CII BUILDING **GLOBAL** LEADERSHIP

2012 ANNUAL REPORT

BUILDING **GLOBAL** LEADERSHIP

The Construction Industry Institute, based at The University of Texas at Austin, is a consortium of more than 130 leading owner, engineering-contractor, and supplier organizations from both the public and private arenas. These organizations work together to enhance the business effectiveness and sustainability of the capital facility life cycle through CII research, educational initiatives, and industry alliances. A research organization creating a wealth of expert knowledge and practical information, CII provides vital leadership to the engineering and construction industry.

PURPOSE

The purpose of CII is to measurably improve capital delivery through the cooperative effort of owners, contractors, and academics.

VISION

CII is a leader in the construction industry, renowned for creating research-based knowledge and best practices that measurably improve the safety, cost, schedule, quality, and sustainability of capital projects.

The increased business success CII member organizations experience prompts participating industry leaders to make breakthroughs in the life cycle value of capital facilities.

MISSION

CII creates global, competitive, and market advantages for its members through its research-based, member-driven creation, dissemination, assessment, and management of industry knowledge and CII Best Practices. High use of these best practices gives members a decisive industry edge. Member organizations and their employees cooperatively engage with leading academics to generate CII knowledge; this unprecedented partnering of industry and academia creates the perfect forum for investigating the most significant opportunities for industry improvement. Member companies, their employees, academics, and the industry at large are improved through this collaborative effort.

Four Core **Knowledge Processes**

Having begun in 1983 with 28 charter members who shared the CII vision, the institute is now recognized in the engineering and construction industry as the knowledge leader for project success. CII has four core knowledge processes: creation, dissemination, assessment, and management.

Knowledge Creation: CII research teams—groups that include academic investigators and employees of both owner and contractor organizations—generate best practices and breakthroughs for the construction industry. CII Benchmarking & Metrics processes create additional knowledge, producing ongoing applied research that establishes industry norms for construction performance.

Knowledge Dissemination: Knowledge created by CII is disseminated to institute members and to other organizations and individuals in the engineering and construction industry. CII distributes this knowledge through research publications, implementation guides, educational materials, workshops, and conferences.

Knowledge Assessment: CII Benchmarking & Metrics collects, analyzes, and assesses the impact of CII knowledge as it is initially implemented and integrated into member organizations' work processes. Once proven through member benchmarking, this knowledge is incorporated into the capital project work processes of the industry at large.

Knowledge Management: Since 1983, CII has produced over 600 research documents and hundreds of other presentations and publications. Knowledge management adds value to CII by organizing and facilitating access to CII's extensive body of knowledge. By establishing communities of practice—virtual interest groups that dynamically share and learn knowledge—CII Knowledge Management further advances the institute's mission.

Through these knowledge processes, CII advances human knowledge and fulfills its mission of enhancing the business effectiveness, sustainability, and global competitiveness of CII members.

Remarks from the **Chairman**

REFLECTIONS ON A TRANSFORMATIONAL YEAR

In my final opportunity to address you as chairperson, I would like to reflect on what we have accomplished in 2012, since I believe these efforts will make a positive impact on CII for years to come.

The following highlights the themes and key activities that we focused on in 2012 in an effort to advance CII's mission:

Be Strategic - Early in 2012 we updated the Strategic Plan to ensure that CII maintains long-term relevance, given the industry's changing operating environment. This effort resulted in the addition of three key strategies focused on globalization, diversification, and expanded performance assessment. Our committees in particular were challenged to update their missions, focus areas, and goals to incorporate these new strategies. I'm pleased to report that good progress is being made as we set these strategies into motion.

Be Communicative - Improving communication between CII and its members and between the various CII committees and teams has been an important goal. This past year, we strengthened the Strategic Communications Committee through increased member participation and expansion of CII resources. We also focused on improving collaboration between the committees, communities of practice, and research teams. These efforts have improved the overall quality of CII communications and enhanced integration among all CII committees.

Be Relevant - We have worked diligently to engage members to understand what is valued most in the relationship with CII. Your feedback has allowed us to implement an exciting slate of new research topics and activities that reflect your collective interests and needs and that respond to the changes and challenges within our industry.

Be Fiscally Diligent - Being good stewards of CII's resources was an important goal for the leadership team. We operated efficiently, acted decisively, and performed well against our fiscal targets.

Be Member-driven - In addition to our efforts to maintain member engagement and leadership, we also focused on targeted recruiting as a way to strengthen our member base. These efforts have been very successful, as we've seen improvements both in terms of the size and quality of our membership.

I am proud of the accomplishments that were made during my year of service as your chairperson, and I would like to thank all of you for your support. It has been a wonderful experience to serve as your chairperson this past year. CII is a remarkable group of companies and individuals — members who care deeply about the future of construction and project management. I am honored to have had a chance to learn so much about the organization and to have helped shape where we are going. Finally, I want to encourage all our members to actively participate in CII research, implementation efforts, professional development, and benchmarking activities. Remember the old adage "the more you give, the more you get in return." I have found this to be especially true with CII.

Thank you.
Glenn Doran
General Manager, Projects - Asia Pacific
ConocoPhillips

Looking back at CII's scorecard, I would summarize 2012 as follows: we remained at the forefront of capital project delivery improvement efforts; we measurably increased the value and satisfaction delivered to our stakeholders and participants; we experienced a highly efficient year in our four key process areas; and we sustained our financial diligence.

What I am most struck by about 2012 is the ever increasing strength of our research efforts. Seven research teams reported out at the 2012 CII Annual Conference in Baltimore: Safety Leading Indicators; Probabilistic Risk Management; Project Management Skills of the Future; Managing Indirect Costs; Construction Productivity; Front End Planning; and Modularization. Additionally, the six research teams that will report out at the 2013 conference in Orlando continued their research efforts. And, in the spring, CII launched 10 new research teams that will report out in 2014. Twenty-three research teams working in a single year is a record for the institute.

This record launch of research teams was possible because you, the member companies, again contributed your best and brightest performers to staff these teams. I thank you for trusting the CII research process to yield compelling and useful findings and to help your people—your key asset—grow rapidly through their participation on a CII research team. This record research effort was enabled by a growing membership and shared funding received from Process Industry Practices, Construction Owners Association of Alberta, and the Construction Users Roundtable.

Research findings don't improve safety, cost, schedule, and quality unless they are integrated with the capital project delivery processes. The Implementation Strategy Committee (ISC) continued its effort to help members of all experience levels succeed at implementation as the Experience Reference Index (ERI) was presented at the annual conference in Baltimore. The ERI provides a framework for a member company to determine the kind of support its implementation actions need—based on the maturity of the member company's delivery processes. This is the latest tool from the ISC to help the member companies overcome barriers to implementation and realize improved project outcomes from the research findings.

During 2012, the CII Benchmarking & Metrics (BM&M) staff completed its work on the new Performance Assessment System (PAS), an effort that included the migration of data from the legacy system. Now members have round-the-clock access to their respective projects, which enables easy assessment of project performance and up-to-date comparisons to industry norms. Because these reports are drawn from data reflecting the $275 billion in capital delivery value in the PAS database, they give participating members the confidence to act decisively and the power to manage effectively.

In addition, the BM&M team successfully leveraged external funding to develop the National Health Care Benchmarking Program. Beginning with the development of a framework for similar facility types, the team was able to devise a system that makes the many kinds of health care projects commensurate. After having established this basic framework, the team further focused on schedule, budget, program delivery, and sustainability metrics. The initial phase of the program will be complete in 2013. Given the challenges the health care industry now faces, the benefits of this first-of-its-kind program will be tremendous in the years to come. I am excited that CII is able to contribute to the improvement of this crucial segment of the industry.

The Knowledge Management Committee added two more CII Communities of Practice (COP) in 2012, Modularization and Performance Assessment. This addition brought the total number of COPs from nine to 11. Through the COPs, more than 86 member companies and over 300 industry leaders and academic experts, actively participate in this dynamic knowledge sharing environment. The growth of this program is testament to both our members' commitment to improving the industry and to our desire to continuously increase the net value of CII membership.

Our 2012 annual conference in Baltimore featured several distinguished keynote speakers: Jim Mulva, retired Chairman and CEO of ConocoPhillips; Major General Michael Walsh of the U.S. Army Corps of Engineers (USACE); and Alistair Gibb, Ph.D. of the European Construction Institute and Loughborough University. Two long-time member organizations—Saudi Aramco and USACE—presented compelling case studies on best practice implementation. And, once again, we heard from next generation stars representing the National Center for Construction Education and Research, Skills USA, and the ACE Mentor Program. I was also honored to present the 2012 Carroll H. Dunn Award of Excellence to our friend Bud Ahearn, and the Richard L. Tucker Leadership and Service Award to long-time volunteer and friend, Melissa Herkt.

We introduced a new feature to the annual conference in 2012—the CII Next Generation Leaders' Forum. Cam Marston, author and expert on generational differences, offered strategies and tactics that young industry professionals can use to engage all generations for project success. The forum was so well attended that we now plan to host one every year.

The year 2012 seems a blur to me now. As we head into 2013, CII will continue to deliver high-quality collaborative research, develop leaders, and improve safety, cost, and schedule. Enjoy looking back at your accomplishments over the past year, and prepare to face the opportunities 2013 will bring. CII and I will be right there with you, improving an industry that makes critical, long-lasting, and sustainable contributions to the world in which we live.

Wayne Crew, P.E.
CII Director

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CII BEST PRACTICES IN ACTION AT PATHFINDER
Front-End Planning

Steve Cabano
President/COO
PATHFINDER, LLC

As a consulting organization focused on improving the global capital project industry, Pathfinder has applied various CII Best Practices through application-oriented training as well as independent project support services. In 2012 alone, Pathfinder trained over 1,500 international project practitioners in various project planning and execution topics. We also executed over 50 international project readiness assessments, independent project reviews, and project risk workshops. Both training and consulting efforts utilized CII Best Practices and tools: Front End Planning; Project Definition Rating Indices; and other CII practices such as Project Health Indicators. We see CII as THE authority in the engineering, procurement, and construction (EPC) industry Best Practices.

Knowledge **Creation**

RESEARCH COMMITTEE

With a joint team of industry representatives and leading academic researchers as members, the CII Research Committee develops and directs the CII research process. The committee holds at least four face-to-face meetings each year. At the first meeting, usually held in conjunction with the fall CII Board of Advisors (BOA) meeting, the committee implements its research topic generation process. As part of this process, committee members solicit BOA member input to help them identify and develop key engineering and construction issues confronting the capital facilities delivery industry. With the list of possible topics generated at the fall meeting, the committee meets again, usually in January, to refine the topic statements and to determine the slate of possible topics.

Once the new slate of topics has been developed, the committee again meets in tandem with the BOA, at the spring meeting. At this third meeting the committee presents the topics and asks BOA members to help prioritize them. After the BOA vote, the committee determines the year's new topics and then forms 18- to 20-member research teams from member-company nominees and the academic researchers that the committee has selected through its competitive process.

Having recently adopted a qualifications-based approach to selecting the appropriate academic researchers, (rather than a proposal-based approach), the committee requests that all interested academics submit their qualifications for particular topics in advance of the spring meeting. The committee annually initiates approximately eight new research teams, typically from three categories of research: 1) best practice/core improvement; 2) current, emerging, and future trends; and 3) people-oriented topics. These teams normally work for two years to complete the necessary research, prepare publications that document their findings, and report out at CII's annual conference.

The following seven research teams reported their findings at the 2012 CII Annual Conference:

- Craft Productivity Research Program, Phase IV (The University of Texas at Austin, University of Waterloo, and University of Kentucky)
- Methods for Dealing with Uncertainty—Applying Probabilistic Controls in Construction (University of Colorado)
- Project Management Skills of the Future (Arizona State University)
- Managing Indirect Costs (Iowa State University and Michigan State University)
- Industrial Modularization: How Maximize; How to Optimize (The University of Texas at Austin)
- Implementing Safety Leading Indicators (University of Florida and University of Colorado)
- Project Definition Rating Index (PDRI) Summary of PDRI Research (Arizona State University)

After holding their fourth face-to-face meeting at the conference—typically held at the end of July each year—the committee members and the CII research staff turn their focus to the teams that are midway through the expected two-year research cycle. In late August or early September, each of these teams participates in a committee teleconference, presenting updates on their research. Research staff members schedule meetings with individual teams to follow up on any issues identified during this teleconference. Since these teams are scheduled to present at the conference in the following year, the goal of these visits is to assess their progress and to help them develop their publications and conference presentations.

CII BEST PRACTICES IN ACTION AT CONOCO PHILLIPS
Project Execution

Glenn Doran
General Manager,
Projects -
Asia Pacific
ConocoPhillips

"The body of knowledge available through CII has benefitted a variety of engineering and construction industry organizations. Companies with a growing global footprint are leveraging CII's Best Practices and tools to meet project needs in many areas, including safety management, front-end planning, contracting strategy, and project execution."

Knowledge **Creation**

RESEARCH COMMITTEE (CONTINUED)

The following teams will be presenting at the 2013 CII Annual Conference:

- Construction Productivity Program—Phase V (The University of Texas at Austin, University of Waterloo, and The University of Kentucky)
- Improving the Accuracy of Project Outcome Predictions (University of Alabama)
- Knowledge Transfer from the Near-Retirement Generation to the Next Generation (The University of Texas at Austin)
- Strategies for HSE Hazard Recognition (University of Colorado, Virginia Tech)
- Deploying Best Practices in Unfamiliar Countries (Virginia Tech)
- Workface Planning—From Design through Execution (The University of Texas at Austin).

As these teams entered their second year of research in June of 2012, CII launched a record nine new teams. The Research Committee and research staff also held virtual meetings in July and August with these new teams to assess progress on their proposal development. (As part of the Research Committee's efforts to improve the CII research process, all research team academics and industry members are asked to jointly develop their respective research proposals during the summer months following the team launch.) After the July and August meetings, the committee held a virtual meeting in the early fall to approve each new team's proposal.

These newer teams will present their findings at the 2014 CII Annual Conference. They are as follows:

- True Impact of Late Deliverables at the Construction Site
- Using Near Miss Reporting to Enhance Safety Performance
- Interface Management
- Managing a Portfolio of Projects-Metrics for Improvement
- Sustainability Practices and Metrics for the Construction Phase of Capital Projects
- Measuring Project Complexity and Its Impact
- Quantitative Measurement of PM Competencies
- Mitigating Threats of Counterfeit Materials in the Capital Projects Industry
- Achieving Zero Rework through Effective Supplier Quality Practices

The changes to the research process initiated in 2011 have focused the efforts of the committee and CII research staff on quality improvement. These changes have included improvements to the selection of academic researchers, the development of research award schedules, and the communication of CII research standards. These improvements have also allowed for a lengthening of the period of time that each team is engaged in actual research. Most importantly, the new requirement that principal investigators work with industry team members to formulate research proposals has not only increased the time available for research, but has also improved team alignment. While CII stands confident in its unique approach to research and its ability to deliver valuable applied research findings to industry, the committee will continue its efforts to enhance member value and strengthen CII's ability to advance the industry.

ACADEMIC COMMITTEE

The Academic Committee (AC) continues to serve as CII's primary forum for the academic community. Its duties include the following:

- designating subject matter experts to support the research process
- identifying and grooming new academic researchers for success at CII
- helping to ensure that CII research is competently performed within the classic research framework

In 2012, Carl Haas of Waterloo University finished his term chairing the committee, and Paul Goodrum of the University of Colorado assumed the chair position. Ed Back of the University of Alabama was nominated and accepted the position of vice-chair.

In 2012, the committee once again sponsored the annual conference poster competition at the CII Annual Conference in Baltimore. This yearly contest benefits everyone involved: it gives graduate students working at schools that do not receive CII funding exposure to the CII research model; it allows students at schools that receive CII funding but who themselves are not working on CII-funded research to present their work; and it allows conference participants the chance to see valuable non-CII sponsored research. The 2012 competition attracted more than 30 posters submissions, of which 10 were selected for conference presentation. The award for best poster went to Umberto C. Gatti of the University of Washington, and Tao Cheng of the Georgia Institute of Technology. Their poster was titled, "Applying Construction Workforce Physical Strain Monitoring to Enhance Productivity Management."

The AC was also proud to sponsor Dr. Chris Hendrickson of Carnegie Mellon University as a plenary speaker at the annual conference. His talk was titled, "Environmental Life Cycle Assessment and Carbon Footprinting for Business." Dr. Hendrickson also led a series of implementation sessions on the same topic.

The AC also promoted awareness of CII-sponsored research in 2012 by organizing a specific CII research track at the 2012 American Society of Civil Engineers Construction Research Congress at Purdue University at West Lafayette, Indiana.

In support of CII's ongoing effort to reach out to the academic community, the committee conducted three webinars to educate researchers interested in performing research for CII. The first seminar was titled, *How to Participate in CII* and the second was called, *The New CII RFQ & Proposal Process.* The first two seminars explained the CII research cycle and the recent change from a proposal-based RFP process to a qualifications-based (RFQ) approach to selecting researchers. The third one, titled, *How to Successfully Execute a CII Project*, targeted the newer academics selected for a CII research team.

In 2012, the AC proposed a new stipend program to the CII Executive Committee to help subsidize the travel of young academics (and others with no previous CII research experience) to the CII Annual Conference. The proposal was approved, and the CII Research Committee plans to select four inexperienced academics as recipients of the stipend program in 2013.

Knowledge **Dissemination**
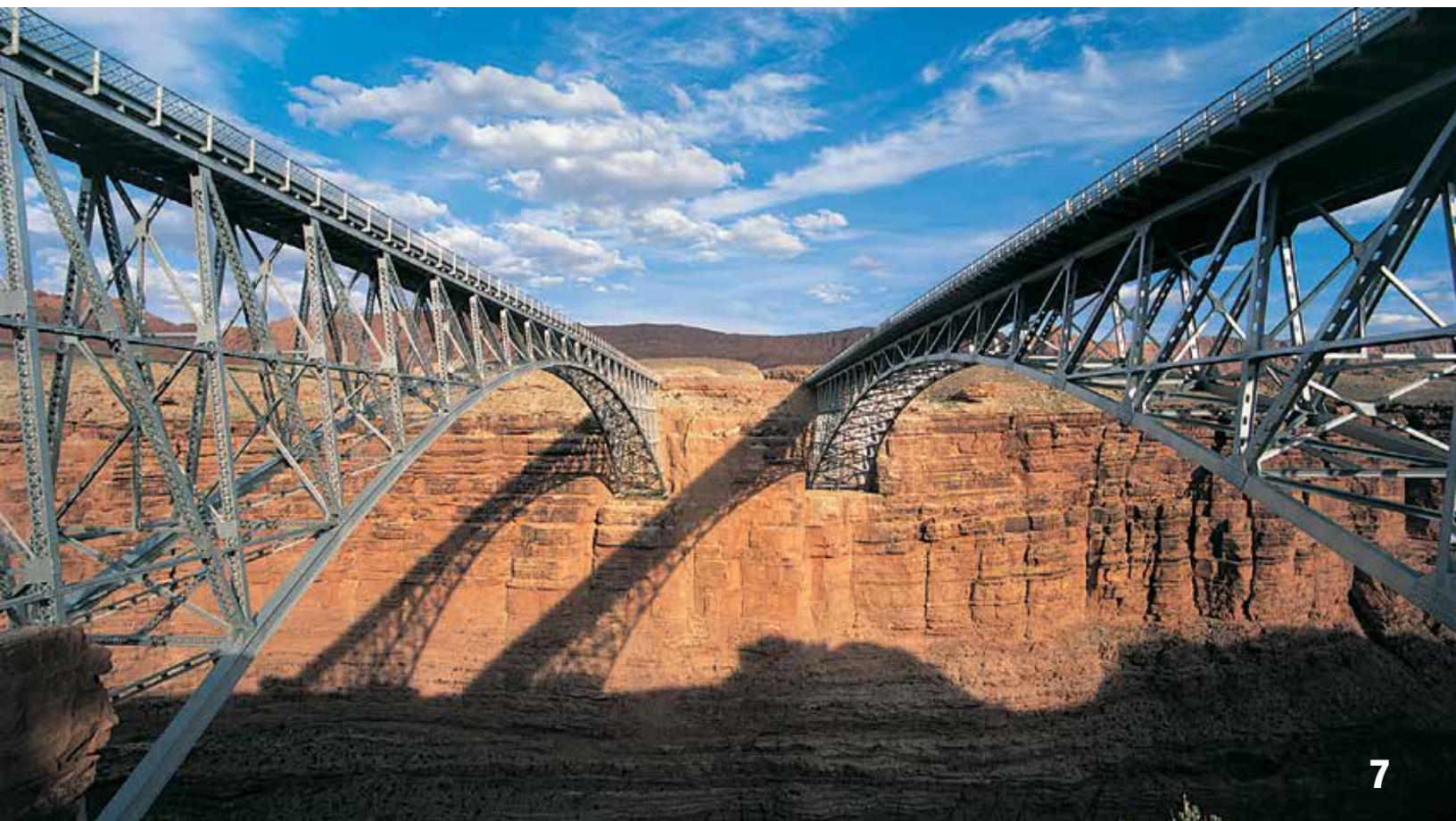
IMPLEMENTATION STRATEGY COMMITTEE

To fulfill its mission of promoting the implementation of CII knowledge and work processes, the Implementation Strategy Committee (ISC) designs activities and hands-on educational opportunities for CII members.

Each year, the ISC conducts two Performance Improvement Workshops (PIWs)—one in the spring, and one in the fall—to enable members to hone their CII Best Practice implementation skills and to learn about new CII products. These workshops also provide networking opportunities for ongoing implementation support. In 2012, the spring PIW was held in Scottsdale, Arizona, and the fall workshop took place in Houston, Texas. Both were highly successful, delivering great value to a combined attendance of 151 participants. At the close of each workshop, the ISC offers a four-hour optional course for attendees. At the spring workshop, Dr. William Badger and Dr. Avi Wiezel of Arizona State University taught a Leadership Skills course using a couple interactive tool exercises—*The PM Magic Deck of Action Cards Game* and *The Who's on Your Molecule? PM Diagnostic Tool*. At the fall workshop, a four-hour course was offered on front end planning for infrastructure projects led by Dr. Edd Gibson of Arizona State. Gibson discussed Implementation Resource 268-2, *PDRI: Project Definition Rating Index – Infrastructure Projects*, the CII tool that helps project team members identify critical planning issues and promotes front end planning success.

In addition to developing and conducting the PIWs, the ISC provides mentoring on request to participants in the CII Implementation Champions program. The committee also facilitates the CII Implementation website. The website details CII implementation planning, notifies members of upcoming ISC events, gives contact information for ISC support, and provides website links to products and conference presentations.

In 2012, four individual committee members contributed articles to the quarterly CII eNews featuring CII Practices. The articles discussed Globalization, getting started with Benchmarking/Performance Assessment, implementing Project Security Practices, and exploring CII's published research on Piping Design. ISC members also continued to help validate emerging industry practices through the Program for Early Implementation.

In 2012, the committee published version four of CII Implementation Resource 166-3, *CII Best Practices Guide: Improving Project Performance*. This publication is designed primarily to help CII Implementation Champions and others lead CII Best Practices implementation. It provides information to anyone interested in learning more about implementing CII Best Practices. It also is a resource for planning and evaluating the implementation of individual Best Practices.

The committee also sponsored Implementation Resource 246-3, *Support for the Implementation Champion: The Experience Reference Index*, published in December. This publication is a resource that helps users understand the specific strategies that should be brought into play depending on the level of experience in implementing CII research findings as well as the geographic deployment of the organization.

The ISC delivered a popular presentation at the 2012 CII Annual Conference titled *Experience Reference Index – The Global Recipe for Implementation Success*. This presentation discussed the ways implementation requirements differ on the basis of familiarity with CII research findings, implementation experience, the geographic deployment of the organization, and other organizational characteristics. Using the theme and style of a current reality TV show, the presentation answered what the correct recipe should be for a successful outcome. Based on ISC research, the speaker introduced a secret ingredient for implementation success. The implementation session drew a large audience. In the session, a panel examined two cases of attempts to implement CII practices in an organization. In each case examined, the focus was on which elements of the key ingredient were missing or lightly implemented.

To further benefit implementers of CII practices, the committee also oversees two key online resources: the Implementation Tool Box, an online resource that provides implementation guidance, and the Implementation Assistant, which allows users to create implementation plans based on the guidance of Implementation Resource 246-2, *The Implementation Planning Model: Steps to Success*. Managers of implementation initiatives that use the Implementation Assistant can monitor the progress of their efforts.With the tool, implementers can initiate and track implementation plans, establish milestones, and use metrics for effective implementation.

Photo courtesy of Fluor Corporation

Knowledge **Dissemination**

PROFESSIONAL DEVELOPMENT COMMITTEE

The mission of the Professional Development Committee (PDC) is to provide developmental paths for member company employees. The committee enables implementation of CII research, plans future educational opportunities for CII members, creates outreach programs, evaluates trends in industry education, and develops new educational vehicles.

At the beginning of 2012, CII held its seventh offering of the highly rated CII Executive Leadership Program, jointly run by CII and the McCombs School of Business at The University of Texas at Austin. The program—a two-week, in-residence, educational experience—provides in-depth knowledge on a range of leadership skills necessary for the top capital facilities positions of the future. The program focuses on enhancing executive leadership capabilities and strategic business skills, benchmarking best practices, and building collaborative owner-contractor and peer-to-peer relationships across the industry.

The PDC's Registered Education Provider Program, now in its seventh year, provides CII members and the general public with a qualified corps of instructors available to teach CII principles and methods at member organization facilities and other venues.

In 2012, CII partnered with the McCombs School of Business to design a custom professional development program for Ecopetrol S.A. The Ecopetrol International Project Management Program was designed to ensure the development of managerial skills of project professionals at Ecopetrol S.A. The two cohorts kicked-off the program by attending a two-day program in Bogota, Colombia and then came to Austin for a five-day, in-residence program.

In addition to its classroom-based programs, the committee oversees the CII online education program. Members and non-members can access the CII curriculum and benefit from fully interactive and professionally developed online courses. The current online curriculum covers the CII Best Practices on Partnering, Development and Alignment of Project Objectives, Constructability, Construction Safety, Planning for Start-Up, Pre-Project Planning, and Scope Control and Change Management.

PROFESSIONAL DEVELOPMENT COMMITTEE (CONTINUED)

In addition, the PDC facilitates an online resource plan—the CII Professional Development Continuum—to help organizations plan the career development of new project managers. The continuum illustrates how CII publications, education modules, online courses, web seminars, and instructor-led courses address project management competencies.

The title of the PDC's 2012 CII Annual Conference presentation was "The Cultural Dimensions of Global Learning." This presentation showed how companies are modifying their traditional U.S.-based training programs to meet the needs of local workers in other regions of the world. With an increasing number of large capital projects in foreign countries, companies are recognizing the importance of developing new and effective training that can be implemented on an international scale. In the well-attended implementation session, the panelists—learning leaders from The Shaw Group, Dow Chemical, and Procter & Gamble—emphasized the importance of an educated workforce in any location using the *It's a Small World* theme.

After the moderator opened with an overview of cultural learning differences, the panelist from Procter & Gamble explained how the company performs language translations, conducts verbal training, and adapts knowledge-checks and visual examples to reach workers in countries with low literacy rates. He also stressed the importance of ensuring that training tracks with the availability of local construction tools and equipment. Lastly, he recommended the firm's practice of grounding case studies in local cultural contexts and the use of virtual/web based training in areas that lack the necessary training skills and capability. The Dow Chemical representative showed how the company is delivering traditional classroom courses in virtual training sessions to accommodate all geographies. She explained how Dow engages students through learning exercises adapted to their respective cultures and how the firm has translated non-engineering courses into 12 local languages for broader coverage. The final panelist described the new teaching practices that The Shaw Group employs at two large nuclear plant projects in China. He also talked about how the learning styles of workers differ by locale, and how Shaw instills safety and best construction practices in laborers' work habits in areas where such work processes have traditionally been less important.

The PDC held its second offering of two four-hour instructor-led courses in conjunction with the 2012 CII Annual Conference in Baltimore, Maryland. Dr. William Badger and Dr. Avi Wiezel of Arizona State University taught a Leadership Skills course before the conference and Dr. G. Edward Gibson, Jr., of Arizona State University taught the Project Risk Assessment course at its conclusion. Over 34 organizations participated in these offerings.

The sixth offering of the CII Best Practices course took place during the 2012 fall semester. The interactive course, offered to graduate students in civil engineering and construction management, was held at The University of Texas at Austin and broadcast to thirteen distance learning sites: Arizona State University, Florida International University, Iowa State University, North Carolina State University, Pittsburg State University, San Diego State University, Texas A&M, The University of Wisconsin at Madison, The University of Houston, The University of Michigan, Vanderbilt University, Virginia Tech, and The University of Alberta. Each fall, CII staff and senior leaders from CII member organizations serve as course lecturers, offering students insights into the workings of the engineering and construction industry. Teaching the course gives the executive lecturers valuable contact with tomorrow's industry leaders.

During 2012, the PDC developed and successfully presented three web seminar series: a two-part series titled *Lessons Learned Program*, a one-part series called *Increasing Capital Efficiency*, and a two-part series on the topic of *Product Integrity Concerns*. Each seminar included a live question-and-answer session. Over 75 organizations participated in these events and provided good reviews. More web seminars are planned for 2013.

The PDC continues to sponsor the Best Practices–Best Practitioners Alliance, a collaboration of the Construction Management Association of America (CMAA) and CII. Now in its third year, this alliance is dedicated to improving construction performance and outcomes. Its mission is to improve capital facility delivery in all settings by promoting the professional practice of construction and program management in conjunction with the broadest possible application of recognized industry best practices. In 2012, CII staff and CII academics presented at the CMAA Owners' Forum and at the CMAA National Conference & Tradeshow. CMAA representatives attended and presented at the spring 2012 CII Performance Improvement Workshop and the CII Annual Conference.

The PDC sponsored the publication of the eight-hour Education Module 257-21, *Global Procurement and Materials Management*, focusing on the latest CII research in this area. In addition, it sponsored the publication of the four-hour Education Module 268-21, *Project Definition Rating Index (PDRI) for Infrastructure Projects*, bringing yet another option in support of the Front End Planning process.

In 2012, the PDC also hosted a web conference for training directors to explain how companies are modifying their traditional U.S.-based training programs to meet the needs of local workers in other regions of the world. The event also had a live question-and-answer session at the end of the presentation. Over 16 different organizations attended this one-hour event.

CII BEST PRACTICES IN ACTION AT WALBRIDGE
Zero-Accident Techniques

Richard J. Haller
President and COO
Walbridge

As Walbridge grows in the global marketplace, it's important that we remain committed to our core values.

Our number one core value is: "Think, demand and deliver safety in all aspects of our business." Recently, on a project in Doha, Qatar, the Amana Walbridge joint venture team achieved the milestone of 2.5 million man hours without a lost time injury. This achievement is clearly related to our adherence to Zero Accidents Techniques, a CII Best Practice.

In addition to dealing with typical cultural and language differences, Walbridge's management on the project demonstrated to partners, subcontractors, suppliers, and the client that there is nothing more important than the safety and health of employees. This provided confidence to the staff and reinforced the belief that improving the safety culture was well worth the effort.

Our team pushed for procuring higher quality personal protective equipment (PPE), which provided greater protection and lasted longer than equipment typically used in the region. Significant investment was made to train employees in areas like scaffolding, cutting/grinding, rigging, confined spaces, aerial work platforms, work at height, and fire fighting. As standard on any Walbridge project, all employees entering the Qatar site attend a site specific safety and health induction delivered in their native language. Any employee experiencing difficulty in processing this information receives an interactive training session with one of the lead HSE Officers.

Walbridge has also utilized its safety observation process on the project and has conducted more than 2,000 observations to date. Employees receive constant coaching and mentoring in the field to improve their performance. In addition, these observations are tracked continuously and used to determine training needs and generate key topics for weekly "Tool Box Talk" meetings.

Building global leadership starts with taking our safety culture and practices, a key contributor to Walbridge's success at home, and expanding their use in the global marketplace to benefit our clients and protect the people working on our projects.

Knowledge **Assessment**

BENCHMARKING & METRICS COMMITTEE

The CII Benchmarking & Metrics (BM&M) Committee and staff regularly obtain, analyze, and disseminate quantitative information regarding members' project performance. In 2012, the CII Benchmarking Program provided project performance information and analyses to five active CII research teams. The BM&M Committee also continued to expand the presence of benchmarking around the globe. Construction industry associations from Canada, Norway, Brazil, South Korea, and China visited CII in an effort to bring CII benchmarking to their companies and countries. In addition, 2012 saw CII's Performance Assessment System (PAS) add Russian as the third language used in its questionnaire, Key Report, and Data Miner – the other languages being Portuguese and English.

The CII Benchmarking and Metrics Program also continued to expand its selection of industry-specific metrics programs. Specifically, CII staff began working with interested companies in the gas processing and power generation and transmission sectors. These efforts will continue in 2013, along with the opening of at least three, new university-based Performance Assessment Laboratories (PAL). Besides the PAL located at the University of Calgary used to benchmark oil sands projects and pipelines, the next PALs will likely be located in Brazil (in partnership with the Center of Excellence for Engineering, Procurement, and Construction [CE-EPC]); in Russia (in conjunction with the National Oil and Gas Institute); and in Norway (in partnership with the Norwegian Center for Project Management). As a result, CII's Benchmarking Program is critical to the development of the organization's plans for long-term relevance: diversification of industry sectors, globalization, and the expansion of performance assessment (benchmarking).

Notably, the BM&M Program added 54 new projects to the CII benchmarking database in 2012, bringing the total number of projects tracked to 2,096. These new additions were submitted by 21 companies. A primary goal for the CII BM&M Committee in 2013 is to improve participation rates in the benchmarking program to include all member companies. One way this may be achieved is through coordination with CII research teams' data collection efforts.

Other CII Benchmarking Program achievements in 2012 included the following:

- Awarded $475,000 in external research grants for benchmarking programs
- Completed the eighth round of annual data collection for the Pharmaceutical and Biotechnology Benchmarking Program, bringing this program's database to 247 projects
- Held two training sessions for the National Healthcare Facilities Benchmarking Program (Washington, D.C., and Oakland, California) and began to receive numerous project submittals
- Published CII's annual safety report, two journal articles, and five conference proceedings
- Supervised five Ph.D. candidates (graduating one) and two M.S. students
- Produced 21 data requests for CII member organizations and research teams

It is clear that a strong benchmarking program is important to CII's continued success at improving project outcomes. Going forward, renewed member participation in the CII Benchmarking Program is a key objective for CII.

BENCHMARKING ASSOCIATES TRAINING

Three training sessions for CII Benchmarking Associates were held during 2012 for the member employees responsible for entering project data into the CII Benchmarking & Metrics System. Host cities for the training included Austin, Texas (CII), St. Louis, Missouri (Anheuser-Busch InBev), and Houston, Texas (Burns & McDonnell).

BENCHMARKING AWARDS

At the CII Annual Conference in Baltimore in July, the 2012 CII Benchmarking User Awards were presented to Saudi Basic Industries Corporation (SABIC) in the owner category and Alstom Power in the contractor category. Both companies have impressive, sustained benchmarking programs.

Knowledge **Management**

KNOWLEDGE MANAGEMENT COMMITTEE

The purpose of the Knowledge Management Committee (KMC) is to maintain and add value to CII's body of knowledge, and to establish and support the CII Communities of Practice.

CII members leverage collective industry wisdom through the CII Knowledge Structure—CII's systematic online categorization of its research products. The committee manages and maintains the structure and is responsible for approving all changes, including the placement of new products and archiving outdated products. The knowledge structure categorizes research publications into 14 knowledge areas, and further subdivides them into best practices, other practices, and information topics. Within each knowledge area, publications are listed by product type, i.e., implementation resources, research summaries, educational materials, or research reports.

In an effort to maintain and add value to CII's body of knowledge, the KMC recommends research topics to the Research Committee, refreshes best practices that require updating, and identifies and validates emerging best practices. In 2012, the KMC continued utilization of the Knowledge Management System (KMS)—an online tool developed by the committee to help its members more efficiently and effectively conduct product reviews to keep CII's body of knowledge relevant. Because reviews are conducted online by product family, productivity has been greatly enhanced. In 2012, the committee added archival guidelines and performed over 80 reviews—significantly more than in prior years.

In an effort to improve the overall value of CII's body of knowledge, the KMC sponsored and kicked off two new teams: The Knowledge Base Enhancement Steering Committee and the Risk Management Integration Team. The first team is focusing on enhancing access, usability, and member value of CII's vast collection of over 500 research-based products, while the second is focusing on updating and integrating CII's risk management tools to improve member value and utilization of Project Risk Assessment as a best practice.

COMMUNITIES OF PRACTICE

The KMC expanded CII's Communities of Practice (COPs)— groups whose members share a passion for a topic or practice area. The COP program provides a virtual environment in which members can deepen their knowledge and understanding of a topic through ongoing collaboration and knowledge sharing. At the beginning of 2012, the already established COPs addressed safety, sustainability, globalization, information management, front end planning, next-generation leaders, risk management, quality management and federal facilities delivery. By year-end, the KMC had launched two new communities: Modularization COP and Performance Assessment COP. This addition brought the total up from nine to 11 COPs with 300 members, representing a 50 percent growth in COP participation over last year.

A highlight during the 2012 Annual Conference held in Baltimore was the Next-Generation Leaders Forum, sponsored by the KMC. Over 70 members attended this first-ever CII event, featuring Cam Marston, a renowned generational speaker and President of Generational Insights. Marston's presentation, *How to Achieve Success in Your Workplace: an MBA of a Different Sort,* covered various generational learning and management styles and how we can leverage them. The forum was very well received and will continue at the 2013 Annual Conference in Orlando.

The KMC also sponsored the second annual COP Leadership Forum, also held during the annual conference. COP leaders provided insight into their progress, deliverables, and lessons learned, as well as ideas for continuous improvement. This successful knowledge sharing event will be repeated at the 2013 Annual Conference.

CII BEST PRACTICES IN ACTION AT EASTMAN
Alignment

Mark Cox
Vice President,
Worldwide Engineering &
Construction
Eastman Chemical
Company

In the course of carrying out capital projects, Eastman routinely applies many CII Best Practices; however, I would like to focus on the importance of alignment when taking on complex projects with aggressive performance targets.

Eastman is a global specialty chemical company that produces a broad range of advanced materials, additives and functional products, specialty chemicals, and fibers that are found in products people use every day. One such product is Eastman's Tritan™ copolyester, a new-generation copolyester which is manufactured without bisphenol A (BPA). This remarkable substance balances the properties of clarity, toughness, and heat and chemical resistance.

After its introduction, the demand for Eastman's Tritan™ copolyester product rapidly increased, leading to the need to expand production capacity on an accelerated schedule. Increasing capacity involved not only increasing the polymer production capacity, but also the capacity of the feedstock chemicals.

Six capital expansion and relocation projects were identified across two Eastman manufacturing sites that needed to be executed simultaneously —and in record time— to meet the business need. With such a diversity of projects and project teams working to achieve the same product delivery date, alignment of all key stakeholders during the front end planning phase was critical to the success of the overall program.

Following Eastman's Capital Process, alignment sessions were held that included the key representatives of the business, technology, manufacturing, engineering, construction, procurement, and senior management functions. This proved to be critical to the success of the projects and facilitated collaboration and the pursuit of a common set of goals by all of the stakeholders.

In these alignment sessions, the business representatives explained the business needs, challenges, issues, and objectives for the project in order to foster a common understanding by all stakeholders. All known knowledge gaps were identified and plans to close those gaps were discussed. Project priorities — with safety at the top— were established, and roles and responsibilities of each stakeholder were reviewed and clarified.

Once the alignments were completed, the project teams had a clear understanding of these following projects parameters:

- what the business was trying to accomplish with the projects
- who the key business, technology, manufacturing and management sponsors and leaders were for each project, as well as the overall program
- the project priorities that define the relative value and importance of capital cost, project schedule, product quality, operating cost, and reliability as well as a basis for making trade-offs between those priorities
- the sponsor's tolerance for taking commercial risks to achieve the unusually aggressive schedule targets, while ensuring safety would not be compromised
- the constraints, assumptions, and unresolved issues that would shape the project execution strategies
- the project's governance and oversight guidelines.

This family of projects was completed in about 60 percent of the time usually required for fast-tracked projects of this size and complexity, a feat that would not have been possible without the clarity of purpose and buy-in achieved through front end planning alignment. Not only were these projects completed in record setting time, they were completed, within budget, and are delivering first class product at or above nameplate capacity.

MEMBERSHIP COMMITTEE

The mission of the Membership Committee (MC) is to develop and implement strategies and resources to recruit and promote the early engagement of new members; assure the continuing participation of current members; monitor member value and satisfaction; and, when appropriate, recommend termination of membership.

CII membership continued to grow in 2012, reaching 132 members by year-end. A 27 percent increase in membership over the past two years challenged the committee to enhance member orientations and develop an online member tool, *myCII*, to assist members in early networking, orientation, and management of their CII team.

CII surveys its membership biennially to assess member value and satisfaction. In 2012, the MC and CII staff analyzed the 2009 and 2011 survey data, distributing the findings at the fall 2012 Board of Advisors meeting. The MC then conducted a roundtable where the Board of Advisors discussed ways to improve the identified challenges.

The Membership Committee will continue to recruit organizations that add to the stature and knowledge base of CII, while assisting current members in receiving the most value from their membership.

STRATEGIC COMMUNICATIONS COMMITTEE

The purpose of the Strategic Communications Committee (SCC) is to support the purpose, vision, and mission of CII through communications; improve the quality, consistency, and alignment of core process and standing committee communications to better deliver CII's value proposition; maintain and promote CII's brand and industry leadership; and maximize communication channels to expand CII's audience and membership.

In 2012, the committee placed a priority on recruiting efforts–doubling its membership and filling liaison roles from all four CII core process areas and the Executive Committee. The SCC implemented its communications plan, including publishing CII's 2011 Annual Report, quarterly eNews issues focused on delivering more informative CII content to members, and various eblasts announcing CII events. The SCC continued to expand

media relations to increase coverage of CII research and the Annual Conference. In an effort to improve communications quality, consistency, and alignment the SCC developed a Communications Matrix (guideline) that was accepted by the Executive Committee and will be rolled out at the January Leadership Meeting to achieve alignment with all CII standing committees.

Other focus areas included developing a theme and key messages for the 2012 Annual Conference, registration of CII's marks (logo, secondary logo, and tagline), working with the Health Care Benchmarking Metrics team on a communications campaign, and developing a social media guideline for 2013 launch into new communication channels.

ANNUAL CONFERENCE

The theme of the 2012 CII Annual Conference—Building Global Leadership—focused on the major changes that two decades of globalization has had on the business environment. Global leadership requires a specialized set of competencies and corporate values to respond to the demands of such complex business dynamics.

CII speakers showcased new research with many ready-to-use tools. Ilker Adiguzel, Director of Construction Engineering Research Laboratory with the U.S. Army Corps of Engineers, served as the conference chair. Conference keynote speakers were Jim Mulva, Retired Chairman & CEO of ConocoPhillips; MG Michael Walsh, Deputy Commanding General and Emergency Operations with the U.S. Army Corps of Engineers; and Mark Vitner, Director and Senior Economist of Wells Fargo Bank.

The following featured speakers rounded out the conference presentations: Stephen Ayers, Architect of the Capitol and Alistair Gibb, ECI Royal Academy of Engineering Professor of Loughborough University.

Students from the Baltimore-based Architectural, Construction, and Engineering (ACE) Mentor Program discussed their future professional plans. Students from SkillsUSA and the National Center for Construction Education and Research (NCCER) - two trades-oriented mentoring programs – also presented. These young people came from around the country to talk about their local programs and to provide hands-on demonstrations of training equipment. In addition, graduate students from engineering programs at universities across North America presented posters of their non-CII funded research.

Process Industry **Practices**

Process Industry Practices (PIP) is celebrating its twentieth anniversary and continues its growth and success. Over the past year, its lists of member and subscriber companies has grown to now total 106 owner/operator and contractor companies regularly utilizing its harmonized PIP Practices. With an additional 21 Licensees, PIP remains a well-recognized industry consortium. As the global reach of its Members, Subscribers, and Licensees grows, PIP continues to see the use of its practices extending beyond the process industry.

PIP is an independently funded organization operating under the umbrella of CII. Success is a direct result of its member companies' applying key resources in support of nearly 500 PIP Practices in now nine engineering disciplines. Developing PIP Practices involves harmonizing member companies' internal standards. The content of these practices is applicable to the needs of numerous process industry non-members and to those in related industries around the world. Again in 2012 PIP has received enthusiastic participation and support from its member company volunteers and management. This results in continuing progress to regularly update and revise its practices, develop approved new practices, and continue to increase industry awareness, acceptance, and use of them.

Member-driven initiatives in 2012 included the continuation of PIP's work to identify opportunities to make its practices more globally applicable. A Pipeline Systems Function Team has been formed and is developing Piping Practices related to ASME B 31.4 and B31.8 codes for gas/liquid transmission and distribution piping systems. The special needs of hygienic process piping systems are being addressed with a new team developing plans for practices to support those needs. In response to member company needs, a key improvement has been added to the PIP website to allow its members to have online access to archived

published practices and key supporting documents used in their development. In the third quarter of 2012, the PIP Strategic Planning Committee started the planned three year interval review and update of the Strategic Plan. The revised plan will be published by the end of 2013.

Several significant funding and expanded participation opportunities were approved and started in 2012. In addition to PIP's funding of the CII research project titled, "Mitigating Threats of Counterfeit Materials in the Capital Projects Industry," PIP resources will actively participate on the CII research team. The PIP Steering Team approved a total of $250,000 funding for an Endowed Presidential Scholarship in PIP's name for the Cockrell School of Engineering. An additional $250,000 has been approved to support and have naming rights for one of the small project labs in the new Engineering Education and Research Center building planned at The University of Texas at Austin (UT). Details for these contributions are being finalized with UT. These are important opportunities to ensure broader awareness of PIP and enhance its relationship with CII and UT. PIP will also provide some funding and resource support to the Materials Technology Institute for their project to develop industry guidelines for "Inspection and Evaluation of Old Equipment - Lost Papers."

Quarterly discipline-specific implementation workshops continued during 2012. The Coatings-Insulation-Refractory and the Process Control-Analyzer Function Teams were featured. These workshops continue to provide excellent forums for sharing implementation success stories. PIP Members continue to report that they achieve considerable savings by implementing PIP Practices, rather than developing and maintaining their own internal standards. The networking opportunities and knowledge management sharing of non-proprietary information are recognized as very beneficial to all participants.

MEMBERS - OWNERS

3M Company
Aera Energy
Aramco Services
Archer Daniels Midland
Arkema
Ascend Performance Materials
BP
Celanese
Chevron
CITGO
ConocoPhillips
Covidien
Dow Corning

DuPont
Eastman Chemical
Evonik Degussa
Flint Hills Resources
FMC
Hess
HollyFrontier
Honeywell
Huntsman
Momentive Specialty Chemicals
Monsanto
Mosaic Fertilizer
Occidental Oil & Gas

Pasadena Refining
Phillips 66
PPG
REC Silicon
Rentech Inc.
SABIC
Sekisui Specialty Chemicals
Sunoco
Tesoro
UOP LLC
Western Refining

MEMBERS - CONTRACTORS

Ambitech Engineering Corp.
BE&K (a KBR Company)
Bechtel
Braskem America Inc.
Brinderson
Burns & McDonnell
Burrow Global
CB&I
CDI Engineering
CH2M HILL

Chemtex International
ENGlobal
Fluor
GE Energy
IHI E&C International Corporation
Jacobs
KBR
Merrick and Company
Middough
OnQuest

Ref-Chem
S&B E&C
SAIC Energy, Environment, and
Infrastructure LLC (SEE&I)
Samsung Engineering America
SK Engineering & Construction
SNC-Lavalin
Technip
URS Corporation
WorleyParsons

SUBSCRIBERS

ABEC Inc.
Agrium
Bahrain Petroleum Co. (BAPCO)
BHPBilliton Nickel West
Cenovus Energy Inc.
ChevronPhillips Chemical
Coffeyville Resource Refining and
Marketing LLC
Emerson Process Control
ENPPI-USA
Harvest Operations Corp.
Jotun Paints
Koch Industries Inc
KPS Technology & Engineering LLC

Kraton Polymers
Lloyd Engineering
Lyondell Chemical
Marafiq
Methanex Corp.
Northwest Upgrading Inc.
NuStar Logistics, LP
ONEOK
Petroleum Company of Trinidad & Tobago
Plasco Energy
PlusPetrol SA
Praxair
Rockwood Lithium
Sasol

Seadrift Coke
Silver Eagle Refining
Sinclair Oil Corp.
Stepan Company
Sumitomo Chemical Company Ltd.
Tengizchevroil (TCO)
The Sherwin Williams Co.
The University of Texas at Austin
The Williams Companies
Valero
Willbros Engineers, LLC
Wood Group Mustang
Woodson Engineering LLC

LICENSEES

API
ASME
Autodesk
Aveva Inc
Bentley Systems
Codeware
ConcepSys Solutions

IEEE
IHS
Intergraph
ISA
Lee College
National Institute of Building Sciences
National Insulation Association

Palomar College
St. Paul Technical College
SAI Global
South Central Louisiana Technical College
Texas A&M-Corpus Christi
Thomson Reuters/Techstreet
University of North Dakota

Fiatech

Fiatech leads the way in providing solutions. Fiatech listens to its members, develops projects that address their top challenges and opportunities, and delivers results that provide new approaches on how our industry designs, builds, operates, and maintains buildings and infrastructure, while continuing to look forward for new directions and advancements of significant importance to the industry. Fiatech studies the pressing challenges companies are facing, engages with experienced industry subject matter experts, and provides real-world solutions they can take back to their organizations and implement.

2012 was a strong year for Fiatech. In addition to the delivery of over 20 project results, Fiatech had many achievements – some of which are highlighted below.

- The 2012 Fiatech Technology Conference and Showcase received strong feedback from the more than 360 individuals who participated and described the conference as the most informative event in the industry on new work approaches and technology advances.
- Fiatech was invited to participate in the White House Grand Challenge initiative, which is directed at bringing innovation and technology into the design and construction industry while also preparing the next generation of leaders.
- Fiatech maintained a strong technology exchange and outreach program highlighted by its Technology Tuesday webinar series. Fiatech also had a very active technology outreach program, participating in over 50 events and continuing to expand its activities with the capital projects community in Europe and globally.
- The Roadmap Team advanced an industry technology strategy with member-focused development of tactical action plans for each of the Roadmap Elements, resulting in increased advancement of Roadmap-sponsored projects in the project formation process.
- The Regulatory Streamlining Team continued to advance the Autocodes (Automated Code Checking) project that works with the International Code Council (ICC) and is now implementing the next phase to deliver a training session on Regulatory Streamlining Best Practices – a Guide for Replicable Buildings for adoption in the ICC Code, and "A Practical Deployment Strategy for Digital Signatures and Seals in Fully Electronic AEC Processes." This group also is working on the adoption of digital seals and signatures.

- The Procurement and Materials Management Team completed a comprehensive Materials Management Productivity Improvement Planning Guide, finalized and released its Global Materials Tracking Case Study, initiated the first phase of the Next Generation Project Performance Predicting (NP3) tool, and launched the Expediting Equipment & Materials Selection and Acquisition (EMSA) project.
- The Construction Team, working with the Workforce Team, made several advancements in 2012. In partnership with COMIT, they completed a Real Time Field Reporting Study as well as a practical study on RFID applications for site access control. Additionally, they organized and initiated a Mobile IT Community of Interest and completed a User Acceptance of Mobile IT report. The team also developed a new project on Advanced WorkFace Planning that is going forward into 2013 and which dovetails off the work CII has already done.
- The Operations & Maintenance Team, in collaboration with EPRI, completed a three-year project to develop and test a 3D radiation exposure virtual reality planning tool that uses an avatar to assess worker exposure during plant maintenance. The team is developing a project for 2013 to apply avatars and virtual work environments to address incident response planning in other types of industries and potentially hazardous conditions.
- The Information Management Team continued with strong activity focused on delivering value through advancing interoperability. In collaboration with the POSC Caesar Association (PCA), the team advanced development of the Joint Operational Reference Data (JORD).The iRING brand was endorsed by the Board as an industry direction for ISO 15926 data exchange. In collaboration with AISC, a new structural steel interoperability project was initiated and will continue into 2013. Additional projects were completed for project information flow, equipment information exchange and information exchange patterns.
- The Fall Member Meeting featured workshops and sessions showcasing Fiatech's activities and projects and review of the 30 project proposals submitted by members for 2013.

Fiatech looks forward to an exciting year of further progress and value contribution in 2013. The projects that are underway and the projects in development will provide great business value to its members and partners as Fiatech continues in its leadership role for the industry.

FIATECH 2012 MEMBERS & PARTNERS

Fiatech welcomed ten new members in 2012, helping to expand our reach and leveraging our member's investments. At the end of 2012, Fiatech had over 35 percent of its members and partners headquartered outside the U.S. including Australia, Brazil, Canada, Finland, France, Greece, Israel, Norway, Russia, Saudi Arabia, South Korea, Sweden, and the United Kingdom.

AIA Building Connections
American Institute of Steel Construction
ARC Advisory Group
Areva
Arizona State University
ARX
Atlas RFID Solutions
Autodesk
AVEVA
Avolve Software
Bechtel
Bentley Systems
Black & Veatch
buildingSMART alliance
Burnham Nationwide
Burns & Roe
Carnegie Mellon University
CCT
CH2MHILL
CIB
Clemson University
Consolidated Contractors Company
Construction Industry Institute
Construction Opportunities in Mobile IT
Construction Sciences Research
   Foundation
Continental Automated Buildings
   Association
Coreworx
Dassault Systemes
Department of Veterans Affairs

The Dow Chemical Company
Drexel University
Emerson Process Management
Electric Power Research Institute
ExxonMobil
Fluor
Georgia Institute of Technology
HAL
Hatch
Honeywell
IFS
Intelliwave Technologies
Intergraph
Jacobs
Kaiser Permanente
King Fahd University
Korea Advanced Institute of Standards
   and Technology
Korea Institute of Construction &
   Transportation Technology Evaluation
   and Planning
Loughborough University
Madcad
Mechanical Contractors Association of
   Chicago
Meridian Systems
MIMOSA
Metalforming
Myongji University
National Academy of Construction

National Center for Manufacturing
   Sciences
National Institute of Standards &
   Technology
Noumenon
OnTrack Engineering
Open O&M Initiative
Oracle
Panprojects
S&B Engineers & Constructors
Siemens
Solibri
SPAR
Systemation Solutions
Target
Tecgraf-PUC/Rio
TEEC Software Solutions
Texas A&M University
Thomas Industrial Networks
Trimble
Tennessee Valley Authority
University of Alberta
University of Calgary
University of Michigan
University of Salford
The University of Texas at Austin
University of Washington
University of Waterloo
VNIIAES
VTT
WorleyParsons
Zachry

CII Awards

CARROLL H. DUNN AWARD OF EXCELLENCE

The Carol H. Dunn Award of Excellence is the highest recognition bestowed by the Construction Industry Institute. The award, established in 1985, bears the name of the original recipient, the late Lt. Gen. Carroll H. Dunn, U.S. Army. The purpose of the award is to recognize an individual who has had singular and notable responsibility for significant advancements in improving the construction industry.

Major General Joseph A. "Bud" Ahearn

The 2012 Carroll H. Dunn Award of Excellence was presented to Major General Joseph A. "Bud" Ahearn. Ahearn is the twenty-sixth recipient of this award, joining a distinguished line of unique individuals who have shown the highest degree of personal dedication to improving cost, schedule, and safety of capital projects. Ahearn earned the honor for a lifetime of leadership and service to the construction industry and to the country. Throughout his career as a military engineer and, later, as an industry leader, he held key strategic positions that required practical skills, the ability to communicate with and engage stakeholders, and a sustained commitment to the development of leadership. In 2011, Ahearn semi-retired from the industry, remaining active as a consultant with CH2M Hill and serving as member of the National Academy of Engineers, the National Academy of Construction, the American Society of Civil Engineers (ASCE), and the Society of American Military Engineers (SAME). Throughout his life, he has had a strong sense of community and has set a high standard for excellence in engineering and national service.

TUCKER AWARD AND OTHER CII AWARDS

In addition to the Carroll H. Dunn award, the Construction Industry Institute recognized excellence among its members and academics by presenting the following awards in 2012:

Richard L. Tucker Leadership & Service Award

This award recognizes an individual who has contributed significantly to the advancement of the CII mission and to the success of CII as an organization.

Melissa B. Herkt was recognized as the ninth recipient of the Richard L. Tucker Leadership & Service Award. Herkt has been a model of outstanding service to CII. Her contributions to CII, her dedication to the industry, and her unflagging spirit of good will make her more than deserving of this honor.

Herkt has been actively involved in CII programs for the past 11 years, having served on the Board of Advisors (BOA), Executive Committee, and in leadership positions on the Research, Membership, and Nominating Committees. Serving as the 2011 CII Annual Conference Chair and being a regular participant in the CII Executive Leadership Program, she has consistently and enthusiastically been willing to lead and inform others about the benefits of CII membership.

Distinguished Service Award

This award recognizes individuals who have generously contributed their energy and talent to the advancement of the CII mission.

Distinguished Service Awards were presented to the following CII leaders at the Spring 2012 Board of Advisors Meeting:

- Randy J. Abdallah
- Melissa B. Herkt

Distinguished Service Awards were presented to the following CII leaders at the Fall 2012 Board of Advisors Meeting:

- Jim Backes
- Don Leinweber

Outstanding CII Implementer Award

This award recognizes a significant contribution to enhancing the implementation of CII Best Practices and research findings.

The Construction Industry Institute selected **Hugh L. (Tad) Fry III** of Anheuser-Busch InBev and **Jason Crain** of Hargrove Engineers + Constructors as co-recipients of the CII Outstanding Implementer Award. The Implementation Strategy Committee chooses the recipients and recognized them at the 2012 CII Annual Conference.

CII Benchmarking User Award

This award recognizes an owner member organization and a contractor/supplier member organization that have made exceptional use of and contributions to benchmarking.

Saudi Basic Industries Corporation (SABIC) was named the winner of the 2012 CII Benchmarking User Awards in the owner category. **Alstom Power** was named the winner, for the third time (2007, 2011, and 2012), of CII's Benchmarking User Award in the contractor category.

CII Professional Development Award

At the 2012 CII Annual Conference, the Professional Development Committee recognized **Emerson Process Management**, Process Systems and Solutions business unit, with the CII Professional Development Award. Their innovative work to incorporate CII research into the firm's professional development processes resulted in robust programs that addressed the diverse learning needs of individual contributors, project operations personnel, and managers and leaders worldwide.

CII Distinguished Professor Award

The distinguished professor award recognizes full-time or adjunct faculty who incorporate published CII research findings into the courses they teach.

Dr. Sanjiv Gokhale, Vanderbilt University

Currently the Director of Construction Management in the Department of Civil & Environmental Engineering at Vanderbilt University, Dr. Sanjiv Gokhale won the 2012 CII Distinguished Professor Award because of his innovative use of CII Best Practices in his courses. Gokhale uses a distance learning format to conduct his Advanced Project Management course with 10 other universities and serves as the facilitator for in-class discussions and assignments. In all his courses, Gokhale introduces students to the theory and application of construction project management fundamentals, from contractual relationships to zero accident techniques.

Dr. David Grau, The University of Alabama

Currently an assistant professor in the Department of Civil, Construction, and Environmental Engineering at the University of Alabama, Dr. David Grau won the 2012 CII Distinguished Professor Award. Grau integrates CII research on modularization, site layout, productivity, and constructability into his courses to expose his students to real-world techniques and to increase their awareness of CII research at an early stage of their careers. Grau has used CII research in conjunction with on-site visits to give his students the right balance of theory and practice.

Outstanding CII Researcher
Dr. William J. O'Brien, The University of Texas at Austin

Dr. O'Brien is an Associate Professor in the Construction Engineering and Project Management Program, Department of Civil, Architectural, and Environmental Engineering at The University of Texas at Austin. His research focus on novel processes in the areas of supply chain management, project controls, resource management, information management, and the design of advanced decision support systems has made him one of CII's busiest and most versatile researchers. His consistent solid research design, practical approach to industry problems, attention to detail, and precise communication of findings makes the research he produces remarkably valuable and user-friendly.

Outstanding CII Instructor
Dianne Underwood, ConocoPhillips

Dianne Underwood of ConocoPhillips was recognized with the 2012 Outstanding CII Instructor Award. Underwood and her team deliver over 14,000 hours of training annually for ConocoPhillips' global capital project workforce. Underwood engages trainees by using a combination of CII educational materials and by sharing her own experiences to provide practical examples of the material. For the past three years, she has also developed and delivered ConocoPhillips' contributions to the CII Best Practices course—a distance-learning course that has benefited approximately 500 engineering and construction management students in universities across the country.

Shanghai, China

CII Financials

Sources and Uses of CII Resources in ($000)

		Net
BEGINNING BALANCE		
Carried Forward from 2011	966	
Balance Forward	620	
Reserve	1,000	**2,586**
SOURCES		
Membership Dues		4,510
Product Sales:		
Revenue	171	
Production & Sales Expense	(174)	(3)
Other Sources		50
TOTAL SOURCES		**4,557**
USES		
Programs:		
Research	2,199	
Implementation	268	
Professional Development	202	
Best Practices Program	51	
Knowledge Management	78	
Benchmarking & Metrics	800	
Executive Leadership Program	273	
Breakthrough	19	
Benchmarking & Metrics Revenue	(156)	
Other Program Revenue	(800)	2,935
Conferences:		
Annual Conference	1,079	
Attendance Fees	(928)	151
Supporting Activities:		
Support of Members & Director's Groups	468	
Academic Committee	20	
Other Activities	62	
Supporting Activity Revenue	(127)	423
Information Systems		214
General Expense:		
Administration	388	
Other Activities	185	573
TOTAL USES		**4,296**
NET		**261**
ENDING BALANCE		**2,847**

Director

Wayne Crew

Executive Staff

Kim Allen, *Associate Director of Knowledge Management*
Manuel Garcia, *Associate Director of Knowledge Dissemination*
Dr. Stephen Mulva, *Associate Director of Knowledge Assessment*
Dr. Stephen Thomas, *Associate Director of Knowledge Creation*
Jewell Walters, *Program Manager, Member Support*

Staff

Hanna Arbogast, *Program Coordinator*

Nuria Ayala, *Senior Program Coordinator*

Michael Burns, *Technical Writer/Editor*

Terri Buvia, *Executive Assistant*

Erika Corbell, *Program Coordinator*

Dr. Jiukun Dai, *Research Engineer*

Frances DeCoux, *Administrative Associate*

Deborah DeGezelle, *Project Manager*

Kristi Delaney, *Senior Program Coordinator*

Jasmine-Rose Henderson, *Administrative Associate*

Kelly Lenig, *Senior Program Coordinator*

Matt Ondrey, *Software Developer*

Donna Rinehart, *Administrative Associate*

Bernie Rosenblatt, *Financial Analyst*

Debbie Samilpa, *Administrative Associate*

Dr. Jacqueline Thomas*, Editor*

Stevan Wilsan, *Systems Administrator*

Hong Zhao, *Project Manager*

IN MEMORIAM

Ted C. Kennedy
CII Chairman, 1989
Carroll H. Dunn Award of Excellence, 1988

Gerald R. (Rick) Oegema
Benchmarking & Metrics Committee Member, 2008 – 2012

CII

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