

## A-CAT CORP.: FORECASTING

*Jitendra Sharma wrote this case solely to provide material for class discussion. The author does not intend to illustrate either effective or ineffective handling of a managerial situation. The author may have disguised certain names and other identifying information to protect confidentiality.*

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Shirish Ratnaparkhi, operations manager at A-CAT Corporation (A-CAT), had to submit a forecasting report concerning the sales of the company's primary product — voltage stabilizers. Ratnaparkhi, who was handling the manufacturing department, wanted to get to the bottom of the matter before making recommendations to his immediate superior, vice-president Arun Mittra.

Ratnaparkhi remarked: "If we have worked out all the factors and know the right figures, then there is no reason that we cannot foresee the future correctly — provided that everything we presume turns out to be how we predicted it to be. Otherwise, even the best of the forecasting techniques will fail."

### THE COMPANY

A-CAT was one of the leading producers of electrical appliances in India. It competed with and belonged to the category of medium scale industry, which produced and distributed domestic electrical appliances to the rural population in and around the Vidarbha region. The company owned and operated two medium-sized manufacturing units in a sleepy town called Gondia, in one of the remote districts in Vidarbha, ironically a backward region in the most progressive state of India, Maharashtra. A-CAT had an alliance partnership with Jupiter Inc. for the production of cabinets and had a collaborative venture with Global Electricals for manufacturing TV signal boosters and battery chargers.

A-CAT's manufacturing units had been in operation since 1986. The budget year 2010—2011 showed annual sales of Rs. 9,800,000, and the company employed about 40 employees. The primary functional departments of A-CAT were its purchasing department, design department, manufacturing department and sales and service department.

A-CAT's primary flagship product was a voltage regulator of 500 kilovolt amps (KVA) that was branded and sold under the tag of VR-500. These voltage regulators were used for varied purposes but were most commonly used in households as a protective device for refrigerators and television sets, so as to protect the latter from the vagaries of load fluctuations and/or frequent power failures, which were a very common phenomenon in Vidarbha.

Instead of competing with the large-scale operations prevalent in a similar type of industry, A-CAT preferred to focus on the rural segment. The company offered nearly 100 different models of various electrical appliances for household use, including TV signal boosters, FM radio kits, electronic ballasts, battery chargers and voltage regulators. The broad range of products catered to the rural population in and around the district and Gondia, which comprised a large population. At the low end of the market were customers who were quite sensitive towards pricing. In the opinion of top level management, there was more scope in this segment of the market. They had been proved right but were worried that this situation was not going to last long and that the downward trend in sales was getting worse.

## THE ISSUE

During the past few months, the sales of voltage regulators had fallen off. In reaction, A-CAT recently started deliberating on its policy of purchasing and stocking spares and components in the system, especially with regard to schedule and stock-in-hand inventory. The firm stored all its spares and components, including the transformers, in its factory store.

A few of the functional department heads were questioning the nature of keeping a big stock of transformers on hand. Since a large number of products manufactured and sold by A-CAT, such as the voltage regulator, had a transformer as one of their principal or primary components, the store managers always tried to keep a good quantity of spares as a buffer for this vital part.

Orders for the main product of A-CAT — that is, voltage regulators — came in throughout the year. Most of the time, these orders were categorized as “rush orders,” and the store managers knew that the supplier of the transformers required for the product needed at least one week, if not more, for delivery.

On top of this, it was likely that the transformer supplier would raise prices if uniformity and continuity in placing of orders for transformers was not guaranteed. Placing orders beyond a certain limit also stretched the system — whereas A-CAT had previously had access to four suppliers, now there was only one.<sup>1</sup> Thus, ordering too many transformers not only exposed the capacity constraints at the supplier’s end but also led to a substantial tie-up of the company’s cash reserves. Moreover, the blocking of capital had a domino effect on the purchase and inventories of other products’ spares and components. Considering the prevailing market scenario and the economic outlook, A-CAT could not afford to fight problems on different fronts.

An increased cost of its primary spare component was the last thing A-CAT needed. Although the revenue and profits for the whole organization had steadily grown over the years of its existence, sales of voltage regulators had been quite volatile. They were already showing a sluggish year-on-year growth rate in comparison to their closest competitors.

The sales division was supposed to forecast the demand for voltage regulators as a measure for determining the right amount of transformers to keep in inventory. Though transformers were used in other A-CAT products, the company decided to consider only the issue of the number of transformers required for voltage regulators.

TVs, refrigerators, washing machines and other white goods used voltage regulators as a guard against potential voltage fluctuations and hence the resulting forecast of voltage regulators had an effect on the

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<sup>1</sup>Refer to Jitendra Sharma, “Decision Making at A-CAT,” Ivey Case No. 9B11D011, September 19, 2011.

supply chain. It also had an impact on the number of workers called in for shifts, resulting in scheduling issues.

## THE BRIEF

Vice-president Arun Mittra carried out several rounds of discussion at different levels in this regard, but they failed to completely resolve the issue. So he decided to take the matter in his own hands and called for a comprehensive data report of sales figures for the last several years.

Mittra deliberated on this for a while and asked his secretary to contact his operations head for an urgent meeting. He said,

We have always estimated how many transformers will be needed to meet demand for our final products, especially for voltage regulators. The usual method is to look at the sales figure of the last two to three months and also the sales figure of the last two years in the same month and make a guess as to how many transformers will be needed to sell this many voltage regulators. With this method, we were able to manage quite well until now; however, the general complaint is that either we have too many transformers in stock or there are times when there are not enough to even meet our normal production levels. It's a classic case of both under-stocking and over-stocking. In either case, we are facing troubles at the final product delivery front and also our supplier is raising a lot of objections about our haphazard manner of placing orders.

As operations head, Ratnaparkhi was asked by Mittra to have a closer look at the data report and to offer his understanding and analysis of the issue within a fortnight, when the next order for the transformers would have to be placed. The size and timing of the order was the bone of contention between various functional departments. Refer to Exhibits 1 and 2 for the data summary.

Mittra also emphasized that Ratnaparkhi's recommendations were to be very crystal clear and precise and accompanied by justification for the decision taken. He said, "We should be able to plan our transformer purchasing better. I would like you to not only understand, analyze and propose your projections but would also like you to come up with a report that even a lower grade clerk in stores should be able to fathom and follow."

**EXHIBIT 1: TRANSFORMER REQUIREMENTS DURING THE PERIOD (TAKEN FROM THE SALES OF VOLTAGE REGULATORS)**

	2006	2007	2008	2009	2010
January	779	845	857	917	887
February	802	739	881	956	892
March	818	871	937	1001	997
April	888	927	1159	1142	1118
May	898	1133	1072	1276	1197
June	902	1124	1246	1356	1256
July	916	1056	1198	1288	1202
August	708	889	922	1082	1170
September	695	857	798	877	982
October	708	772	879	1009	1297
November	716	751	945	1100	1163
December	784	820	990	998	1053

Source: Company files.

**EXHIBIT 2: SALES FIGURES OF REFRIGERATORS DURING THE PERIOD**

Quarter	2006	2007	2008	2009	2010
I	3832	4007	4826	5411	6290
II	5032	5903	6492	7678	8332
III	3947	4274	4765	5774	6107
IV	3291	3692	4972	6007	6729

Source: Company files.