



# **Ci3 *India* Developers' Roundtable**

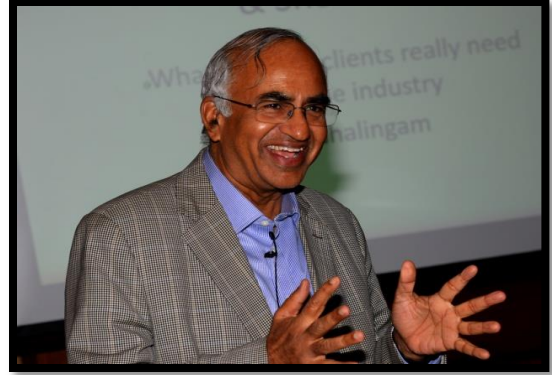
**23 February 2016**

**at Taj Lands End, Bandra, Mumbai**

## **Summary Report**

**Ci3**





## **1. Background with brief Introduction to Ci3**

### **1.1. RATIONALE**

Relevant international experience indicates that significant industry improvements must be championed by a core group of enlightened large clients with a long-term vision for value-driven project delivery. Supply chains will only respond when their paymasters' selection and performance criteria require them to improve in desired directions. The much-needed culture change must also be catalyzed with such 'carrots and sticks'. For this, a critical mass of large clients must set the scene jointly, to initiate new norms and ways of working, so that major supply chain partners realize that they must change their mind-sets and minimum standards (or lose business and become obsolete), while end-users appreciate that they are receiving better value from such progressive suppliers.

To address the above, the Construction Industry Improvement Initiative India - Ci3 *India* was launched on 14 October 2015 from IIT Madras, aiming to trigger and empower the desired transformations. The ultimate aim of Ci3 India is to drive meaningful and sustainable industry improvements by actively involving all the major stakeholders at appropriate stages of this journey. Furthermore, large clients who spearhead such change will reap more and faster benefits.

### **1.2. Ci3 *India* OBJECTIVES**

The principal objectives of Ci3 India are:

- (1) To identify current and imminent critical issues in the Construction Industry in India.
- (2) To compile a Roadmap for industry improvements in strategic high (& wide) impact domains.
- (3) To launch (a) system improvement initiatives and (b) demonstration projects, in prioritized focus areas within the above strategic domains.

### **1.3 Ci3 *India* LAUNCH and 1<sup>ST</sup> REGIONAL ROUNDTABLE OF BUILDING CONSTRUCTION CLIENTS**

This first major Ci3 event was on 14 October 2015 at IIT Madras. The Summary Report, describing the proceedings, inputs, outputs, along with a photographic record and Presentation PPTs are accessible on the Ci3 web-site at [www.ci3india.com](http://www.ci3india.com).

## **2. Developers' Roundtable at Mumbai on 23 Feb. 2016**

### **2.1. INTRODUCTION**

In keeping with the imperative to mobilize the national construction industry, it was decided at the outset to hold the second major event of Ci3 *India* in another major regional hub. Thus "Ci3 *India* Developers' Roundtable" was arranged in Mumbai and held at Hotel Taj Lands End, Bandra, Mumbai on 23 February, 2016.

Mr. S. Mahalingam (Former CFO, Tata Consultancy Services) chaired the meeting with Mr. Sanjay Ubale, (Managing Director, Tata Realty and Infrastructure Limited) also setting the scene for engaging the industry representatives, by presenting valuable insights based on extensive experiences. Prof. Mohan Kumaraswamy and Prof. K.N. Satyanarayana from IIT Madras presented the background and the imperatives for the 'Construction Industry Improvement Initiative' India (Ci3 *India*), in the light of what had been achieved in other countries as well.

The participants at this roundtable were mostly high level representatives of large construction developers from the Mumbai region as in Appendix 1, while the program is in Appendix 2.

The core aim of this Developers' Roundtable was to develop and disseminate the business case for moving over to holistic cost-efficient and time- efficient construction paradigms, i.e. moving away from the current disparate thrusts for individual stakeholder optimization, towards broader-based, longer-term and well-focused building construction industry eco system value maximization. In view of the then impending real estate regulation bill and thrust for affordable construction, land-based arbitrage as the primary revenue model needs to be supplemented with healthy margins from construction-activity from a developer perspective. Significantly increased efficiencies and a value-for money focus should simultaneously ensure that superior value and sustainable built assets are delivered to end-users by a healthy and viable supply chain in an all-win scenario.

The group deliberated extensively on various agenda items to be pursued for Ci3 *India* and arrived at the following action item outcomes:

### **2.2. OUTCOMES- ACTION ITEMS**

#### **2.2.1. Productivity focused Actions:**

- Identify and/or formulate a set of useful KPIs (based on international practices, but adjusted to meet local needs and priorities) for use by a 'Benchmarking club' to

facilitate focused and regulated data sharing\* and continuously improve project level efficiencies vis-à-vis industry averages/ norms.

- Formulate 5 year targets to significantly reduce both average project construction costs and overall project time-frames. Note - International studies indicate that significant cost reductions and project time savings can be achieved by restructuring basic project procurement and delivery strategies and protocols, including construction standards, proactive procurement and working arrangements, lean methodologies, labor standards and continuously improving best practices.
- Revisit design process management, with a view to upgrade design quality, as well as optimize the 'economics' of construction and 'life cycle value' of the built assets themselves. Note: Both must be targeted together from the design conceptualization stage. An adequate number of concept design alternatives should be evaluated before the detailed design stage, so as to select the optimal approach.

**Also:** Clients must create the need for awareness of the use and benefits of technology and disseminate the benefits of technology adoption to industry with demonstration projects, cost-benefit case studies, sharing reports etc., including on benefits of Lean Construction approaches, BIM adoption etc. to target overall efficiency and sustainability.

- Revisit design codes and strengthen technical inputs (from academia, construction clients, architectural & engineering consultants, construction companies) to the revisions of such codes so that BIS and other code development authorities would realistically update and rationalize relevant design codes to increase efficiencies, while also targeting quality, safety and sustainability of construction processes and the built assets.

### ***2.2.2. Human Capital (including Labour, Technical & Managerial Manpower) focused Actions:***

- Establish the business case for significantly increasing the proportion of direct/ formal workers in a construction project i.e. for quasi-formalization of workforce-on-site to minimize attrition, accidents and delays due to 'lack of skilled manpower'. Note: Studies indicate that the average construction worker age is 26, indicating absence of experienced skilled workers, while construction work is seen as a 'part-time', unskilled profession instead of a skilled, long-term career.
- Set stage-wise targets for mandating the proportion of trained and certified direct/ formal workers in a construction project e.g. from 30 % in 2 years to 50 % in 4 years to ... in 5 years?). Note: Given the impending demand of skilled workforce and sectoral

growth, attracting and retaining talent at all levels from entry-level onwards, is critical. Thus, we need to revisit the popular paradigm of construction manpower requirements being 'project-based', from an organizational perspective that aims for an adequate

- pipeline of projects to move manpower from one project to another within the organization. Thus metrics like % formally trained and certified workforce should be mandated during the tendering and contract finalization stages and closely monitored for compliance.
- Improve the overall construction industry image and make it attractive for all talent pools at entry-level as well as for career development. Note: The aspiration of most rural Indian youth is now for 'decent work conditions, good treatment, respect and potential for advancement' in addition to pay/ wage considerations. Thus, investing in basic accommodation, food and travel facilities (if need be on deductible basis) like in the Middle-East countries would yield worthwhile dividends.

**Also:** Up-skill professionals with advanced technologies. Survey existing institutes – eg. PMI, Institution of Engineers, CIDC, Universities. Consider options such as 'finishing schools' ('top-up') for young graduates with different specializations – in Structural, Geotechnical, MEP Engineering, Construction Management, etc.

- Formulate scientific measures for skill levels, productivity, along with benchmarking and linking of wages to skill-productivity levels rather than to government-fixed, minimum-wages. Note: This may provide a more a cost-efficient, viable approach to construction than increasing mechanization purely to reduce manpower needs.

**Also:** assess the potential benefits of off-site construction (including precast concrete and pre-engineered components e.g. bathroom units) for large projects and project portfolios, where higher skills and a more mature workforce segment can also contribute.

### **2.2.3. *Construction Clients' Charter***

- Voluntarily subscribe to a 'Construction Clients' Charter' based on which relevant targets would be embedded as necessary conditions in bidding/tendering/vendor selection processes and protocols e.g. in prequalification/ tender requirements and selection criteria/ ratings.

### **2.2.4. Ci3 India – Institutional Platform**

- Set up an institutional platform to enable and propel Ci3 *India* activities. Given overlapping objectives and thrusts, it was proposed that this initiative can be spear-headed by a Special Task Force of the Institute for Lean Construction Excellence activities. Note: It is envisaged that a Ci3 hub in Chennai would still be needed.

\* Some outputs from the Oct. 2015 Regional Roundtable of Building Construction Clients held in Chennai are incorporated in the above Action items e.g. in items 3 and 7, whereas some other items overlap as in items 1, 5, 6 and 9.

\*\* ‘regulated data sharing’ (see Item 1): carefully regulated data-sharing, where confidential data remains confidential. Only benchmarking members’ group averages will be available within the group, i.e. to those who have contributed their own required data in well-defined specific areas.

### **3. Acknowledgements**

All our Ci3 Developers’ Roundtable participants are gratefully acknowledged for their valuable contributions. Mr. S. Mahalingam is specially thanked for his inspiring presentation and incisive insights, while we are grateful to Mr. Sanjay Ubale for his insightful initial remarks and strong inputs that catalyzed the industry deliberations and set targets for formulating our resulting action plan. Tata Realty and Infrastructure Limited (TRIL) are gratefully acknowledged for their excellent arrangements and for hosting this event at Taj Lands End, Bandra. The Brigade Group and IIT Madras are acknowledged for establishing the T.N. Subba Rao Brigade Group Adjunct Chair Professorship that helped launch and support this initiative. We are also grateful to Mr. S. Mahalingam and Mr Sanjay Ubale for their personal invitations that helped us to mobilize a balanced cross-section of high caliber participants for this Roundtable too.

### **4. Disclaimer**

This summary report was prepared from available information from recordings of discussions, and notes of recorders which were in turn compiled as best as possible. This summary inevitably conveys some interpretations by the recorders and compilers. So it is certainly not exhaustive and may not accurately reflect the specific views or priorities of the speakers or of all the Roundtable participants. The reported outcomes are thus to be taken as broad collective outputs from this Developers’ Roundtable that are provided for interim indicative purposes, just as in the case of (and indeed to complement) the Summary Report for the 1<sup>st</sup> Regional Roundtable.



## ***5. Appendix I – List of Developers' Roundtable Participants***

- Mr. S. Mahalingam, Tata Realty
- Mr. Sanjay Ubale, Tata Realty
- Prof. Mohan Kumaraswamy, T.N. Subba Rao Brigade Group Chair Professor, IIT Madras
- Prof. K. N. Satyanarayana, IIT Madras
- Dr. Harsavardhan Subba Rao, Chairman & MD, Construma Consultancy Pvt. Ltd
- Mr. Mohit Malhotra, Executive Director, Godrej
- Mr. Kishore Bhatija, Managing Director, Real Estate Devel. K Raheja Corp
- Mr. Suresh Raheja, Raheja Universal
- Mr. Rahul Raheja, Raheja Universal
- Mr. Percy Vandrevalla, Raheja Universal
- Mr. Shaishav Dharia, CEO, Palava City Lodha
- Mr. Kekoo Colah, SPCL
- Mr. Subodh Runwal, Runwal Group
- Mr. Prakash Patil, Tata Realty
- Mr. Nagesh Rao, Raheja Universal
- Mr. Harmesh S Madhyani, Raheja Universal
- Dr. Venkata Santhosh Kumar Delhi, IIT Bombay
- Mr. T. Kalyan Chakravarthy, PAN IIT Alumni Reach for India Foundation
- Mr. Santhosh Loganathan, PhD Research Scholar, IIT Madras
- Mr. S. P. Srinath, PhD Research Scholar, IIT Madras
- Ms. Poornima Dore, Tata Trusts & IIT Bombay

## 6. Appendix 2 - Program on 23 February 2016

PROGRAMME		
3.00 pm – 3.10	Welcome address	<b>Prof. K.N. Satyanarayana</b> , Professor of Civil Engineering, IIT Madras
3.10 – 3.30	Introduction to Ci3 India - Construction Industry Improvement Initiative India	<b>Mr. S. Mahalingam</b> , Former CFO & Executive Director, Tata Consultancy Services
3.30 – 3.50	First Regional Roundtable Outcomes & Proposed Way Forward	<b>Prof. Mohan Kumaraswamy</b> , T. N. Subba Rao Brigade Chair Professor, IIT Madras
3.50 – 4.10	Building Clients Perspectives	Discussion Initiation - <b>Mr. Sanjay Ubale</b> , Managing Director & CEO Tata Realty and Infrastructure Limited
4.10 – 4.25	Brainstorming on Critical Issues	ALL Participants
4.25 – 4.35	Individual Perspectives on Critical Issues and Root Causes	ALL Participants to please list in Feedback Form
4.35 – 4.50	Refreshments Break	
4.50 – 5.15	Joint Brainstorming for Significant Breakthroughs	ALL Participants
5.15 – 5.40	Way Forward with Action Plan	ALL Participants
5.40 – 5.50	Summary of Key Outcomes	<b>Prof. K.N. Satyanarayana, Prof. Mohan Kumaraswamy and Mr. S. Mahalingam</b>
5.50 – 6.00	Wrap-up and Vote of Thanks	<b>Dr. Harshavardhan Subba Rao</b> , Chairman & Managing Director, Construma Consultancy Pvt. Ltd.