

Case Study

Case of Missing Deliveries

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"Yes Sir! I shall once again have a word with Harendra & see to it that the problems are resolved" said Manish, the Head - Supply chain Management SBU.

It was already 8:30 pm & he was still in the office. Manish had no desire to talk to Harendra, Head-Marketing SBU, but he had no choice. Reluctantly he dialed Harendra's blackberry. After a few seconds Harendra was on line, "Hi Manish! What's up? What makes you call me that too at 9'o clock at night?"

"C'mon Harendra, you very well know why I have called up. We discussed this today morning & still you made a complaint to the CEO"...Manish was clearly annoyed.

"So what do you expect me to tell the CEO when he wants to know the status? I just told him that with current delivery status there is no way I can complete the sales target. In fact there is every chance that we might have to pay delay penalties. I didn't complain about you. I have my own problems to worry about. I too got quite a dressing down for the outstanding receivables"...said Harendra

"Whatever it is! Can we meet tomorrow say at 11 am, only two of us to sort out these delivery problems?"...Manish wanted to end the conversation as soon as possible.

"Fine with me. See you tomorrow at 11:30 then. Goodnight!"...Harendra ended the call.

Manish leaned backwards in his chair & closed his eyes. He was thinking about his previous job. He was so happy there. It was a medium sized consumer durables company manufacturing air conditioners, refrigerators, television sets etc. As head of SCM there, he was instrumental in improving cycle time, reducing the inventories & substantially improving the bottom line. He even bagged the 'Most valuable Employee' award for 2 successive years. But that was past. Just 9 months ago he joined his current employer, 'StarWind' as Head-SCM. Starting from sourcing of materials, manufacturing the finished turbines & delivering it to the customer's site were the responsibility of Supply Chain Management. Marketing took care of erection & commissioning of the turbines. Starwind was a amongst the top 10 renewable energy companies in the world. It was a leading wind turbine manufacturer. The wind turbine industry had grown at a phenomenal rate (45% CAGR) during last 5 years & so had Starwind. From a medium size company having annual turnover of INR 500 Cr., Starwind had grown to become a big company & last

year did a turnover of about INR 4000 Cr. The company had set the target minimum 50% increase in top line for the current year. Much of this growth was expected to come from export volumes. In fact over the last five years company had gradually shifted its focus from domestic market to international market. The figure 1 represents marketwise sales break up for Starwind over a period of last 5 years. Most of the exports were to USA & Europe.

About Wind Turbine product:

A commercial wind turbine usually consists of 4 major components,

1. Rotor
2. Nacelle
3. Tower
4. Transformer

Major component of rotor is blades which were manufactured in house in Indian facilities. Blades are the most technologically sensitive component & performance of turbine depended to a large extent on profile of blades. Standard assembly time for rotor was 48 hours

Nacelle consisted of the entire drive train i.e. shaft, gearbox & generator. The drive train is the most failure prone component of the turbine. Starwind was sourcing gearboxes from Europe whereas shaft, generator, various castings were sourced from China / India. Standard assembly time for nacelle was 24 hours.

Raw material for towers was mostly sourced from China. A typical wind turbine tower of MW series has a height of 60m to 70m. Transformers were also sourced locally mostly by the customer themselves. Many industrial customers also preferred to source their own towers. The technical specification for towers was however responsibility of StarWind. Standard assembly time for tower was 96 hours.

A turbine usually consisted of 9000 odd components. Erection & commissioning of these turbines was a specialised task involving huge cranes which often needed to be booked well in advance

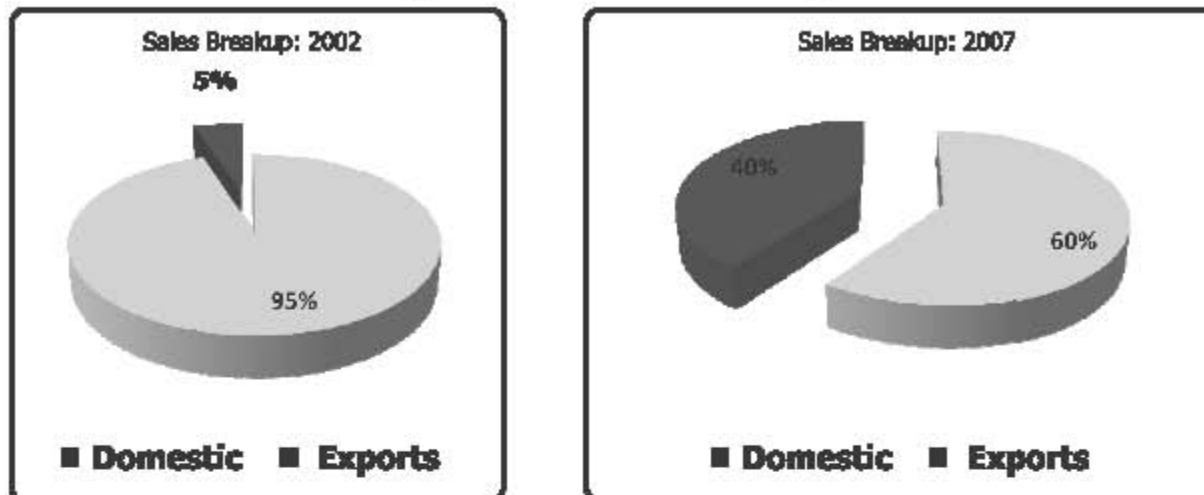
About Starwind Business Model:

Amongst all the players in wind industry, StarWind had a unique business model. It had its R&D centres in Europe where the turbines were designed. All the turbines were designed to European specifications. Only the R&D office had authority to issue specification changes. Due to nature of product & industry, change in specifications was a norm rather than an exception. The assembling / manufacturing was done in India. In order to capitalize on the low cost manufacturing base of China, Starwind

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Figure 1 : Marketwise Sales Breakup



had entered in to joint venture with 2 Chinese companies which used to manufacture the components required for the turbines. Similarly it also had a JV with a US company in India to manufacture the generators (StarWind-Bush). This Generator JV company was not allowed to sell to outside market & had StarWind as its sole client. One of the Chinese JV company manufactured various forgings (Wuxi-StarWind) & the other manufactured various castings (Shandong-StarWind). Thus the Indian assembling facilities used to get their materials from Europe, India as well as China (both JV companies as well as non JV suppliers). In fact over the period of last 5 years the sourcing mix had also gradually changed. From totally Europe dominated sourcing (close to 80% by value), Starwind currently sourced 35% (by value) of components from Europe, 35% from China & balance from India.

The turbines were assembled in the Indian facilities (StarWind had 5 manufacturing facilities across India) where they were also tested & then dispatched to customers all over the world. Usually all the fabrication work was carried out locally under the purview of respective plant manager. Special vehicles were needed to transport these huge parts & outbound logistics played a key role. figure 2 gives a diagrammatic representation of manufacturing footprint of StarWind.

"Manish, this is the plant wise inventory report that you had asked for in the morning. Off course this does not include our JV plants both in India & China" Said Rajeev, who was standing in front of Manish. Rajeev continued, "All our plants are full with raw material inventories. There is material available at Bonded warehouses also which we need to clear as soon as possible, to avoid additional charges. All the plant managers have told me that they won't be able to take any further material as they do not have any storage space left. There is good news also, we have achieved our targeted cost reduction of 3% well ahead of schedule" Rajeev was working with StarWind for last 5 years. He had joined as Asst. Manager & within a span of 5 years had risen to become Head of Purchase. He was an Engineer by qualification. Manish admired Rajeev's technical ability & promptness but was of the opinion that

Rajeev lacked the 'management bandwidth'. Manish always used to say, "Rajeev you need to think beyond your domain (i.e. Purchase) in order to increase your effectiveness. Most of the time, I see you chasing suppliers, either for deliveries or for changes in specifications. I am aware about these frequent specification changes that we have to adapt to. But still you need to put your foot down when needed. A holistic approach need not be at the cost of sacrificing our own efficiency".

"Thanks Rajeev! Let me go through it. In case I need any other information I will get back to you". Rajeev wished him Good night & left the office. Manish glanced at the reports. (Table 1)

He didn't need inventory reports for the JV companies. He had a meeting with the Group CFO in the morning wherein the Group CFO had made him aware about excess finished goods inventories at all the JV companies. In fact the Indian JV company had to resort to single shift production (from planned double shift) as they were about to run out of their working capital financing options. The situation at the Chinese JVs was also becoming critical. The CFO wanted Manish to instruct his people & start lifting the material from the JV companies. The foreign JV partners were not happy with the situation. The CFO also pointed out that over the last 2 years working capital needs of StarWind have grown at a massive proportion. It even outstripped their rate of topline growth. According to him this was a big concern & he expected Manish to have a control over inventories.

Manish studied the reports for some time. It was almost 10 pm & he was totally exhausted. He shut down his laptop, packed his briefcase, switched off the lights & came out of his cabin. He saw his core team still working on something. The team consisted of three bright young Management graduates & their leader Mayank directly reported to Manish.

Mayank noticed his boss, Manish walking towards exit door. He ran towards Manish, "Sir, can I have minute please? Sir, we did the entire analysis of the current delivery scenario & also got some inside information about preparedness of Marketing & typical customer complaints. They are only telling the half truth." Mayank then explained his Boss the team's findings. After Mayank had

Figure 2 : Manufacturing Footprint of StarWind

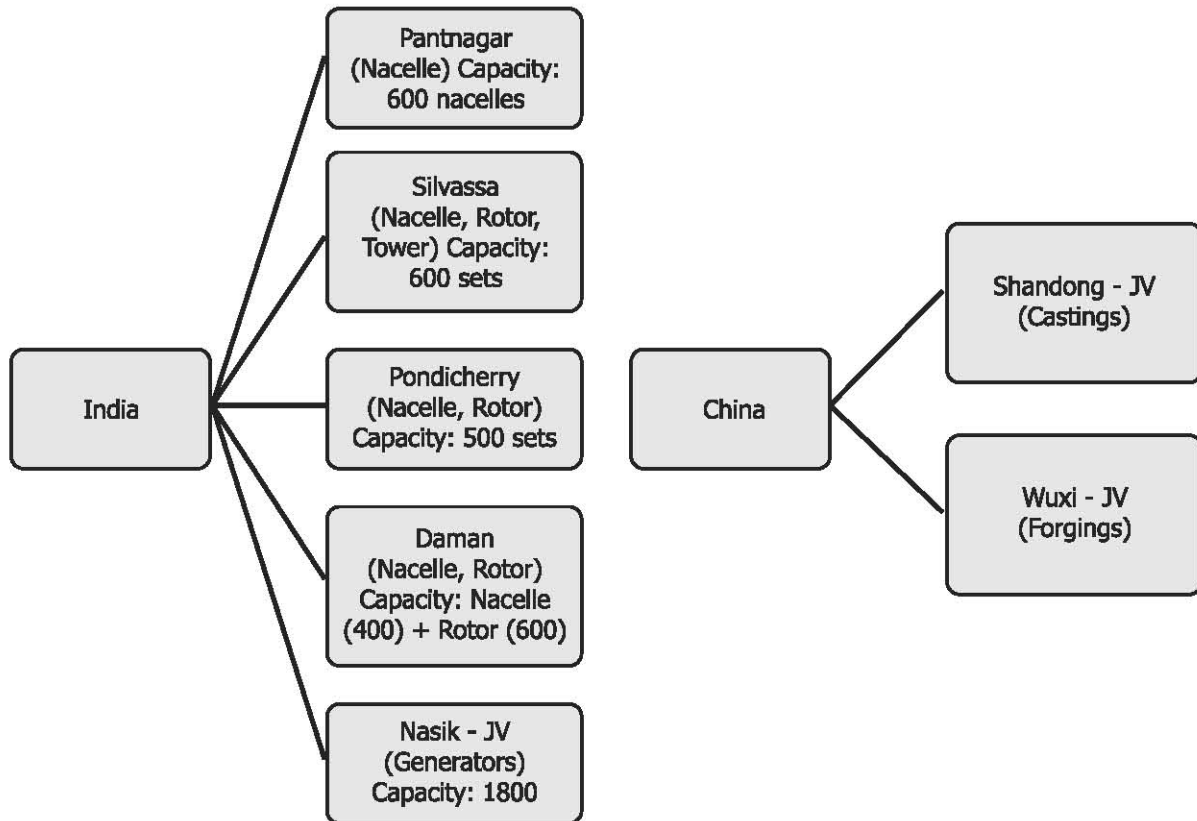


Table 1

Particulars	Plants (All figures in Crores)				
	Pantnagar	Silvassa	Pondicherry	Daman	Nasik-JV
Inventory Break up					
Raw Material	300	651	291	288	45
Work In Process	33	60	30	45	15
Semi finished Goods	165	250	135	100	6
Finished Goods	66	33	45	30	109
Total	564	994	501	463	175

finished, Manish smiled at him & said "That sounds promising. But don't forget we have orders in hand, there was no major breakdown in any plant & we are still not able to deliver. Unfortunately that's what matters! Anyway, dig for some more

data & do further analysis. Unless we have any concrete information with supporting data, we might have to face music. Let's discuss it tomorrow morning at 9:30 sharp, as I have meeting with Harendra at 11:00. Good night".