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# CW

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## Construction World

Largest Circulated Construction Business Magazine  
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- Concrete Equipment ...94
- Interviews: NASSCOM; Bangalore Metro Rail Corporation; SBI Capital Markets; Pimpri-Chinchwad Municipal Corporation; Covestro (India); Louis Berger; Mfar Constructions...103, 102, 104, 84, 100, 92, 90

# WAREHOUSING ROOM TO GROW

₹500 billion is expected to flow in for the creation of warehousing facilities in India between 2018-2020. CW explores demand drivers, design specifications, role of IT, and more...

### CWBIZ

45+ Upcoming Projects, Product Launches, Building Material Prices, Tenders, Contracts Awarded and more... 126, 148, 164, 160, 162

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₹500 billion is expected to flow in for the creation of warehousing facilities in India between 2018-2020. **CW** explores demand drivers, design specifications, role of IT, and more...



Cover photo courtesy: Embassy Industrial Parks, Chakan



Photo courtesy: Everstone Group

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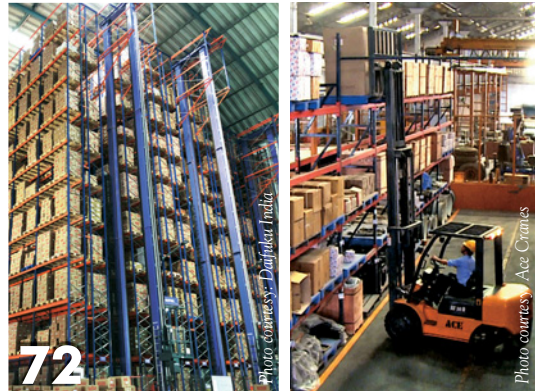
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Photo courtesy: Shriang Steels and Services

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Photo courtesy: Dairfield India

Photo courtesy: Ace Cranes

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## EDITOR'S NOTE

### THE TEPIDITY HANGOVER



While most agencies are speculating on the estimated GDP growth rate for India and the fact that oil is a big worry for our financial health, not one is able to capture the mood of the economy despite the numbers. Are we well past the painful period in the economy? How long do we have to wait to see the green shoots seen by some (but not most)? The answers are at best befuddled. So, let's start looking at what is definitely the positive part of what is visible.

The Insolvency & Bankruptcy Code (IBC) has brought all delinquent cases on the auction table and bids are at advanced stages. Having bidders indicates that the propositions are attractive. We have the case of Bhushan Steel, which has helped bankers redeem their loans by curtailing losses that would have been caused if the company had gone into liquidation. Bhushan Steel would have fetched only Rs 140 billion if liquidated, but Tata Steel has paid Rs 325 billion for the 5-million capacity plant 150 km away from its Kalinganagar plant. With most banks having already made provisions for 50 per cent of the total Rs 560 billion Bhushan owed them, proceeds from the sale are seen boosting their profitability.

What's remarkable in this case is that while the liquidation of the

company would have fetched Rs 140 billion, the transparent process of auctioning the company has been able to restore a better realisation at nearly three times this value. Further, the asset is getting a bidder that will restore two-third of the funds lent to an active status. In the erstwhile BIFR regime, this asset would have gathered rust until the plant became inoperable and the workers would have lost their means of a livelihood. If the IBC can similarly convert many of these stressed assets into earning assets despite a haircut, it would stem the loss of jobs and save assets from decimation.

On another note, subsidies to the poor in India would not reach the intended beneficiary and would be diverted owing to poor governance. Today, direct benefit transfer and Aadhar linking have helped save Rs 830 billion. What's more, the housing shortage in urban areas is now settled at 10 million homes, while the government wants to build another 10 million homes for the rural poor by the end of 2018. Houses are being constructed at breakneck speed, with L&T, Shapoorji and NCC being some of the companies picking up large contracts. Further, mega infrastructure projects like the metro, trans-harbour link, coastal road, airports, Bharatmala, Sagarmala, railway stations, freight corridors and bullet train will continue to face execution challenges – but remain our biggest prospects. Grab them and get going or you will miss the opportunity under the hangover of tepidity.

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# Justifying Automated Material Handlers

Until customers demand the benefits derived from full automation, semi-automated material handling equipment is likely to prevail.

Material handling players are either part of the organised sector or the unorganised sector; a further classification could be automated material handling and non-automated. **Asim Behera, COO, Daifuku India**, pegs the

value of these segments at over Rs 30 billion.

In 2018, India will demand around 14,000 units of material handling equipment, including forklifts and other warehousing equipment (excluding cranes), says

**Tushar Mehendale, Managing Director, Electromech**. Last year, demand was 30 per cent lower.

## What's spurring growth?

"With almost all the industrial sectors showing signs of

resurgence, we are seeing a pickup in demand, with warehousing driving this growth," says Mehendale.

"We expect the warehousing sector to expand two to three times," says **SPS Chauhan, Director, Asia & Middle East, Bastian Solutions**. Whereas Chauhan believes that the ecommerce, retail, FMCG, pharma and 3PL industries will drive this expansion; **Samir Gandhi, Managing Director & CEO, Gandhi Automations**, feels that demand is more need-based as opposed to being (specific) industry-driven.

#### Bestselling material handlers

Forklifts of capacity less than 5 tonne account for 85 per cent of

## QUICK BYTES

- Value of material handling segment pegged at ₹30 billion.
- Demand drivers: Retail, ecommerce, FMCG, pharma and 3PL industries.
- With automated equipment in the market, a greater number of 'smart' warehouses are expected to evolve in coming years.



**"In 2018, India will demand around 14,000 units of material handling equipment."**

**- Tushar Mehendale,**  
Managing Director, Electromech

the demand for material handling equipment, says **Chetan Gole, Vice President, Forklifts Division, Ace Cranes**. "This demand mainly comes from the automobile, chemical, fertiliser, pharmaceutical, glass, steel, ferro-alloys, rubber and other industries."

While Gole expects this segment to continue to drive growth, he expects considerable growth in demand for heavy-duty forklifts of capacity 10 tonne and above. "To cater to this emerging demand, Ace Cranes plans to introduce heavy duty forklift trucks of 12-32 tonne capacity," he says.

By power mode, electric forklifts are growing faster than diesel forklifts despite the former having lesser power, shorter duty cycles, lesser ground clearance and grade-ability and limited applications. This, Gole says, is because the warehousing sector is demanding 'green' equipment.

Another equipment segment seeing major growth in demand is reach stackers for handling 20 ft and 40 ft containers.

#### Barriers to automation

While the sales of material handlers are rising, today, "only about 1 per cent of warehouses in India have deployed full automation so far; most warehouses deploy semi-



**"Users are more inclined to deploy technology that helps shorten the handling time and make it safer."**

**- Samir Gandhi,** Managing Director & CEO, Gandhi Automations

automated equipment," notes **Subramani Raja, Senior Engineer, Nichiyu Forklifts India**.

At present, the Indian warehousing industry is predominantly semi-automated; the determining factors are the cost of real estate and human resources, explains **Elangoven K, Head, Operations, Jayem Warehousing**, a company with clients mainly in the FMCG and home appliance sectors. According to him, cutthroat competition keeps prices low, which makes it hard for warehousing service providers to justify investments in automation.

At **BoxMySpace**, where industry standard material handling equipment like stackers, pallet trolleys, etc, has been deployed, the experience is similar. **Pratyush Jalan, CEO, BoxMySpace**, says: "We don't propose to deploy automated material handlers as of now or in the near future because of their high cost. Also, the industry is price-sensitive and competitive so we have to make sure we provide the best supply chain services to our customers but keep focusing on reducing their overall logistics cost at the same time."

"It doesn't help that the entry barriers to the logistics and warehousing industry are very low," explains Elangoven. "One vehicle or a building

## FEATURE-MATERIAL HANDLING EQUIPMENT

### Tracking tools

Sensors, telematics and other time-saving tracking tools for the seamless point-to-point tracking of materials have been well accepted, says **Samir Gandhi, Managing Director & CEO, Gandhi Automations**. "Users are more and more inclined to deploy technology that helps shorten handling time and make it safer."

"Tracking technologies that have seen an uptick in deployment in warehouses and stores include barcode and RFID," adds **Asim Behera, COO, Daifuku India**.

However, **Elangoven K, Head, Operations, Jayem Warehousing**, clarifies that sensors and telematics have been well accepted for handling certain products, such as IT and white goods, for enhancing productivity. And **Pratyush Jalan, CEO, BoxMySpace**, believes sensors still do not justify their high cost in terms of the efficiencies they are capable of bringing in.

Clearly, the widespread use of advanced technology in material handling is still some years away.

(four walls) of just 1,000 sq ft is enough to qualify as a logistics and warehousing player in India today; consequently, the industry has many small players and this, in turn, keeps the industry fragmented and unorganised."

Agreeing that most current establishments are too small,

Chauhan says, "What we see at present is scattered depots of 20,000 sq ft to 30,000 sq ft whereas, truly speaking, a warehouse is upwards of 100,000 sq ft in size."

"It would help for an industry body to establish the criteria to define players," says Elangoven.



Photo courtesy: ElectroMech

With almost all the industrial sectors showing signs of resurgence, material handling equipment is seeing a pickup in demand, with warehousing driving this growth.



**"We expect the number of warehouses to reduce by two-thirds and the average size increase**

**three to four times."**

- **SPS Chauhan**, Director, Asia & Middle East, Bastian Solutions



**"We don't propose to deploy automated material handlers because of**

**their high cost."**

- **Pratyush Jalan**, CEO, BoxMySpace

### Towards automation

What could drive automation?

Automation will only take off when customers demand high quality services, responds Elangoven.

With Raja noting that those with full automation are mostly warehouses of 100,000 sq ft and above, typically of a few mobile part suppliers and automobile companies, an increase in the average size of warehouses would definitely drive automation. Industry experts expect this to happen in the near future.

"As the full effects of the Goods & Services Tax (GST) Act kick in, we expect the number of warehouses to reduce by two-thirds and the average size to increase three to four times," says Chauhan. "When the warehouse size crosses 100,000 sq ft, design assumes importance to ensure the facility achieves economies of scale."

## FEATURE-MATERIAL HANDLING EQUIPMENT



**“Automation pays off if the solution is correctly designed and deployed.”**

- **Asim Behera**, COO, Daifuku India

“Safety, productivity and the shortage of knowledgeable, skilled and experienced manpower will drive interest in automated material handlers,” says Gole.

An emerging industry packaging trend could also make automation more appealing.

“We are seeing a shift from ‘case in-case out’ to ‘case in-eaches out’ with the new modus operandi involving the need to pick (and pack) a few products of various kinds as opposed to full cases of one product,” says Chauhan. “This is driving the adoption of products that facilitate the movement of ‘goods to person’ instead of ‘man goes to goods’ to eliminate the time it takes to walk down warehouse aisles and allow employees to spend more time picking.”



**Automation does not increase the cost of material handling; both factory and distribution automation are growing in India.**

Consequently, conveyors, automatic storage and retrieval systems and robotics are the three thrust areas, as per Chauhan.

As companies look to maximise the utilisation of vertical storage space, Gole expects to see greater demand for rack systems like double deep racks,



**“We expect considerable growth in demand for heavy duty forklifts of capacity over 10 tonne.”**

- **Chetan Gole**, Vice President, Forklifts Division, Ace Cranes

### The role of IT



IT is pivotal to the operations of 2,802 warehouses in India and 112 warehouses overseas managed by the SLCM Group, says **Sandeep Sabharwal, CEO, SLCM Group.**

“The SLCM Group has deployed an in-house developed solution, AGRI REACH, to track the quality and quantity of commodities stored in its warehouses in real time, and send transaction updates to the head office and the client, also in

real time. We have deployed this solution on android-tablets in all our warehouses,” he explains. “Additionally, audit inspectors are equipped with GPS-enabled handhelds to facilitate real-time reporting and information flows. And, geo-tagging all our operational warehouses helps monitor other activities and inward or outward movement.”

reach trucks with a lift height up to 13 m, and narrow aisle equipment. “As the size of warehouses increases, demand will increase for order pickers, tri-stackers, and articulated stackers. Demand for automated storage retrieval systems and robotics or guided vehicles for storage and retrieval will grow for large warehouses storing large quantities of a variety of goods,” he says.

## FEATURE-MATERIAL HANDLING EQUIPMENT

### Justifying automation

Some shift in user demand is already happening, according to Mehendale. "We are seeing a shift towards the premium end of the market as buyers grow aware of the greater reliability and ruggedness of this equipment vis-à-vis the economy range of products," he reasons.

Essentially, buyers are becoming more conscious about the capabilities of material handling equipment, and preferring to invest in more versatile and capable equipment, says Raja. "For instance, narrow aisle trucks with a reach of 9 m are being preferred over forklifts with a reach of up to 7 m."

Both factory automation and distribution automation are growing, the first because India is doing well and the other apart from the first reason because of GST," notes Behera.

Automated equipment is the best the market has to offer so Mehendale expects a greater

### "Low prices make it hard to justify investments in automation."

- Elangoven K, Head, Operations, Jayem Warehousing

### "Only about 1 per cent of warehouses in India have deployed full automation so far."

- Subramani Raja, Senior Engineer, Nichiyu Forklifts India

number of 'smart' warehouses to evolve in coming years. To tap this emerging demand, ElectroMech offers fully automated Yale forklifts and stackers alongside standard forklifts that are designed for the most demanding conditions. "These come with a warranty in excess of 2,000 hours," says Mehendale.

However, a word of caution: "Automation should not be done for the sake of automation,"

says Mehendale. "Automation needs a detailed (capex) cost-benefit analysis."

Behera explains: "Obviously there is a capex to automation compared to doing nothing but then there are operational savings from high throughputs, safety, traceability, reduction in pilferage, and being able to work 24 x 7. Overall, automation does not increase the cost of material handling, rather it pays off if the solution is correctly designed and deployed."

"Automation helps reduce material losses from the lack of safety in transit and damage during the carriage inward and outward," agrees Gandhi.

The capex associated with deploying full automation starts at the time of construction because those technologies necessitates magnetic sensing to be inbuilt in the structure, notes Raja.

Also, the business volume must justify the capex on automation. "Above a certain threshold of volumes, automation becomes a no-brainer as it then has a tremendous potential to deliver cost reductions," says Mehendale.

Estimating the business levels that justify investments in automation, Chauhan says: "In India, businesses that operate three shifts with a high throughput can expect to break even in three years. Businesses operating in two shifts with a medium throughput will take five to six years to break even while those operating only one shift with a low throughput will have to wait nine to ten years to break even."



Photo courtesy: Nichiyu Automations

Sensors, telematics and other time-saving tracking tools for the seamless point-to-point tracking of materials have been well accepted.

- CHARU BAHRI | CW |

To share your views, on the market for Material Handling Equipment in India, write in at [feedback@ConstructionWorld.in](mailto:feedback@ConstructionWorld.in)