eMoksha
A DATA SCIENCE COMPANY

AI/ML IN STEEL/METAL DISTRIBUTION – BENEFITS & POSSIBILITIES

Businesses across various industries are increasingly turning to AI to enhance their operational efficiency, reliability, and profitability. Similarly, steel/metal distribution companies also have the tremendous potential to reap the benefits from this new wave of technologies and capabilities . There is a significant amount of noise around AI, with a growing number of vendors and software tools boasting about being "***AI-powered***". However, many C-suite executives at mid-sized and even larger steel/metal distribution organizations are struggling to comprehend how AI can be leveraged to drive business success in their businesses..

Amid all the hype surrounding AI, it makes sense to examine, "***How exactly can AI improve my business?***" But before going into that, let's briefly reflect on how the modern steel/metal distribution system is working in the digital world we live in.

DECODING STEEL/METAL DISTRIBUTION IN THE DIGITAL AGE

In a steel/metal business model, the distribution ecosystem typically consists of multiple channels for serving a particular market need-

- Steel/Metal distributors may have sales reps engaged in field sales activities, distributors or channel partners, striving to bridge the distance between the steel mills and users of finished steel, inside sales reps, and the websites that help grab customers' and prospects' attention.
- Achieving coordination and synchronization in all these activities is critical for revenue generation and enhancing the total customer experience and profitability.
- Adding to the complexities of any steel/metal distribution business, there are constantly evolving market conditions, the need for timely sourcing, and the pressure of coming up with competitive pricing customized for specific market and customer segments.
- Steel/metal distribution businesses manage a multitude of such business interactions in ERP systems and end up storing mountains of multi-year historical transactions about such business activities. These transactions can serve as a perfect use case for applying AI and Machine Learning.

Before we go any further, let us first define Artificial Intelligence/Machine Learning in simple terms.

MACHINE LEARNING (ML)	ARTIFICIAL INTELLIGENCE (AI)
Focus on algorithms	Focus on practical use of Machine Learning algorithms
Algorithms learning from historical data	Device centric
Algorithms discover new patterns and rules	Device functionality changes based on newly discovered patterns and rules

Sometimes these two terms AI/ML are used interchangeably.

HOW CAN AI/ML HELP MY STEEL/METAL DISTRIBUTION BUSINESS?

In the post-pandemic world of unreliable lead times, and unpredictable demand embracing technology to modernize the distribution business is no longer a choice for steel/metal distributors. Hence, here we singled out 2 major ways distribution leaders can leverage AI/ML capabilities to streamline their distribution business.

SUPPLIER ORDER RECOMMENDER

If your steel/metal distribution business is still relying on Excel spreadsheets or ERP reports for supplier orders and demand forecasting, it's time to consider AI/ML. With AI, you can replace manual work and achieve unparalleled speed, scale, and accuracy in demand predictions. By analyzing multi-year historical ERP data, external environment data(weather, market data, and so on), and live streaming data sources, AI can provide demand forecasts based on market signals and patterns

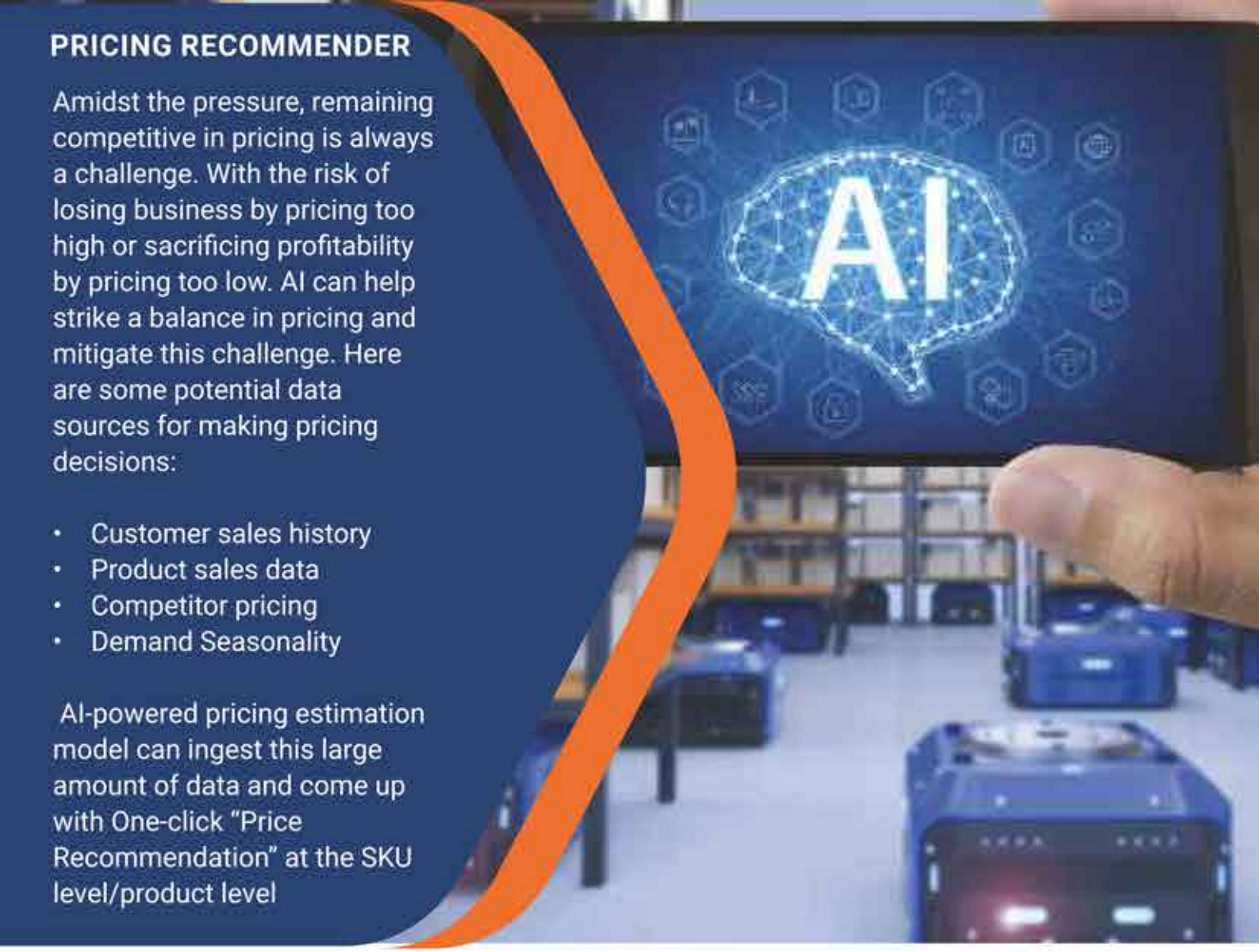
An ideal Demand forecasting system should allow you to predict with high precision what to order from a supplier, when to order, and how much to order. Depending on your reorder time cycle, you should be able to "Click" a button and get the real-time forecast down to the SKU /item level. The implications of this approach can be a game-changer for your business. How? AI can enable the complete elimination of manual forecasting processes as any new data is automatically ingested into the data stream with a high degree of forecast accuracy and self-adjusting forecast rules, based on changing customer behaviors. We have been able to cut down the supplier ordering process timeline from weeks/days down to an hour using this approach.

PRICING RECOMMENDER

Amidst the pressure, remaining competitive in pricing is always a challenge. With the risk of losing business by pricing too high or sacrificing profitability by pricing too low. AI can help strike a balance in pricing and mitigate this challenge. Here are some potential data sources for making pricing decisions:

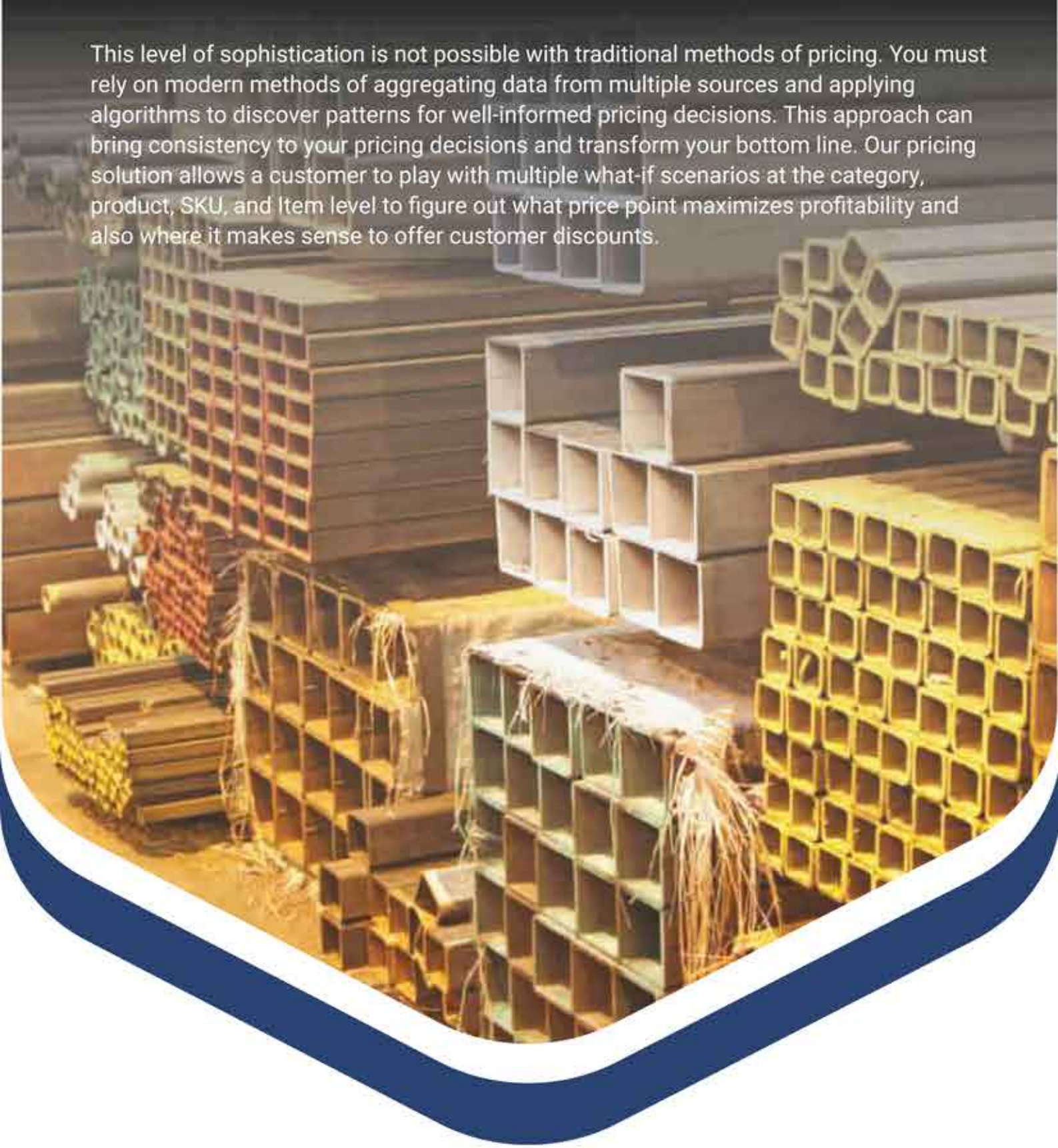
- Customer sales history
- Product sales data
- Competitor pricing
- Demand Seasonality

AI-powered pricing estimation model can ingest this large amount of data and come up with One-click "Price Recommendation" at the SKU level/product level



THE PRICING MDEL PERMITS YOU TO DEFINE PROFITABILITY SCENARIOS AT THE PRODUCTS LEVEL, CUSTOMER LEVEL, AND SKU LEVEL. PROVIDING VISIBILITY INTO SCENARIOS CAN HELP IN SETTING PRICES THAT MAXIMIZE PROFIT AND ALSO REWARD THE CUSTOMER.

This level of sophistication is not possible with traditional methods of pricing. You must rely on modern methods of aggregating data from multiple sources and applying algorithms to discover patterns for well-informed pricing decisions. This approach can bring consistency to your pricing decisions and transform your bottom line. Our pricing solution allows a customer to play with multiple what-if scenarios at the category, product, SKU, and Item level to figure out what price point maximizes profitability and also where it makes sense to offer customer discounts.



CONCLUDING THOUGHTS

Each application and usefulness of AI for steel/metal distribution described above has got its level of knowledge dependency to deliver as per the expectation. A lot depends on historical data availability, approach, resources, and leadership buy-in to make it happen. Hence, before investing in an AI solution, business leaders must understand what problems they are trying to solve, what outcomes they expect, and how AI can get them there.