Construction Industry Institute®
South Africa Chapter

Newsletter
September 2015

CII-SA Chapter Launch

On 21 May 2015 the South African Chapter of the Construction Industry Institute (CII-SA) was launched at the University of Pretoria's Graduate School of Technology Management (GSTM).

The launch was attended by more than 70 industry representatives and academics. CII-SA aims to measurably improve capital project performance in Southern Africa as well as the rest of Africa. Having access to valuable tools, techniques and methods developed over more than 30 years by CII, the local Chapter will research capital performance and improvement on the continent as well utilise current best practices.

Keynote speaker Mr Jack van der Merwe, CEO of the Gautrain Management Agency highlighted the challenges faced by rolling out mega infrastructure projects. The life cycle cost of mega projects as well the influences of external factors are often overlooked and underestimated and should be attended to with diligence.

Dr Stephen Mulva, Associated Director for Performance Assessment at CII, believe that CII-SA will contribute to the continent by facilitating and promoting the international offering of CII's wealth of knowledge and validated mechanisms.

By joining and participating in the activities of CII-SA project owners, consultants, contractors, academics and regulatory bodies can benefit from collaborating and create opportunities to improve the development, implementation and sustainability of large capital investments.

CII Annual Conference, Boston, Massachusetts, USA, 3 - 6 August 2015

The 2015 CII Annual Conference was held at the Marriott Copley Place Hotel in Boston from 3 to 6 August. The theme of this year's conference was "Leading the Performance Revolution". In his opening remarks CII Director Wayne Crew emphasised various aspects ranging from safety to performance of owner-contractor partnerships.

As usual, feedback regarding safety was first on the agenda. For the first time since 2010 the Total Recordable Incident Rate (TRIR) saw an increase of 13%, albeit from a very low base (fig 1). CII member organisations' TRIR rate is still approximately 9 times lower than the industry average for which the target of zero will always remain the objective. A call was made to all parties to once again address safety matters and work hard towards the zero incident and fatality target.

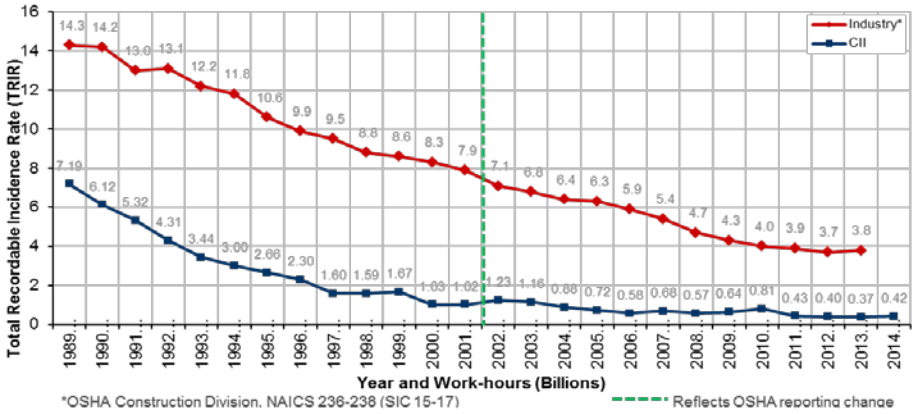

Figure 1: TRIR

Key note speakers Barry LePatner, founder of LePatner and Associates LLP, and Jan Tucman, Editor of Engineering News Record, highlighted the three most significant influencing factors that will impact the construction industry in the near future. These factors were; automation and extensive use of robots, 3D printing and drone technology.

Automation and robot technology – With labor productivity in the construction industry lagging behind other industries such as manufacturing and services, the use of robot technology will continue to be developed. In residential construction bricklaying robots have been successfully deployed with fully automated house construction a potential reality in the near future.

3D Printing – The development of 3D printing technology is accelerating. Advanced pilot scale tests are being done to print buildings from polymer materials to full scale, metal-based scale bridges.

Drone technology – Even though the regulatory framework for drone usage still needs to be refined, there is no doubt that this technology will be extensively applied in construction, especially where accessibility for inspection is difficult or were safety of people is a concern.

According to a study by Boston Consulting Group automation could decrease the average labor-cost by an average of 16% by 2025.

The main focus of the conference was once again the feedback from the various Research Teams (RTs). Plenary and implementation sessions were held on the following topics:

- PDRI for Small Industrial Projects
- Successful Delivery of Mega-projects
- Measuring the Success of a $3 Billion "Laboratory Innovation"
- Next Generation Leaders Community of Practice
- Critical Factors for Commissioning / Start-up Success
- Organizational Strategies for Instantaneous Project Controls
- New Perspectives in Delivering Information to the Crafts
- Maximizing Success on Integrated Projects: An Owner's Guide
- Successful Delivery of Flash Track Projects
- Smart Thinking and 10-10 Team Indicators
- Visual Sensing and Analytics for Construction and Infrastructure Management
- Validating Advanced Work Packaging as a Best Practice

The conference was closed by a presentation by IHS Economics & Country Research, on the divergence in the world economy and construction markets.

Owner – Contractor Partnering

Traditional benchmarking for capital projects focused mainly on the front-end of projects and then measuring the final results after close-out in terms of time, cost, operations, safety, etc. With 10-10 the focus shifted to a more inclusive approach whereby people interaction and working relationships became part of the assessments. Since the launch of 10-10, nearly 800 phases of capital projects have been inserted into the program. Analysis of this data has consistently shown a strong benefit of true partnership between CII owner and CII contractor organisations. As indicated in figure 2 collaboration during Front End Planning (FEP) saw an improvement in 14.7% when CII owners and CII contractors work together in partnership on the same project. In analysing the data "Design Efficiency" came out as a feature benefitting capital optimisation fairly significantly.

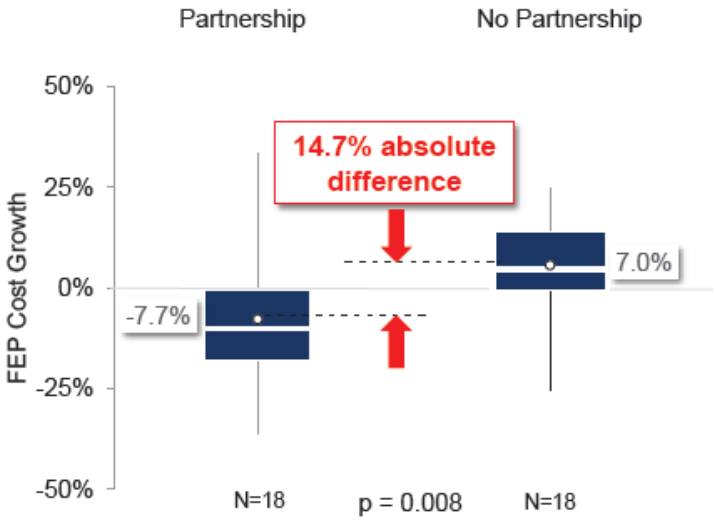

Figure 2: Cost benefit of partnering during FEP

CII – South Africa

With most of the start-up administration completed CII-SA is looking forward to actively engaging with the project community.

The following events are scheduled for September 2015:
Committee meeting: 16 September 2015
Membership orientation: 22 September 2015
Training will be confirmed for November 2015

Research topics will be listed and discussed during the Membership orientation meeting. Proposals and applications will be submitted to CII in October for consideration during the Board of Advisors meeting in November 2015.

For enquiries please contact us anytime.

Regards

Dr Giel Bekker
Director