



Newsletter 1-2018



Enhancing the business effectiveness of the capital facility life cycle through research and development and driving business value for your capital projects

CII – Africa Chapter - Commissioning and Handover of Capital Projects Workshop

The Construction Industry Institute (CII) Africa Chapter will be hosting a one-day Workshop on the Commissioning and Handover of Capital Projects. Presentations as well as an overview of CII tools and techniques on the topic will be discussed in an active-learning workshop by industry experts and practitioners. The Commissioning and Handover of Capital Projects workshop will be a full-day workshop held at the University of Pretoria on Thursday, 3 May 2018.

For more information and to register to attend, contact Tharien Potgieter on email: tharien.potgieter@uct.ac.za by 16 April.

CPD points will be awarded on completion of the workshop.

The practices and methods for defining mechanical completion and identifying responsibilities and accountabilities are typically not well defined with disputes frequently arising over the readiness of assets for transfer to commissioning and owner teams. Several studies have shown that commissioning failures are too common in frequency and extremely costly in impact. The transitions between construction, pre-commissioning, commissioning, startup and closeout (abbreviated as CCSU) remain challenging for many reasons, but especially due to the contractual separations and the multitude of organisational interfaces and hand-offs.

Achieving project and commissioning success requires a solid understanding of the CCSU activities to be undertaken and the associated responsibility assignments.

The Commissioning and Handover of Capital Projects Workshop will provide workshop participants with focused and substantive guidance and the CII best practice resources on how project teams can enhance the effectiveness of CCSU transitions.



The CII best practice implementation resource, SP333-1 Managing Transitions between Construction Completion, Pre-Commissioning, Commissioning, and Startup – is available to CII members. SP 333-1 is comprised of four tools: a flowchart of 124 Commissioning and Startup activities, organised by project phase and thematic categories; a RACI matrix that defines the responsibilities of each activity's manager; a set of 20 "hot spots" where problems most often arise; and an illustrative case study that demonstrates the value that results from timely and effective mitigation of the hot spots.



CII Annual Conference – July 2018

The Construction Industry Institute (CII) will be hosting its Annual Conference this year in Indianapolis in the USA. The Annual Conference theme this year is; 'Imagine – The Value of Transformative Possibilities'. The CII Annual Conference 2018 is the premier event of the capital projects industry.



The Conference will be held at the JW Marriott Indianapolis hotel, in downtown Indianapolis, Indiana, commencing on Monday, 23 July and running through until Thursday, 26 July, 2018.

Should you plan on attending, it is advisable to finalise your registration by the latest, Friday, 8 June 2018 to take advantage of the early-bird price. After Friday, 8 June, it will cost an extra US\$300.

To register to attend the conference and book accommodation at the Marriott hotel, access the CII Conference Web pages by clicking on, or copying and pasting the following Web link into your browser – <http://cvent.utexas.edu/d/ntqbmw>.

The conference is the culmination of a year of research and development, providing conference delegates with the opportunity to network and discover the latest CII research findings, presented by innovative researchers, industry experts and the brightest minds in academia. This year the CII will highlight solution experiences on the showcase floor featuring innovative universities, cutting edge solutions and industry partners. All will focus on ingenious ways to drive business value for capital projects industry.



The conference provides capital project and industry practitioners the opportunity to learn from the latest capital project and construction research and best practice development. It is a unique opportunity to hear first-hand from some of the best practitioners and academics in the discipline. As each day of the conference begins, the presentation slides for that day's presentations will become available for download from the CII Knowledge Base.

The conference also enables you to earn professional development (CPD) points toward maintaining your professional certification.

Last year the conference saw presentations from a number of industry-led research teams. Two examples of just some of these innovative best practice research topics were:

Assessing the Maturity and Accuracy of FEED to Support Phase-gate Approvals – In many cases, front end engineering design (FEED) is neither mature nor accurate at project authorisation, which results in poor project results and severe impact to business performance. Little guidance existed on what it takes to provide a mature and accurate FEED. The FEED presentation provided empirical results demonstrating the impact of FEED maturity and accuracy on project performance, demonstrating savings of up to 24 percent in cost. A new best-practice tool, the FEED Maturity and Accuracy Total Rating System (FEED MATRS) toolset, was introduced and its application described.



Transition Management between Construction Completion, Pre-commissioning, Commissioning, and Operations – This presentation focussed on the structuring and management of the key project activities that underpin effective transitions between construction, pre-commissioning, commissioning, startup, and closeout (CCSU). It also highlighted and described the frequently troublesome CCSU “hot spots,” their causal factors, and the required mitigating strategies, planning, and monitoring performance.

CII – New Best Practice Research Topics, Implementation Resources and Tools

The CII has recently added new capital project research topics and implementation resources to the CII Knowledge Base.

CII – Africa Chapter members are able to download the relevant best-practice implementation resources and tools free of charge from the CII Knowledge Base.

The following new best practice topics and implementation resources have been published:

RT-330 – Improving Frontline Supervision in Industrial Construction



Frontline supervisors – Foremen and General Foremen – are responsible for translating construction plans into productive practice. Despite the importance of these roles, experience and research findings indicate weaknesses in frontline supervision and associated opportunities for improvement.

The CII best practice implementation resource; Improving Frontline Supervision in Industrial Construction provides the Foremen and General Foremen working on today's capital construction sites with the ten core competencies needed to adequately lead and manage their workforce.

RT-331 – Assessing the Maturity and Accuracy of Front End Engineering Design to Support Phase-gate Approvals

Assessing the maturity and accuracy of front end engineering design (FEED) to support phase-gate approvals is a critical task with significant impact on overall capital project success. Poor scope definition during FEED has been shown to be a major cause of project failure. The FEED MATRS implementation resource and tool directly addresses this problem; it is an easy-to-use tool to enhance the predictability of cost and change order performance of large industrial projects.

RT-332 – Measuring Progress and Defining Productivity Metrics in Model-based Engineering

Over the past decade, the adoption of a model-driven approach to engineering has dramatically changed the delivery and coordination methods in capital projects. Many firms are already engaged in model-driven engineering processes and they have a positive perception of the value they receive for the time, money, and efforts they have expended on their modelling programs.



The Model Maturity Index (MMI) definitions, the Model Maturity Risk Index (MRI) toolkit, and the Model Execution Plan Addendum establish procedures and define metrics by which project stakeholders can reliably measure progress and productivity in a model-driven engineering process.

RT-333 – Transition Management between Construction Completion, Pre-commissioning, Commissioning, and Operations

The transfer of new assets from construction to commissioning, and then on to the owner/operator, can cause confusion and create significant controversy. Today, transfer practices vary considerably across the industry. The practices and methods for defining mechanical completion and identifying responsibilities and accountabilities are typically not well defined, and disputes arise over the readiness of assets for transfer to commissioning and owner teams.

The research findings from this study provide focused and substantive guidance in the best practice implementation resource on how project teams can enhance the effectiveness of construction, commissioning and start-up (CCSU) transitions.

RT-334 – Best Practices for Preventing Out-of-sequence Construction Activities and Minimising their Impacts

Out-of-sequence work (OOS) is defined as an activity or series of activities that are not performed according to a planned logical productive sequence. Despite the seriousness of the challenges that OOS imposes on the capital projects industry, the existing body of literature lacks direct solutions for how to handle OOS. Until now. The RT-334 research is the first of its kind, as it investigates the causes, warning signs, and impacts of OOS. It also provides proven concepts for preventing OOS and minimising its negative impacts.

The best practice research provides 21 recommended concepts for preventing OOS and mitigating its impacts. The concepts are detailed in the “Concept File” so that each recommended concept is explained through a set of actions to minimise OOS, as well as information about when to apply each of these actions, conditions for successful application, cost implication, targeted outcomes, illustrative examples. Overall, The Concept File comprises 164 different actions across four project stages (concept, detailed scope, design, and construction).



Regards

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Director

