GSSC shipyard developed content information to the IIIP effort for inclusion on the web site.

My Story Case Study.

The work of ethnographic interviewing to gather human stories is well documented in academic studies. Conversion of this information to compelling video narratives is work of a film-maker. IIIP leaders, faced with extremely limited budgets, converged on an approach to developing "my story" vignettes of real shipyard workers.

A former SENESCO Marine employee, a woman who had been on welfare and came into the industry in a welfare-to-work program agreed to share her story and to help us develop a format for other stories. This employee expected to work in a shipyard office setting but was intrigued by industrial operations. She joined an entry-level welding course at the shipyard, quickly qualified and then added shipfitting, pipefitting, and pipe-welding skills. She was injured on the job and joined the company's safety department. She progressed in leadership to help manage workforce and production for an ocean-going tug boat project. She subsequently was recruited to lead the manufacturing training section of the

Rhode Island Job Corps Center. Her story may be unusual, yet it has elements of many people who come into the shipbuilding and repair industry without prior experience.

Following the interview with the SENESCO Marine woman, we decided to start the "my story" pre-interview with a 10 question format.

- 1. What is your job at the shipyard now? Briefly describe for people who have never been in a shipyard.
- 2. What are some things you really like about your job?
- 3. What was most difficult for you to learn or become accustomed to at the shipyard?
- 4. When you were a child or a youth, did you ever think about jobs or work that were anything like the shipyard is?
- 5. What jobs did you have before getting your first shipyard job? What were some good or not-so-good things about those jobs? What do you remember attracted you to apply for a shipyard job?
- 6. What are some things you really like about your company, your work colleagues?
- 7. What shipyard jobs would you like to have in the future? Do you think you can learn and then be assigned to do this different work?
- 8. What don't you like about your job or shipyard work?
- 9. What advice would you give to a person thinking about work at the shipyard?
- 10. What stories of your shipyard work are you proud of or remember well and would like to tell other people?

Gulf States Shipbuilding Consortium helped ATN identify candidates for interview. Several candidates had superb stories, rehearsed their video interview, but were then overcome by stage fright. An example of an articulate "raw" unedited story is included in the goships.com web site, a scaffolding foreman from Signal International LLC. Several additional "raw" interviews are included in Appendix ___ DVD files.

The experience suggests two future courses of action: First is to continue to find and coach real shipyard workers to tell their stories; second is to capture the real story in ethnographic interview and have the shipyard worker coach an actor to play their role.

Feedback from goships.com survey suggests that the "my story" segments are an important part in both attracting people to consider the industry and then convincing them they can succeed.

Gebhardt and Smallwood developed a matrix of topics and content information keyed to the agreed goships.com page design and fed direction to the web designer to populate pages as budget and time allowed. Much of this work was provided as industry cost share.

Some problems in gathering imagery were discovered. The large defense-oriented shipyards had layers of communications and security approval to obtain before imagery could be released. Some Crosscut members at some large shipyards were never able to

obtain imagery release. Some smaller shipyards offered imagery but did not have the time and technology to take the still or video clip information and annotate it for use. Close observation of some images in the gallery reveal errors such as safety glasses with side shields not properly worn, so careful image choice and editing will be needed.

7. Market Testing and Survey

Any new product development must pass through a range of stages and gates demonstrating that gate criteria is met. The IIIP project went through its ideation and preliminary product (commercials and basic web site) stages and gates. A broader market test was conducted. Several channels of industry image introduction were used.

An article co-authored by Dr. Gebhardt, Audrey Smallwood of Alabama Technology Network, and Barbara Murray was submitted to and published in the August issue of Maritime Reporter (pages 52-54). The goal was to call broader industry attention to the issue of workforce recruiting and the existence of the goships.com web site. The article text is in Appendix ___. The Maritime Reporter used images from the goships.com gallery in producing the story.

The work of the Industry Image Project was included in Crosscut Panel presentations at:

- Navy Ship Tech 2007 conference January 2007
- Crosscut Panel Meetings in January, July, and November 2007
- NSRP Executive Control Board, June 2007
- NSRP Joint Panel Meetings, June and July 2007
- Ship Production Symposium, November 2007

Audience response provided additional feedback about the IIIP.

A relatively simple survey was designed and initially tested with selected Crosscut Panel Members. When the survey was deemed clear and relatively simple, it was instrumented in a web-based survey system that would automatically gather and collate survey results.

The specific survey questions are at Appendix C. Questions sought basic demographic information of the respondents, their impression and comments on the home page layout, the three commercials, selected content pages, and requested suggestions for change or more information or format on the web site.

The survey opportunity was broadcast to all Panel Chairs and Major Initiative Team Leaders, the Crosscut Initiatives Panel e-mail exploder, and a range of Crosscut Panel e-mailing lists. Several follow-up e-mails were sent.

Goships.com Survey Results

Fifty-two (52) responses were obtained. All target categories of the key goships.com audiences responded. The following paragraphs give summary responses. Pertinent extracts of the survey are in Appendix D. A Microsoft Excel spread sheet with all

responses correlated to the respondent is included in Appendix E. The web-based survey software allows other views of data. The goships.com web portal is funded to operate through calendar year 2008. Access codes for the survey system can be obtained from the Project Technical Lead.

Careful review of the correlated response spreadsheet helps to put respondent category (student, shipyard employee, etc.), shipyard experience, age, and other demographics in

Subject: GoShips Web Site Survey

Please take this web-based survey of the www.goships.com Web Site. You are invited to send this invitation to other people you know and who might respond to the survey.

Survey URL: http://goships.com/survey/index.php?sid=1

Description: This survey asks you to evaluate a web site designed for the National Shipbuilding Research Program. The web site is aimed at improving the US shipbuilding and repair industry image and employee recruiting.

Welcome: Please complete this 13 question survey. Your responses will improve webbased tools for US shipbuilding and repair industry image and recruiting. The basic survey will take 10-15 minutes. There are two 6-minute video clips and a photo gallery referenced in question 8 that will extend the survey if you have time. Thanks for your help! Please open the www.goships.com web site in a different browser page. The survey will ask you to look at some pages on this web site. Not all pages are active yet, they are under construction. You can save your survey and come back to it multiple times before finally submitting it.

Administrator: Larry Gebhardt, Crosscut Panel, www.nsrp.org (lpgebhardt@cableone.net)

Laurence P. Gebhardt, Ph.D., CAPT US Navy (Ret) Chair, Crosscut Initiatives Panel National Shipbuilding Research Program www.nsrp.org

context with comments. For example several older respondents did not care for the commercials while younger respondents thought they were good and would send them to friends. Several older respondents watched and commented on the longer videos (scaffold foreman and pipefitter) where many younger respondents did not take time to look.

Careful review of correlated comments may also help individual shipyard leaders gain insight about industry culture. For example, 48 percent of experienced employees said they would like to share what they know; however, when asked to make a commitment to help improve industry image and the goships.com web portal only 26 percent of respondents said they would volunteer to help and only four respondents, outside of Crosscut panel folk, provided contact information.

Following are key demographic questions for the survey.

Question 1. Are you? (choose any that apply) Answer Count & Percentage Student (1) 11, 21.15% Educator (2) 8, 15.38% Parent (3) 7, 13.46%

Shipyard employee (4) 31, 59.62% Career or job changer (5) 1, 1.92% Career advisor (6) 2, 3.85% Non-shipyard employee or retired (7) 10, 19.23%

Question 2. What do you know about shipbuilding and repair jobs? Answer Count, Percentage

No answer 0, 0.00%

Nothing - I'm taking this survey because someone asked me to. (1) 11, 21.15% A little, I'm curious, tell me more. (2) 16, 30.77%

A lot, and would like to share what I know. (3) 25, 48.08%

Queston 11. Your state?

AK	1
AL	7
CA	1
CT	2
FL	1
ID	1
KY	2
LA	2
MD	2
MS	1
NM	1
PA	2
RI	1
SC	1
VA	24
WA	1

Question 12. Your gender? Answer Count Percentage

No answer 2, 3.85% Female (F) 22, 42.31% Male (M) 28, 53.85%

Question 13. What is your age group? Answer Count Percentage

No answer 2, 3.85% Under 13 (1) 0, 0.00% 13-17 (2) 0, 0.00% 18-34 (3) 18, 34.62% 35-49 (4) 9, 17.31% 50-64 (5) 20, 38.46% 65 or older (6) 3, 5.77%

8. Technology Transfer

The progress and results of the Industry Image Improvement Project were widely shared.

The work of the Industry Image Project was included in Crosscut Panel and other presentations at:

- Navy Ship Tech 2007 conference January 2007
- Crosscut Panel Meetings in January, July, and November 2007
- NSRP Executive Control Board, June 2007
- NSRP Joint Panel Meetings, June and July 2007
- Ship Production Symposium, November 2007

The project technical lead briefed the project and demonstrated the goships.com web site (under construction) to:

- National Association of Manufacturers, Industry Institute, Stacey Garrett Wagner
- Shipbuilders Council of America staff

An article co-authored by Dr. Gebhardt, Audrey Smallwood of Alabama Technology Network, and Barbara Murray was submitted to and published in the August issue of Maritime Reporter (pages 52-54). The goal was to call broader industry attention to the issue of workforce recruiting and the existence of the goships.com web site. The article text is in Appendix B. The Maritime Reporter used images from the goships.com gallery in producing the story.

The three IIIP commercials were placed into the youtube.com system for access independent of the goships.com website during project development.

The IIIP website, www.goships.com is active and is funded for operation through 2008.

9. Return on Investment and Cost Share

The IIIP budget of \$25,000 was allocated:

- \$20,000 for commercial design and production;
- \$4,000 for basic web design as a commercial "airing" channel and for survey design and market testing; and
- \$1,000 for technical leadership labor.

Cost share elements included:

•	Alaska Ship and Drydock, Inc. administrative support and accounting	\$5,000
•	Project Technical Lead labor uncompensated 80 hours @ \$80/hour	\$6,400
•	Alabama Technology Network Support – Cash	\$20,000
•	Alabama Technology Network Support – In-Kind (estimate)	\$6,400
•	Todd Pacific Shipyard liaison and tour support (estimate)	\$5,000
•	Studio Trifusion LLC – shoot locations, etc. (estimate)	\$5,000
•	Northrop Grumman Newport News in-kind video clips (estimate)	\$20,000
•	Other shipyard in-kind labor and value of photos (estimate)	\$5,000
	Total	\$72,000

Return on investment is qualitative in nature. Some "soft" elements of ROI deliverables include:

- The project team, both formal and informal, developed a better understanding of elements of industry image and practical methods for improvement
- A functional web site www.goships.com, although still under construction, is serving as an information portal for a range of shipbuilding and repair industry audiences
- Three 30 second commercials for subsequent use point to the web site
- The project subcontractor, an independent film production company, gained substantial learning about the shipbuilding and repair industry
- A completed survey with 52 responses. The survey database is available for additional analysis.
- A methodology for developing "my story" video interviews
- A collaborative development network for web-based resources relating to the US shipbuilding and repair industry.
- Several new participants volunteered to help industry image and recruiting
- Periodic project reports and status updates were provided to ATI staff.

10. Lessons Learned and Recommendations

The Crosscut Industry Image Improvement Project was completed on budget and attracted greater than estimated industry cost share resulting in additional deliverable features noted in this report.

The project was delayed with a formal 2-month no-cost extension during the decline and death of the project technical lead's mother. The project final report was delayed while the survey was administered and evaluated.

Many lessons learned emerged from the project work:

- Translation of shipbuilding and repair industry information to a commercial film production company and web designers is difficult and time consuming. The commercial folk do not understand the industry; industry folk do not have media-marketing background and technical skills. For example, shipbuilding and repair terminology is not familiar to average citizens. How should these terms be represented in text and graphics?
- Fragmentation of the shipbuilding and repair industry became more evident during the project. For example: there is no agreed industry career path for entry level and career employees so this representation was left out of initial web design. Our two trade associations are only peripherally involved in developing industry image strategies and common industry workforce development.
- Participation of shipyards in gathering and sharing industry images and stories
 of realistic work is difficult because of proprietary concerns, security (defense
 firms), and cost limitations.

- The expectations of TV and web commercials are set by corporations with very large marketing budgets. Despite innovation in their design, the limited budget IIIP commercials drew many suggestions for improvement.
- The actual costs of good commercial work featuring shipyard employee stories requires extensive planning, filming, and editing to get results deemed compelling by survey audiences.
- Despite broad request for participation in the goships.com portal and commercials survey, the number of respondents is disappointing. The quality of responses is excellent and yields valuable suggestions for improvement and next steps.
- The goships.com industry image and information portal is well received and welcomed by essentially all survey respondents and others who participated in the site development, roll-out, and improvements over the last year.
- The survey revealed that many Americans, even in shipbuilding communities, lack knowledge and information about our industry.
- The survey revealed that many shipyard employees view the industry through the narrow lenses of their own company and its products.
- The goships.com portal was initially constructed to focus on production employees; however, there is need to consider its use for administrative, design, engineering, critical supply chain and other audiences. Exploration of the portal's value in informing customers and investors could be undertaken.
- There is enthusiasm and need to continue industry image and recruiting work. A follow-on proposal for panel project funding to add content to the goships.com web portal, and the revitalized Crosscut Resources Center hosted on the nsrp.com portal was voted most important by Crosscut Panel members; however, it was not selected by the NSRP Executive Control Board for 2008 funding. Crosscut Panel members will consider next steps for future industry image work at the February, 2008 panel meeting.

"Doing It"

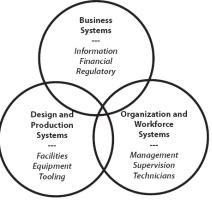
This Industry Image Improvement Project report began with a business case about the state of the shipbuilding and repair industry along with a need and readiness to "Do It" with respect to improving industry image for internal morale, customer and investor relations, and for external employee recruiting. Apart from the key shipbuilding areas in America, few people understand where ships come from and how they are repaired over their lifetimes. An invisible industry image, or a negative image based on history-channel type representation of stick-building, difficult and dangerous work can be changed.

It has been the Crosscut Panel's opinion that the substantial asset investment in our shipyards since 1989 has not achieved desired affordability. The 2007-2008 Crosscut Initiatives Panel strategy has been aimed at developing methods and practices to help align the social and human systems of our shipyards with the technical and process systems.

An approach to achieve affordability can be considered by further aligning and adjusting the three key "stovepipes" which exist in and between our shipyards. Stovepipe alignment may help our shipyard internal industry image and then give some additional approaches to build our external industry image. Some specific actions include:

- We can communicate better whether we build luxury yachts, aircraft carriers, Army watercraft, or barges.
 Our industry as construction or automotive folk have done can revitalize effort around terminology and skill standards so that knowledge-skill-ability has descriptive scenarios, common tasks, and job elements as a basis for shared best practices, continuous improvement, and portability of thinking and work.
 Business processes and common parts catalogs are moving in this direction.
- We can develop strategies and practices that improve our industry image for current employee morale and to attract and retain the good people we need to replace our aging workforce. We've taken some tiny steps in the last few years.
- We can design and deliver much more consistent learning and standard curriculum for new hires and incumbents to accelerate validation and gap-closure of our industry knowledge base. Our partners at colleges and universities can help make the case for public investment in the new workforce.
- We can recognize that our real business value that customers pay for is added in the shipyard workplace. We can help our front-line managers, supervisors, leadmen, foremen or whatever you call high-performance team leaders to be more effective in communicating and leading the alignment of the "stovepipes." The impressive WWII war production effort was achieved with three simple efforts: effective on-the-job instruction, logical job method improvement, and good job relations.

What is a starting approach to "doing it?" Crosscut Initiatives Panel proposes that the Executive Control Board, NSRP commit a 2-3 hour block of time at a regular meeting to begin to brainstorm in a can-do spirit. Together we're much smarter than any one person, company, or customer. We can search for the low-hanging fruit and shape strategies to plan R&D to get at aligning our people, technical and business systems, and improving our industry image in fresh ways. We can name the really difficult and controversial topics that we know in our minds and hearts must be dealt with. In all of this deliberation and planning we can discern win-win pathways, honor traditions and proprietary, and security issues, yet help our industry to thrive into the 21st Century. Our employees, our



customers, and our investors along with our many stakeholders across America will thank us for this effort.

Appendix A: Statement of Work

Appendix B: Article submitted to Maritime Reporter magazine

Appendix C: goships.com Web Portal Survey Questions

Appendix D: goships.com Survey Pertinent Extracts

Appendix E: Digital Video Disc (DVD)

- Shipbuilding and repair industry image products developed through the 1999-2003 Virtual Resource Center
- Crosscut Panel Industry Image-Related Presentations
- Gallery of photographs, video clips, shipyard commercials
- goships.com web portal files and developed commercials as of December 2007
- "raw" interviews of employee realistic job 'my stories'
- goships.com survey spreadsheet

ATTACHMENT A STATEMENT OF WORK

Industry Image Improvement (Sizzle Sells the Steak) January 1 – September 30, 2007

Prime Contractor: Alaska Ship & Drydock, Inc., Doug Ward, Director of Business

Development

PTR: Greg Whitney, Atlantic Marine

Technical Lead: Laurence P. Gebhardt, Ph.D., Crosscut Initiatives Panel

Subcontractor: Nick Boganwright, Seattle, WA (Independent Film Producer)

<u>Industry involvement</u>: Shipyards: Northrop Grumman Newport News, Atlantic Marine, Alaska Ship & Drydock (ASD), Northrop Grumman Ship Systems (Ingalls, Avondale), Todd Pacific Shipyard, others.

Tasks:

The following will be accomplished to support project goals:

- 1. Gather examples of existing shipyard imagery that illustrate the variety and excitement of ship construction and repair work along with contrasting imagery of routine, dull work. (Complete by March 2007)
 - Liaison assistance with participating shipyards to donate film clips and ideas, and encourage other shipyards or organizations to participate.
- 2. Create new imagery to fill imagery gaps. (Complete by May 2007)
 - Film production by the subcontractor plus invited film clips from participating shipyards or others.
 - Subcontractor can choose to purchase rights to existing clips.
- 3. Synthesize existing and new imagery, text, music, voiceover or other audio into three 15-30 second pilot advertising clips suitable for TV, web, e-mail transmission, etc. (Complete by July 2007)
 - Video editing with music, voice, graphics integration.
- 4. Test market the pilot clips in participating shipyards for employees, their families and friends to get feedback on their value (Complete by September, 2007)
 - Develop an introduction and background flyer and survey instrument with instructions.
 - Determine impact of pilot clips on incumbent workforce morale, attracting young people to explore the industry; and generally creating a more compelling mindset toward shipbuilding and repair.

- Determine if shipbuilders, families and friends would share clips by e-mail, between videocapable cell phones, and other innovation.
- 5. Gather results of the film clip surveys and report. (Complete by September 2007)
 - The prime contractor technical lead and subcontractor will jointly prepare the report with inputs from participating shipyards and related firms
 - Provide recommendations for future R&D to improve shipbuilding and repair industry image.

Deliverables:

- 1. Project Status Report March 30, 2007
- 2. Project Status Report June 30, 2007
- 3. DVD with donated, purchased or created film clips authorized for NSRP use; pilot advertising clips and significant drafts, market test flyer, survey instrument September 30, 2007
- 4. Final Written Report and recommendations for future R&D September 30, 2007

Proposed draft article for Maritime Reporter

Good People for the Maritime Industry

By Larry Gebhardt, Ph.D., Alaska Ship and Drydock, Inc., Barbara Murray, Tidewater Community College, and Audrey Smallwood, Alabama Technology Network (ATN)

What does an Alaska Shipyard, a Virginia college, and the Alabama Manufacturing Extension Partnership (ATN) have in common? The simple answer is people.

The shipbuilding and repair industry—along with the broader maritime industry for vessel, port and harbor operations, related land transportation and logistics, etc.—faces the need to support current customers and accommodate growth. Customer needs are met by competent people using the best available technology. Physical assets are important, but people assets may be more important.

Good people are common across our industry. Our industry is in competition with those that have similar skill-pay metrics such as construction, automotive, aerospace, heavy manufacturing and land-based logistics. This means that industry image and awareness, recruiting, training, and retaining are important. Our industry needs people who will consider careers because it takes years for people to gain knowledge, skills and abilities then develop journeyman-like and supervisory experience to deal with the complexity of shipyards, vessels, port and intermodal facilities. We face some problems. Some solutions are emerging.

Our industry is fragmented. Some fragmentation is caused by geographic distribution along 88,000 miles of ocean coastline and 30,000 miles of navigable rivers. There are over 125 American shipyards. Some fragmentation is caused by different government agencies having responsibility for vessel construction and operation such as US Navy (the largest), Army watercraft, US Coast Guard, NOAA, etc. Other fragmentation is caused by different commercial industry segments such as Jones Act, offshore, luxury yachts, and large port cargo. Our industry is supported by labor organizations and specialists in finance, law, insurance, materials, logistics, environmental-safety-health regulations and more. Think about the different trade and professional associations, product and service providers and their supply chains. What government agencies represent the many and varied fragments of our industry?

Our industry has non-standard terminology and skills. We lack a clearly understood path for career entry and development. Other industries such as health care, construction, and computer networks have well developed career ladders, skill standards, certification steps, and other commonality that enables entry, upward job mobility and geographic-employer job portability.

So what are some solutions to ensure we have enough good people to continue operations and to grow as the US and global economies expand? One emerging tactic is to develop

collaborations that support our industry. Until the advent of web-based collaborative systems the maritime industry segments have gone it alone functionally and geographically to recruit and train entry level workers and to upgrade incumbent workers. Here are some emerging concepts designed to de-fragment, share resources, and improve industry image.

- The National Shipbuilding Research Program (NSRP) recently completed a project on workforce readiness improvement including a pilot effort in Alaska. A key element was to develop teaming between shippards and their supporting community colleges. The report is on the web site www.nsrp.org.
- The Gulf States Shipbuilders Consortium (GSSC) was officially formed in December, 2006 so that shipyards, colleges, and economic and workforce development agencies in Louisiana, Mississippi, and Alabama can work together. Collaboration is designed to: assist coastal shipbuilders in increasing productivity, saving jobs, increasing sales and reducing hiring costs through the implementation of a worker sharing program; increase productivity and improve competitiveness by expanding the number of technically skilled workers through the development of accepted skills standards, assessment, and training; enhance the industry image and recruit workers. Through these collaborative efforts, the group is addressing one of the most pressing challenges facing the shipbuilding industry along the gulf coast—the lack of available and skilled workers. Learn more from the GSSC website at http://www.gsship.org
- The SE Virginia Greater Peninsula Workforce Investment Board won US DOL High Growth Initiative funding when the Advanced Manufacturing Collaborative led by Northrop Grumman Newport News, Thomas Nelson Community College and nine other partners agreed to focus on delivering a highly skilled workforce for a growing, high-performance manufacturing sector. Education and training curricula will be developed or adapted to produce required skill sets for new, transitional, and incumbent workers. One innovation draws wisdom from experienced workers by creating a Career Switcher program in which manufacturing retirees gain competencies for certification as technical instructors.
- Tidewater Community College is leading a growing national consortium of shipyards, community colleges and other stakeholders to use National Science Foundation funding for a national resource center for the maritime and related transportation industries. This system can become a clearinghouse for sharing needs and resources for basic entry-level learning curriculum. The shipbuilding and repair industry (and later other maritime, port, logistics, etc., segments) can share their entry level knowledge, skill and ability needs. Then curriculum can be developed to have components of theory, principles, and skill-abilities often best delivered in college classrooms and learning labs. A portion of this curriculum could be developed for distance delivery so that interested people even in landlocked states could begin to prepare for careers in our industry. Then the crosswalk between colleges and businesses can be further developed. For example, we know that good supervisors are critical to helping entry level people gain on-the-job learning and see a path ahead for them. Likewise, company managers need tools for accelerated technology transfer and learning by incumbent workers on the factory floor, and in engineering and administrative offices.

- Companion initiatives by the NSRP, ATN, and other partners have commenced an
 industry image project focused on shipbuilding and repair. This initiative is to show
 realistic high-variety and "extreme" shippard jobs contrasted with routine, dull, and
 low-pay jobs. It includes: some clever sample commercials; an industry information
 web portal, www.goships.com; and a junior high/middle school career day initiative
 led by Old Dominion University.
- NSRP has reactivated the Crosscut Resources Center as a portal for shipbuilding and repair industry professionals to share concepts of a generic career path, workforce development, skill standards, education and training, organization development and culture change, technology transfer and HR management information. A career information portal is developing as www.goships.com.

Some organizations remain skeptical about collaboration until the "what's in it for me" becomes clear. Shipbuilding and repair workforce collaboration is not about stealing customers, workers, or trade secrets from each other. Collaboration is to find solutions to common problems needing resources, and common issues needing further study and deliberation. Workforce development in an era of changing demographics and competition with service industry jobs is a significant need in most shipbuilding and repair areas. Our industry can learn lessons from collaborative practices that have brought open-source software such as Linux, a global encyclopedia named Wikipedia, and peer connecting systems such as the social network MySpace.com.

We invite interested readers to be in contact with us. A central point of contact for now is Larry Gebhardt, Chair, Crosscut Initiatives Panel, NSRP, at larrygebhardt@aticorp.org.

GoShips Web Site & Commercials

This survey asks you to evaluate a web site designed for the National Shipbuilding Research Program. The web site is aimed at improving the US shipbuilding and repair industry image and employee recruiting.

Particip	ants
----------	------

	Participants
* GS1: Are you'	? (choose any that apply)
	Please choose all that apply:
	Student
	Educator
	Parent
	□Shipyard employee
	Career or job changer
	Career advisor
	Non-shipyard employee or retired
* GS 2: What de	o you know about shipbuilding and repair jobs?
	Please choose only one of the following:
	Nothing - I'm taking this survey because someone asked me to.
	A little, I'm curious, tell me more.
	A lot, and would like to share what I know.
	A lot, and would like to shale what I know.
* GS 3: Please	open the www.goships.com home page in a separate browser window. Does the
	nu of items make sense to you? Comment on what you would like changed.
	Please choose only one of the following:
	Yes, menu makes sense.
	No, menu doesn't make sense.
	Make a comment on your choice here:
*	
	the "view our commercials" link at the left side of the www.goships.com home
	at the three 30 second video clips. Ranking: please rank the three commercials:
Diner, Bored at	Office, Bored at Home in order of your preference.
	Please number each box in order of preference from 1 to 3
	The Diner
	Bored at the Office
	Bored at Home
	20.00 00.0000

* GS 5: Would your friends look at the www.goships.com web site if they saw one of these commercials on YouTube or if you e-mailed it? Why?

Approved for Public Release - Unlimited Distribution

11/27/2007 8:26 AM

	Please choose only one of the fo	<u>llowing:</u>			
	Yes - and why				
	■No - and why				
	Make a comment on your choice	<u>here:</u>			
* GS 6: What oth	ner short (30 second) commerc	ial topics	do you think n	night attract a pe	rson to
look at the www	.goships.com web site. Choose	all that a	pply and comr	nent.	
	Please choose all that apply and p	orovide a c	omment:		
	About ships or other vessels or		<u> </u>		
		' <u> </u>			
	products made in shipyards				
	About shipyard technology				
	■About shipyard jobs and				
	pay/benefits				
	☐ About shipyard employees - th	oir —			
		ieii			
	stories				
	Other - tell us				
* GS 7: Go to the	www.goships.com home page	and click	on the link th	at is one of your	choices
	. Scroll through the page to che				
	ou are employed not in a shipya				
	e or more of these choices afte				1631.
Please Check on		-		e a response.	
	Please choose the appropriate res			A 11	NT 4
		Interesting nformation	Make it	Add more pictures or	Not reviewed
		monnation	simpler	graphics	reviewed
	Student				
	Educator				
	Shipyard employee				
	(employer)				
	Career or job changer				
	Parent				
	Career advisor				
GS 8: We are ev	aluating longer video clips and	a photo g	allery about re	alistic jobs in shi	ipyards
and the persona	I stories of shipyard employees	s. If you h	ave time, go th	ne the www.gosh	ips.com
	click on the "my story" video c				
	profiles" linke to find the pipe				
	s page - choose job images. Th				
	I us and add any comment.				-
o, pioaso toi	Please choose all that apply and p	orovide a c	omment.		
		STOVIGE & C	OTTITIOTIC.		
	Scaffolding supervisor	leaco I Inlies	ted Distribution		
	☐ Pipefitter Approved for Public Re	tiease - Uniimi	leu Distribution		

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	□Photo gallery - job images
	□ Don't have time to watch now
looked at and co	y other active pages on the www.goships.com web site. Tell us which ones you mment on them. Provide any other feedback to our shipbuilding and repair mprovement and job recruiting efforts. Please write your answer here:
	ou like to work with us to improve this web site or get more information about repair? If yes, please enter your name, organization, and telephone or e-mail ion.
	Please choose only one of the following: Yes No Make a comment on your choice here:
GS 11: What stat	re do you live in? Please write your answer here:
GS 12: Your gene	der?
	Please choose only one of the following: Female Male
	Approved for Public Release - Unlimited Distribution

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S 13: What is your age group?	
Please choose only one of the following:	
Under 13	
□13-17	
□18-34	
□ 35-49	
□ 50-64	
□ 65 or older	
Submit Your Survey.	

Thank you for completing this survey. Please fax your completed survey to: .

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Goships.com Survey Results – Pertinent Extracts

Fifty-two (52) responses were obtained. All target categories of the key goships.com audiences responded. The following paragraphs give summary responses. A Microsoft Excel spread sheet with all responses correlated to the respondent is included in Appendix E. The web-based survey software allows other views of data. The goships.com web portal is funded to operate through calendar year 2008. Access codes for the survey system can be obtained from the Project Technical Lead.

Careful review of the correlated response spreadsheet help to put respondent category (student, shipyard employee, etc.), shipyard experience, age, and other demographics in context with comments. For example several older respondents did not care for the commercials while younger respondents thought they were good and would send them to friends. Several older respondents watched and commented on the longer videos (scaffold foreman and pipefitter) where many younger respondents did not take time to look.

Careful review of correlated comments may also help individual shipyard leaders gain insight about industry culture. For example, 48 percent of experienced employees said they would like to share what they know; however, when asked to make a commitment to help improve industry image and the goships.com web portal only 26 percent of respondents said they would volunteer to help and only four respondents, outside of Crosscut panel folk, provided contact information.

Question 1. Are you? (choose any that apply) Answer Count & Percentage

Student (1) 11, 21.15%

Educator (2) 8, 15.38%

Parent (3) 7, 13.46%

Shipyard employee (4) 31, 59.62%

Career or job changer (5) 1, 1.92%

Career advisor (6) 2, 3.85%

Non-shipyard employee or retired (7) 10, 19.23%

Question 2. What do you know about shipbuilding and repair jobs? Answer Count, Percentage

No answer 0, 0.00%

Nothing - I'm taking this survey because someone asked me to. (1) 11, 21.15%

A little, I'm curious, tell me more. (2) 16, 30.77%

A lot, and would like to share what I know. (3) 25, 48.08%

Question 3. Please open the www.goships.com home page in a separate browser window. Does the home page menu of items make sense to you? Comment on what you would like changed. Answer Count Percentage

No answer 0, 0.00%

Yes, menu makes sense. (1) 51, 98.08%

No, menu doesn't make sense. (2) 1, 1.92%ke

- Change icons to real people if possible.
- Links to the home page, resources, regional, etc. kind of blend into the background and are hard to read until you scroll over them individually

- · Make map interactive.
- · Really like the layout and functionality of the main page.
- Menu is good but Resources section on right side of home page should be moved up, so it is readily apparent
- I think that there needs to be pictures of ships/shipyards that would grab the attention of the potential candidate.
- I think it would be better if the links on the home page (about ships, shipyard careers, etc) produced results at the same level on the screen. I had to scroll off the screen to see the results. For the first several tries it appeared that the links did not work.
- Consider adding an "About Shipyards" button under "About Ships" with equivalent information Edit the "Links" to say "Links to Ships, Shipping and Shipyard" Under the Regional link consider editing "West Coast" to "West Coast & Alaska" In the Inventory of Your Interests under Students, Who Am I, why not add some choices about ships and shipbuilding. For example: Design a ship or shipyard in virtual 3D model. Build and state of the art mega-yacht or 12 meter racing yacht. Build or Drive a submarine, air craft carrier or other Navy ship. Work for a global shipping line, etc. Now that I finished the inventory and found out it actually shows what kind of jobs are connected with individual interests, maybe we could make this a project to do a maritime interest inventory with choices about maritime jobs and careers. Hell, I might even start to work on this one, it sounds like fun and would be very instructive about our industry. In the How Much Can I Earn Section I found Ship Engineers, but no shipyard jobs. Perhaps if we gave CareerOneStop.org some shipyard jobs and pay rates, they would add them to the site. I could not find shipyard jobs in the US Dept. of Labor Occupational Handbook. I will help lobby US Dept. Labor to list some shipyard jobs, but we should know what jobs we want to list. I could find no shipyard jobs in the careervoyages gov site, same action as above. A number of links must be test driven & repaired I like the menu system and the interesting mix of sites that can be navigated. I will watch for interesting sites to be added.
- The menu items with the icons make me think I should click on the icon to open the link, when actually it is the word which must be selected.
- Too much white space.
- There seems to be a lot of blank space on the home page. Maybe install some maritime current events links or articles.
- The layout for the page is bad design. The white space beside the commercial video window makes the site seem "empty" and the widow that is below for the data for the menu items is diagonal which leaves lots of white space to the left of the window again "empty" space. Also, the menu items data window could either scroll or be chunked with links so the information doesn't increase the window size to infinity.
- Need to add apprenticeship information. Maybe links for differents areas that offer programs.

Question 4. Click on the "view our commercials" link at the left side of the www.goships.com home page and look at the three 30 second video clips. Ranking: please rank the three commercials: Diner, Bored at Office, Bored at Home in order of your preference. Answer Count, Percentage

The Diner (1) 34, 65.38% Bored at the Office (2) 13, 25.00% Bored at Home (3) 5, 9.62%

Question 5. Would your friends look at the www.goships.com web site if they saw one of these commercials on YouTube or if you e-mailed it? Why? Answer Count Percentage

No answer 0, 0.00%

Yes - and why (1) 32, 61.54% No - and why (2) 20, 38.46%%

Would your friends look at the www.goships.com web site if they saw one of these commercials on YouTube or if you e-mailed it? Why?

- Makes me think about my own job and opportunities in shipbuilding and repair.
- They might if they were looking for work since the commercials are interesting
- my friends would not be interested in ship building
- My associates are already in the business
- Only if they had some experience in ships, shipbuilding or have been in the Navy.
- For a Career
- I don't think my friends would look at it because they are not interested in this field.
- The commercials are clever enough to pique their interest
- · Interesting job opportunities, funny, exciting
- I think that the videos spark a curiosity in a creative way.
- My friends already have career goals in mind.
- Because the commercial is well done, holds your attention, and makes me want to know more about shipbuilding.
- interesting
- They are pretty funny and very realistic and for the most part they are true
- · They would do it as a favor.
- That will hit home with the HS grad who expected more!
- Look too much like other vo-tech ads without focusing on legitimacy and potential for advancement in field or being humorous enough on own to warrant looking into further.
- Most of my friends are in a more clerical or administrative vein.
- I am in my mid-50s, so I don't think my "friends" would see the commercials on YouTube, but perhaps my son or daughter's friends.
- I have to wonder what sort of people you are trying to attract. None of the commercials present people who appear to be very promising for this sort of work.
- Assuming s/he were looking for a different career path and were'nt afraid of work and had the ability to learn new skills...
- Does not really even give you enough information to decide if it is something you should look at
- · A lot of my friends are in Bored at the Office jobs and wish for more excitement
- Although I do believe this may be a good start, we need to be a bit more aggressive on the opportunities as opposed to the start up on each clip.
- I think the commercials should show more of the work at a shipyard. Action sequences of installations, welding, rigging, etc.
- They are kind of silly without being really funny. Not much real incentive to move on
- · My friends are too old.
- Possibly, just to check out what is available.
- The Diner and Bored at office caught my attention. I would modify the end of the video's
 with more of an action scene from a shipyard job. The moving blocks don't really visually
 tell me why shipyard jobs are hot.
- These are all aimed at a younger group of people than my age group. May want to consider the 40 50 age bracket who are looking for a change.
- I would send it to people I think that this career field would interest
- · Only if they are considering changing jobs.
- not really that engaging. doesn't provide the hook you need to draw the person to the 'excitement or lucrative opps'
- Most are not interested in the business because of the reputation of NGNN, which in general in this area is poor.

- Let's them know there are jobs out there in industry N/A
- Most of my friends already work at the shipyard or have successful careers and are stable at the present time.
- The "Bored at the Office" scene with the guy sticking Post-Its on his head might get enough attention for the public to view the entire commercial. But that's the only one I consider "pretty good."
- To see what the job opportunities are.
- · they value my recommendation
- Improve their situation and get work experience.
- The bored at office one rings true for a lot of people in minimum wage jobs
- Most of my friends are intellegent, curious people. The diner commercial will hit home to some people too.
- · Most of my friends are already working in shipbuilding or are retired.
- The Diner commercial is offenseive to those who work professionally in the food industry. As a General Manager for a major resturant chain, my wife's take home salary and hours worked were on par with those who hold a managers position within our industry.
- The Sales-pitch at the end of each video needs to give examples of potiential wages and benifits.

Question 6. What other short (30 second) commercial topics do you think might attract a person to look at the www.goships.com web site. Choose all that apply and comment. Answer Count Percentage

About ships or other vessels or products made in shipyards (1) 30, 57.69%

About shipyard technology (2) 35, 67.31%

About shipyard jobs and pay/benefits (3) 41, 78.85%

About shipyard employees - their stories (4) 29, 55.77%

Other - tell us (5) 5, 9.62%

Detailed comments correlated to respondents are in the spreadsheet in Appendix ___

ships are impressive

Navy war ships are always interesting

Educate the public about our industry and the high demand (showing job security)

Show some commercial vessels built by shipyards

With heavy emphasis on the importance of the service provided to the safety and security of the country

college

People are often fascinated by enormity

Great shots of ships/subs at sea can get attention

Show the value our products provide to the public and private sectors.

this may attract the younger set

Pull in folks who think the labor is below them

Progression into robots? SigmaNest and Plasma operators?

Many don\'t know how sophisticated this industry is

Show that the jobs are interesting and safe

Showing newer technology used in the shipyard may attrack younger kids who want to work with computers.

a good hook for the younger target population since most everything is technology driven.

Innovative designs, new tools and systems

computer Drafting

IT is a draw

Information on newest and latest technologies and how they are used in.

This would attract young computer savvy people

Stress modern shipbuilding makes use of current maunfacturing technologies (CNC, CAD,

Automated welding etc) along with the physical skills of yore to build ships

How much could I earn?

pay is bottom line for many

It may be important to link certain skill/jobs with a monetary figure.

they don't realize how much money that they could make in a shipyard and also the pride that you feel when your barges gets tugged away

There is a lack of information available as to the earning potential and career advancement opportunities available in the industry. Information about jobs and pay/benefits would attract users to the site.

The first hook to interest potential workers

Add one for the design group

see my comments in earlier question about how the page is organized

only if competitive and equivalent to white collar jobs

If you show them the money... they will come.

always interested in money

differences between pay rates for shipyard workers and other jobs.

Money and benefits these days are hot topics

Show both aspects of the indusrty i.e. sweat and brawn and soft skills

Good to hear right from the source

The fun that you have working with a diversified group of people

If a person could connect with the video clips in a personal way, I believe he or she would be more likely to visit the site.

Makes it personal

Emphasize the human side of workers

Show people that your potential recruits can relate to

Maybe some lifers can say why they have liked working with their respective shipyards for so many years

From waterfront/ deckplate employee to V.P. of the company - now that's a story personal interest

Pride in building a product that will be used by many and be used for a long time.

Engineering and CAD aspects

Stages of construction

Eductional programs offered at the company - Co-op programs, scholarship programs, tuition reimbursement, apprenticeships, etc.

Appeal to peoples' national pride

Question 7. Go to the www.goships.com home page and click on the link that is one of your choices from question 1. Scroll through the page to check it out. If you are a shipyard employee click 'employer'. If you are employed not in a shipyard or retired, choose an icon of your interest. Please check one or more of these choices after your review and choose a response.

[Student] Answer Count Percentage

No answer 3 5.77% Interesting information (1) 22 42.31% Make it simpler (2) 2 3.85% Add more pictures or graphics (3) 18 34.62% Not reviewed (4) 7 13.46%

[Educator] Answer Count Percentage

No answer 3 5.77% Interesting information (1) 20 38.46% Make it simpler (2) 5 9.62% Add more pictures or graphics (3) 8 15.38% Not reviewed (4) 16 30.77%

[Shipyard employee (employer)] Answer Count Percentage

No answer 1 1.92% Interesting information (1) 22 42.31% Make it simpler (2) 2 3.85% Add more pictures or graphics (3) 17 32.69% Not reviewed (4) 10 19.23%

[Career or job changer] Answer Count Percentage

No answer 3 5.77% Interesting information (1) 18 34.62% Make it simpler (2) 3 5.77% Add more pictures or graphics (3) 14 26.92% Not reviewed (4) 14 26.92%

[Parent] Answer Count Percentage

No answer 2 3.85% Interesting information (1) 20 38.46% Make it simpler (2) 3 5.77% Add more pictures or graphics (3) 10 19.23% Not reviewed (4) 17 32.69%

[Career advisor] Answer Count Percentage

No answer 3 5.77% Interesting information (1) 18 34.62% Make it simpler (2) 2 3.85% Add more pictures or graphics (3) 8 15.38% Not reviewed (4) 21 40.38%

What other short (30 second) commercial topics do you think might attract a person to look at the www.goships.com web site. Choose all that apply and comment. - comment

- · ships are impressive
- · Navy war ships are always interesting
- · Educate the public about our industry
- and the high demand (showing job security)
- Show some commercial vessels built by shipyards
- With heavy emphasis on the importance of the service provided to the safety and security of the country
- college
- People are often fascinated by enormity

- Great shots of ships/subs at sea can get attention
- Show the value our products provide to the public and private sectors.

Question 8. We are evaluating longer video clips and a photo gallery about realistic jobs in shipyards and the personal stories of shipyard employees. If you have time, go the the www.goships.com home page and click on the "my story" video clip to hear a scaffolding supervisor, and/or click the "more video profiles" linke to find the pipefitter story. The photo gallery is linked on the Shipyard Careers page - choose job images. These take about 6 minutes each. If you viewed them, please tell us and add any comment. Answer Count Percentage

Scaffolding supervisor (1) 15 28.85% Pipefitter (2) 29 55.77% Photo gallery - job images (3) 18 34.62% Don't have time to watch now (4) 14 26.92%

Detailed comments correlated with respondents are in Appendix ___

Scaffolding Supervisor

video not available

No active link?

Great resource - It is very important for prospectives to see how they can advance themselves in the work environemnt; starting as entry level and movning up..

Too long and drawn out.

Better of the two videos.

This was a good video

The story is very good; it mixes personal information about the good things of working in a shipyard. It does move a little slow though with a talking head format. Consider splicing in some footage of rock climbers to make the connection with extreme sp

Tried to view this but the commercial about NGNN kept coming up.

Not bad

Too long

Pipefitter

Interesting work.

a good, realistic look at shipyard and pipefitter job

Only clip available

loved it but need to show more women

Wouldn't play

had trouble viewing due to voice breakup

Intro a bit too harsh

I beleive that the intro and discussion is great although the buffer needs to be corrected and/or a selection to download and view as opposed to trying to muddle through is aggravating

Not much job content in the video. Balance of positive and negative with the negative coming up front

Clearly an add for NGNN. Less effective then something that would address pipefitting as a profession, independent of the specific shipyard.

The sound and movie were off and was distracting

Showing the carrier is good start, but consider showing scenes of personal rewards

(good cars etc.). This video does introduce the challenges of working in a shipyard, but those challenges should be immediately countered with examples of benefits, i.e for

I worked 3 years as a pipefitter and I enjoyed seeing how the job was portrayed good and bad

Very good

Had a slight negative vibe to it. Almost seemed to try and scare people into not wanting to work in the shipyard.

Wow, the videos are LONG. You've lost your audience after about 4 minutes.

Good job profile

Realistic profile of job

Photo Gallery

good selection

Should be labeled as PHOTOS?

good variety

Great Resource

Couldn't locate link??

Love the enlargements of workers

good gallery

I believe a more organized approach to the pictures as well as finished product pictures would be helpful

As photo gallery grows consider using a ship icon like the OSHA safety ship to organize photos in major production areas.

nice

A lot of the images are too dark or skewed and unless you work in a shipyard, you may not have a clue what the people in the pictures are doing.

Good shots

Question 9. Look at any other active pages on the www.goships.com web site. Tell us which ones you looked at and comment on them. Provide any other feedback to our shipbuilding and repair industry image improvement and job recruiting efforts. Answer Count Percentage

Answer 33 63.46% No answer 19 36.54%

Comments

About ships has many interesting links.

Overall this is a very good resource. all pages are informative and when the site is completely up it will be very comprehensive

The resources page should keep the menu on the student page on all the pages. E.g. when you click on parents it takes you to that page but the menu at the top is gone.

Links should have (Photos) listed as included in link? Looks pretty good overall. Certainly not an exciting web site though. Has the look of a basic commercial site that lacks "movement." Site is static.

Ship yard careers- I liked that there were picture of the different jobs and not just job titles with definitions.

I looked at all the active pages. Some graphics would help "spice up" the pages that are just links.

I feel like the general layout works to invite visitors in. I especially like the multimedia connecting the visitor to virtually tour potential jobs and getting a feel for the work environments.

I like the "where do I fit in" graphic, but the page needs more pictures and more info about what it is like to work in a shipyard.

looks great

Loved the pics - how about a barge or ship being pushed away on a drydock - It was always one of my favorite memories! Also more pics regarding the weather - don't want to scare anyone away but let them be prepared for what is in store for them. Nothing better than welding in the rain - another one of my great and happy memory that I truly miss- honest - it always brings a smile to my face.

Make the map interactive and add regional employment opportunities.

So far so good! It really looks great. I simply LOVE the "Where do I fit in" Poster and would request permission to use it (or a version of it) for our recruiting efforts at BMP!

It appears to have all the key resources that candidates would need to get information on jobs in the shipbuilding industry. Again, adjust layout on home page so everything is readily viewable

I looked at all areas but wasn't able to view several due to they're still under construction. Let me know when the'll be done.

Don't like how the commercial box in the center of the page makes you have to scroll down in order to see the text box. I missed it the first time I clicked a link. I thought nothing had loaded

I found the site to be very user friendly and easy to navigate through.

I thnk that there should be link to the page as opposed to selecting the category and then selecting again at the bottom.

Looked at the information on comparative salaries. Found noting that said "ship" and had to use personal familiarity with building trades to pick the ones to look at. Thought is was more confusing than helpful to amateur user.

I didn't think the links to the links to Career One Stop or Monster.com were effective. They didn't lead you to anything specific to work in shipyards.

A lot of things are still under construction, but all in all I think it is a good information site.

Overall the site is well organized with lots of interesting links to support recruitment efforts. Next steps would be to use images/icons for links and get our shipbuilding message included in the linked resources.

looked at a couple of pages and the links seemed of value. I would make the pages more exciting. They all seemed very bland to me.

I browsed most of the website. I think it may need more flair in general but I think the information is valuable. The links provided about ships was interesting. I intend to do some of the activities offered when I have more time.

thus far, the site is easy to follow and read... I like the clean look of site.

In general the use acronyms may likely confuse a layperson. When I select a region in the browse jobs by region section, I get all the regions again and have to reselect the region of interest. Engineering/Design/HR/finance/ etc. are not represented in the Shipyard Careers section.

Still a lot of pages under construction, good information. I wish there was information like this when I was in high school, I would of wanted to be a

pipefitter.

The headings under "resources" are colored inconsistently. The panels are not properly aligned in my browser. Menu bar at top needs sub-menus

The website needs some work, it needs to be a little more flashy and image driven. The links need to be more colorful and have some more automation.

The home banner that is consistent throughout the pages is a very good start - like the colors and graphically enhanced photos. BUT, the layout needs a lot of work. The box at the bottom that has all the data for the menu items gets lost if you don't know to look for it. This information is the entire reason for the site - it should be the FIRST thing a viewer should see... the commercials are gravy but not vital.

shipyard careers-good info

Offer resources that include future contracts awarded and current projects so perspective employee or person can do own research.

The more pictures, animation and video the better. Also make sure the most important topics like careers are the most prominently displayed

When you click on an item in the menu, you have to scroll down to see the results. At first, I thought the buttons were inactive. In Shipyard Careers, there needs to be some links to describe each one in more detail, or link to a short video about that career.

Question 10. Would you like to work with us to improve this web site or get more information about shipbuilding and repair? If yes, please enter your name, organization, and telephone or e-mail contact information. Answer Count Percentage

No answer 0 0.00%

Yes (1) 14 26.92% (Contact information provided submitted to Crosscut Panel Chair) No (2) 38 73.08%

Queston 11. Your state?

AK	1
AL	7
CA	1
CT	2
FL	1
ID	1
KY	2
LA	2
MD	2
MS	1
NM	1
PA	2
RI	1
SC	1
VA	24
WA	1

Question 12. Your gender? Answer Count Percentage

No answer 2 3.85% Female (F) 22 42.31% Male (M) 28 53.85%

Question 13. What is your age group? Answer Count Percentage

No answer 2 3.85% Under 13 (1) 0 0.00% 13-17 (2) 0 0.00% 18-34 (3) 18 34.62% 35-49 (4) 9 17.31% 50-64 (5) 20 38.46% 65 or older (6) 3 5.77%