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# Infrastructure Equipment Skill Council

*Transforming the skill landscape...*

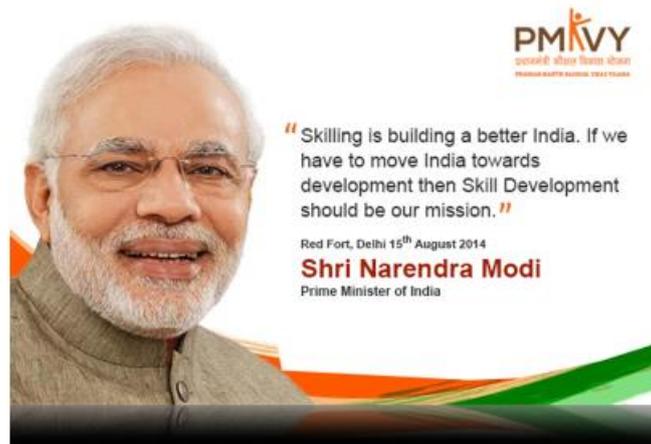
## Quadrennial News Letter 2014 - 2018

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## Introduction

1. The Infrastructure Equipment Skill Council (IESC) is the apex body spearheading the skilling of workforce in the infrastructure equipment sector with primary focus on training and certification of machine operators and service mechanics in the initial phase.



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2. Over the years growth in the infrastructure equipment sector has been synonymous with the economic health of the country. In 2010 the sale of construction equipment was around 60,000 units and expected to touch 300,000 units over the next decade. With existing shortage of skilled manpower coupled with this anticipated growth an overall requirement of nearly two million operators and mechanics was projected.
3. Since the existing Vocational Education System had failed to support the industry the **Indian Construction Equipment Manufacturers Association (ICEMA)** proposed the setting up of an apex body to spearhead the skilling of workforce in the Infrastructure Equipment (IE) Sector which was finally accepted after serious deliberations at all levels.
4. *Accordingly the Infrastructure Equipment Skill Council (IESC) a 'Not for Profit' sustainable organisation was formed in Aug 2014; registered as a Society; with funding in part by contributions from the industry and balance by the **National Skill Development Corporation (NSDC)**. The IESC works in close coordination with the **Confederation of India Industry (CII)***
5. *Considering that majority of manufacturers had their Plants and Head Offices in the South and West Zones, IESC established its Head Office in Bangalore on **1<sup>st</sup> November 2014** and commenced operations immediately thereafter; with initial*

*focus on training and certification of operators and mechanics and then other segments of job roles in the industry.*

## Objectives

6. The mission of the IESC is to transform the skill landscape in the sector; specifically
  - To train over a million Operators and Mechanics in next eight years
  - To empanel around 5000 plus certified trainers over the next decade.
  - To accredit 400 Training Organisations to conduct training pan India.
  - To facilitate certified personnel in job placements in India and abroad
7. The following subsectors /segments in the industry are being covered:

i	Earthmoving	v	Material Preparation & Processing
ii	Mining	vi	Material Handling
iii	Highways	vii	Defense Equipment (CE Equipment)
iv	Concreting	viii	Plant Hiring & Equipment Leasing (CE Equipment)

8. The IESC presently has 29 members comprising equipment manufacturers (OEMs) and equipment financiers etc whose products constitute active engagement of over 90% of the industry's workforce. A snapshot of the current members:



9. The Council is governed by an 18 member body comprising senior executives from all segments of the industry as well as representatives from related bodies like

Department of Heavy Industries, Builders Association of India (BAI), Financial Institutions, Academia and NSDC.

10. The current composition of our Governing Council is as under:

### IESC Governing Council Members..

No	Category	No of Reps	Designation	Company	Name
1	Earth Moving Segment	2	MD & CEO	Kobelco	Vikram Sharma
2			VP	L & T	Arvind K Garg, Co-Chairman
3	Concreting Segment	2	VC & MD	Schwing Stetter	Anand Sundaresan, Chairman
4			MD	Putzmeister	Wilfried Theissen
5	Road Construction Segment	2	GM	Tata Hitachi	M Vijay Kumar
6			MD & CEO	Wirtgen	P Ramesh
7	Material Handling Segment	2	VP	Volvo	Dimitrov Krishnan
8			Director	CAT	V Vivekanand
9	Material Prep/ Processing	2	ED	Terex	Jaideep Shekhar
10			Advisor	Puzzolona	TR Bharathan, Treasurer
11	Finance Company	1	Group CEO	SREI	DK Vyas
12	ICEMA Nominees	2	President	Wipro - Infrastructure	Pratik Kumar
13			EVP - HR	JCB	Jawaid Ashraf
14	Govt Representative	1	New Delhi	Dept of Heavy Industry	Sanjay Chavre
15	Construction Industry	1	VP	BA	RN Gupta
16	NSDC	1	Nominee	Head – SSC Governance	AK Chandel
17	Academia / Training	1	Head of Dept	Indian Institute of Science	Prof NC Shivaprakash
18	CEO as ex-officio Secretary	1	CEO	IESC	HS Mohan

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### The journey so far... an overview of initiatives undertaken

11. **Development of NOS & QPs;** for 33 job roles; validated and in use by the industry; maximum at NSQF Levels 3 & 4 (Operators & Mechanics) covering over 80% of workforce in the industry. Another 10 nos are in the pipeline for balance products and trades to bridge the gap to facilitate career progression. *These were developed in close coordination with construction & mining industry.*

12. **Training Partners:** Presently we have around 53 Training Centers majority of whom are that of OEMs and their Associates; with a pan India spread as under:

North Zone	South Zone	East Zone & North East	West Zone
Delhi / NCR	Karnataka	West Bengal	Maharashtra
Punjab	Tamil Nadu	Jharkhand	Goa
Haryana	Andhra/Telangana	Chattisgarh	Madhya Pradesh
Rajasthan	Kerala	Assam	
Uttar Pradesh			
Bihar			
	Sri Lanka through JCB	Nepal through JCB	
		Bhutan through JCB	

## Our Equipment Portfolio



Backhoe Loader



Hydraulic Excavator



Mobile Crane



Compactor



Wheel Loader



Concrete Pump



Wheeled Crusher



Tracked Crusher



Static Crusher



Screeners



Batching Plant



Hot Mix Plant



Transit Mixer



Self Loading Mixer



Wheeled Paver



Tracked Paver



Motor Grader



Crawler Dozer



Dump Truck



Compressor



Telescopic Handler



Tower Crane



Skid Steer Loader



Boring Equipment

## Our Job Portfolio

Product & Trade	NSQF Level 3	NSQF Level 4
<b>Operator</b>		
Backhoe Loader	✓	✓
Excavator	✓	✓
Wheel Loader		✓
Compactor		✓
Concrete Pump		✓
Crane(Hydra/Truck/Crawler)	✓	✓
Crushers & Screeners	✓	✓
Hot Mix & Batching Plants	✓	✓
Transit Mixers	✓	✓
Pavers	✓	✓
Motor Grader		✓
Crawler Dozer		✓
Dump Truck		✓
Compressor		✓
<b>Mechanic</b>		
Engine	✓	✓
Hydraulics	✓	✓
Electrical	✓	✓
Supervisor Plant & Machinery		NSQF Level 7
Supervisor Maintenance (Infra Eqpt)		NSQF Level 7

## Career Progression...

Entry Level	Middle Level	Master Level	Supervisor
NSQF Level 3 Junior Operator/ Junior Mechanic	NSQF Level 4 Operator/ Mechanic	NSQF Level 5 & 6 Master Operator/ Mechanic	NSQF Level 7 Plant Operations & Maintenance
Preferred 10th Pass	Min 2 years experience	ITI / Diploma with Experience	Diploma/Graduate with experience
<b>11*</b>	<b>20*</b>	<b>4*</b>	<b>2*</b>

13. **Training Conducted:** The yearwise breakup of training conducted is as under:

	2015-16	2016-17	2017-18	2018-19 YTD	Total
Trained	784	1455	3949	1934	8122
Certified	702	1386	3630	1517	7235

Note: In the RPL 4 Project we are planning an all India target of 19000 nos. **Many OEMs as 'Best in Class Employers' have already kick-started these programs.**

14. The job roles of operators and to an extent mechanics being non-aspirational; for the first time a career progression path has been mapped which has been appreciated in the industry.

#### Career Progression..



Note: Figures indicate number of job roles

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15. MOUs have been signed with various States Skill Development Missions & Corporations like Kerala, Andhra Pradesh, Uttarakhand, Gujarat, Assam, Jharkhand & Maharashtra to scale up skilling activities. Expression of Interest has been received from several other states as well.

16. Following the MOU with National Highways & Infrastructure Development Corporation Ltd (NHIDCL) IESC has successfully completed the first round of programs to skill personnel being employed at various road construction project sites in the North East.

17. Like-wise initiatives for skill development in organisations like CIL, MOIL and Indian Army have reached the delivery stage. Programs with AICTE affiliated colleges have already commenced. The Council is working closely with Auto Sector & Logistic SSC's for creating Centres of Excellence.

18. Industry Recognition: Our achievements have been recognised as is evident from the following media articles:

ConstructionTimes Jun 16 Issue...Extracts

**CONSTRUCTION EQUIPMENT**

## IESC: A Step Towards Skilling Manpower

IESC is promoted by ICEMA, where in all the manufacturers are fully committed to the needs of the industry. IESC not only covers the construction sector, but also other sectors like mining, Iron & Steel, plant hiring and leasing, defence etc. IESC has focused approach in creating skilled operators and mechanics for complete range of infrastructure equipment.

The Infrastructure Equipment Skill Council (IESC) is a Not for Profit voluntary organisation promoted by the Indian Construction Equipment Manufacturers Association (ICEMA), supported by the Confederation of India Industry (CII) and funded by the National Skill Development Corporation (NSDC) to spearhead the skilling of workforce in the Infrastructure Equipment (IE) Sector with primary focus on training and evaluation of operators and mechanics.

The Council was formed in August 2013 and started operations from Bangalore in November 2016. The activities of the Council are managed by 25 member governing body comprising senior executives from all segments of the industry as well as representatives from related bodies like NSDC, Indian Association of Banks (IAB), Bharatiya Janata Party (BJP), Bharatiya Kisan Union (BKU), the Chairman of the IESC Governing Body (ICEMA), States and Co-ordinating Annual Development, who are also president of the ICEMA, both who are well known in the industry have also been playing key role in getting and progressing the IESC Development Initiative of the IESC. As NSDC's role IESC is the financial support was signed in October 2016.

**Mission**

- To train over a million operators and mechanics in next five years
- To have 1000 plus certified centers over the next decade
- To create 400 Training Organisations to conduct training job-beds
- To create certified operators and mechanics to job placement in both end of the

**Objectives**

In the pilot project, 5000 Skilled Operators, Mechanics and QP (Qualification India) high quality products namely, Backhoe Loader, Hydraulic Excavator, Mobile Crane (Hybrid Truck/Carrier), Wheel Loader, Compactor and Grader. Range covering nearly 90 percent of the IE sector equipment was developed and approved by the NSDC/NSIC/NSIC in June 2016.

The council after the alignment approved CII as the assessment agency. Skilled the process of identifying and offering training partners who had the necessary facilities and trained resources. Our first training program under the IESC 11 scheme commenced in July 2015, and the first one certified in August 2015, but then over months, the rate of which was considerable.

During the period the council participated in several training activities such as the IESC India Exhibition (held in Bangalore in Dec 2017 and in IESC 2018 in Bangalore in Dec 2018), where the activities of the council were widely publicized and management. It also conducted a panel discussion on skill development under the infrastructure sector.

**Activities**

IESC is in very first year of operation conducted nearly 25 Training Program over the country certified around 70 centers and trained close to 800 personnel which is a considerable achievement. The council is in the process of developing all the states.

**Activities**

The Council is presently engaged in a wide range of activities in India:

- The Council has introduced six priority IE QP and QP (11 IE jobs), covering 90 higher operations to drive an infrastructure with the use of innovative, cost-effective training and assessment tools and to improve the skill level of the workforce, we will be continuing in these

1. Investment of 100% for the training program.

2. The council is a member of the Ministry of Road Transport and Highways to conduct Annual Skill Training Centre in the field of higher operation operators over the 2017. (Approval of the training center).

3. Under IESC training, in collaboration with NSDC, we have our main training with CII India CII and in addition to both the operators and mechanics. The process will be further continued with other countries IES in the world.

4. The Council is collaborating with both state and together IESC Council for establishment of Skill Training Center at other locations across India. Regular meeting the union jointly with Aarti and National Transport Finance.

5. It is also exploring to sign with various state governments and ministries like the Indian Army, CII India, IAB and IIT. (Initiative to drive the skill development program, IESC has already been signed with Tamil Nadu and Kerala. Regular operations of interest for the next level of UP and Trucking).

6. The Mission of IESC Development & Sustainability. After being established under NSDC, IESC and Indian Industry Training Center in Chennai is a significant factor since in IES Bangalore, Chennai and India's Bangalore.

**Standard Item**

The activities of the council are funded by the industry, state government and IESC. The IESC is a project and programs under the leadership of

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ConstructionTimes Jun 16 Issue...Extracts

**CONSTRUCTION EQUIPMENT**

operator skill the Council has started setting up centers of Excellence, Training of Trainers and Certification of Trainers. The current emphasis are on the process of completion.

**Results**

Majority of the equipment manufacturers had have their global presence and take into account the Indian operator requirements to meet the quality standards. Manufacturers are adopting their technologies to suit Indian conditions and to improve the quality, productivity and safety. This will contribute to making the operators and mechanics of their end as IESC certified training centers, where large

mechanics have been made to support skilling of operators & mechanics. The manufacturers own the responsibility to meet the customer requirements and job needs. Majority of the manufacturers have started reporting machines from both skilling profile to operate and maintain the machines under field in a safe and efficient manner.

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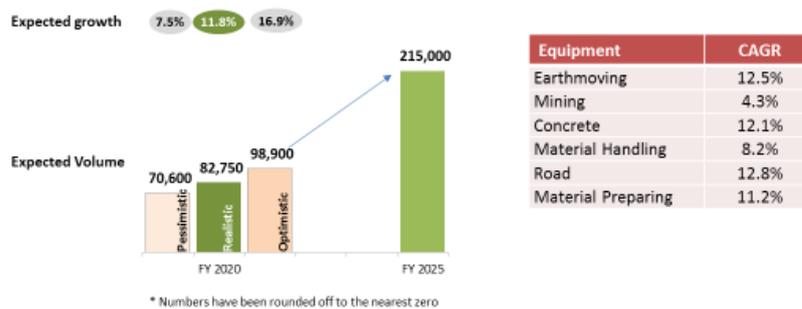
## The journey ahead...challenges and opportunities

19. The growth rate of the construction equipment sector is largely reflective of the growth in the infrastructure segment in India. The volume of equipment sales is expected to grow from around 49,700 units in 2015 valued at USD 2.8 Billion at a realistic rate of 11.8% to 82,750 units in 2020; value USD 5.0 Billion.
20. It is estimated that over a million additional trained operators and maintenance personnel would be required to meet the projected growth of construction equipment in the coming years. Formal training and certification of the current workforce will also be critical considering their bearing on the equipment operating and maintenance costs.

### Industry growth..

Industry is just recovering post the slump of the past few years.. and is currently poised for growth

An optimistic projection of the industry by 2025 could see the it touch close to 215 thousand units sale



Knowledge Partner: Feedback Consulting

Infrastructure Equipment Skill Council



21. Around 60% of our GDP is contributed by Service Sector. Manufacturing Sector has been almost stagnant in the last decade and half. Skilling per se does not create jobs. Jobs is a function of growth of economy, expansion of service sector enterprises, export growth and infrastructure developments.
22. IESC is promoted by ICEMA, where in all the manufacturers are fully committed to the needs of the Industry. IESC not only covers the Infrastructure Sector, but also other sectors like, Mining, Iron & Steel, Construction, Plant Hiring & Leasing and Defense etc. Though being promoted by equipment manufacturers the operations of the IESC is de facto in the service industry which is the major contributor to the GDP.
23. Majority of the equipment manufacturers (OEMs) in India are global entities, who have set up high capex facilities here and upgraded their existing ones to support not only their Indian operations but also their international ones. This entails incorporating the latest technologies in their machines; and in turn requiring skilled personnel which can be ensured by training the operators and mechanics at their & at IESC certified training centers, where huge investments have been made to create facilities of global standards to impart skilling of operators & mechanics.

24. The standards are prepared by IESC in close association with all the concerned stakeholders and take into account the needs of the customers on both Operational & Maintenance deliverables including safety at global standards. The manufacturers own the responsibility to meet the customer expectations & job needs. Majority of the manufacturers have started exporting machines from India. Skilling people to operate and maintain the machines outside India is both a challenge and an opportunity.
25. Apprentice Training Programs: Many of our OEMs have very sound and active apprentice training programs; and majority of them on successfully completing the training have been funneled into the construction & aftermarket support teams of both dealers and customers.
26. While the Industry is fully committed to the skilling eco system to meet the growing demand for Operators & Mechanics; this demand cannot be fully met by the OEM's alone. Hence we need to set up additional training centers with world class facilities to ensure quality skilling is delivered. Cost of setting up of such Training Centres is high, both in terms of capex as well as opex. Hence the Government should support these training partners, which are sector specific with technical knowledge and expertise.
27. Last but not the least, the **CEMMM (Construction Earth Moving Material Handling & Mining Machinery) Bill 2016** is in an advanced stage of progression with the Govt of India, Department of Heavy Industries having notified the same in their domain for public comments. Once this Bill comes into force, it will become mandatory for all infrastructure equipment to be operated by licensed personnel only. This will give the much needed traction for skill development activities in the sector.
28. Till such time efforts will be to bring the vast pool of experienced operators but not formally certified into the fold through the RPL Model (Recognition of Prior Learning). All the stake holders primarily the end users through their apex bodies like Builders Association of India, Crane Owners Association & Aerial Work Platform Owners Association to name a few will be coopted.

## Conclusion

29. The IESC has, over the past three years plus, established a strong foundation and framework for the skill eco system. This has been appreciated by the industry as is evident from the Construction Times, a leading media magazine, recognising these commendable efforts by instituting awards for various skilling activities under the aegis of IESC It is currently well poised to support in meeting the demands of skilled manpower in the coming years.



Bengaluru  
01 Oct 2018

HS Mohan  
CEO