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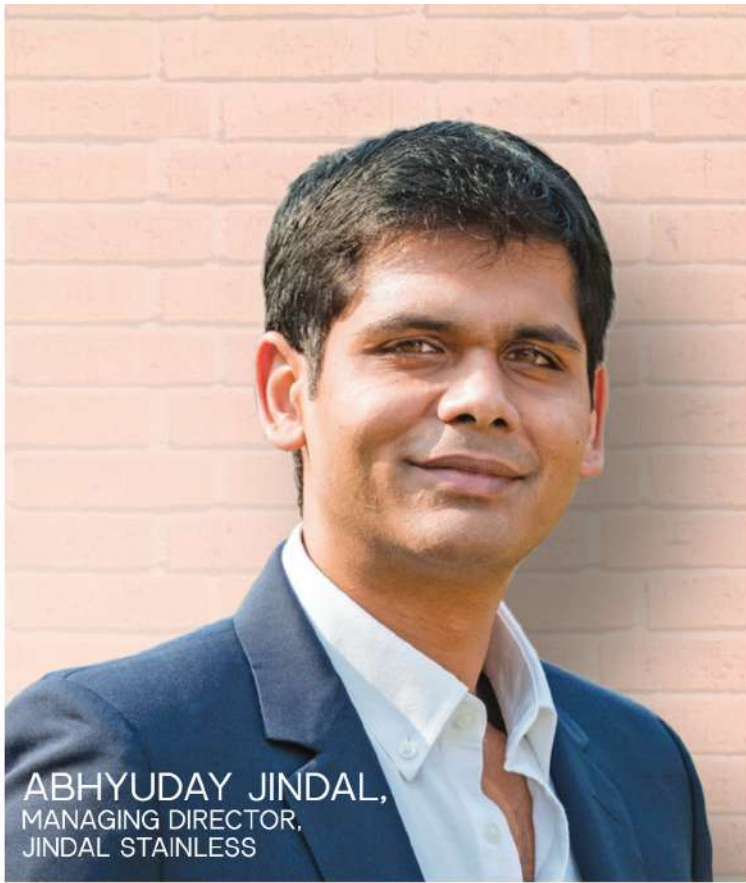
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ABHYUDAY JINDAL,
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EVOLUTION OF
TRADITIONAL
STEEL
MANUFACTURING
INTO A DIGITAL
ECOSYSTEM






ABHYUDAY JINDAL,
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10 COVER
FEATURE

EVOLUTION OF TRADITIONAL STEEL MANUFACTURING INTO A DIGITAL ECOSYSTEM

CXO INSIGHTS

16	23	34
		
<p>MANAGED REVIEW – WHAT YOU NEED TO KNOW DAN COHEN, DIRECTOR - BUSINESS DEVELOPMENT, SANDLINE DISCOVERY</p>	<p>INDUSTRY 4.0 & SUPPLY CHAIN TRANSFORMATION JASJIT SETHI, CEO, TCI SUPPLY CHAIN SOLUTIONS</p>	<p>REVOLUTION BECKONS SALES – RIDING HIGH ON GAME-CHANGING TECHNOLOGIES PRASHANT ROHATGI, GLOBAL HEAD – TECHNOLOGY, DENAVE</p>

LAST WORD

38

<p>A DEEPER LOOK INTO THE OCEAN ANDREAS MERKL, PRESIDENT, OCEAN CONSERVANCY</p>

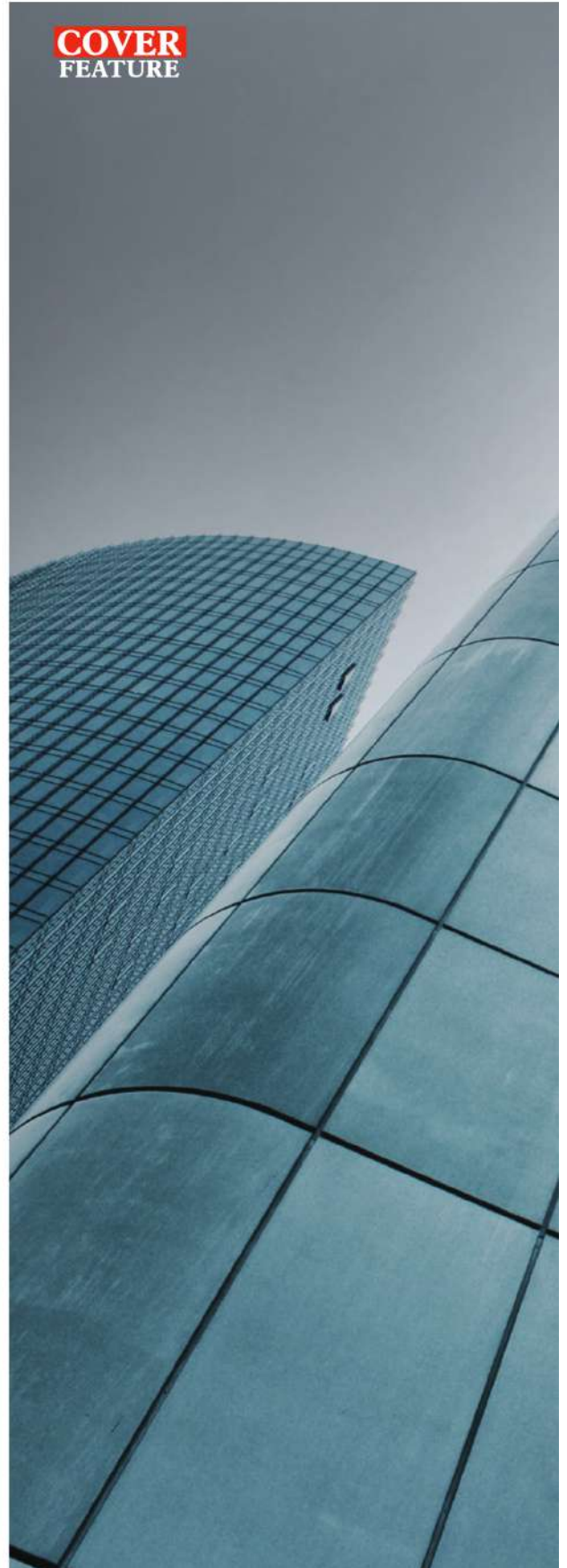


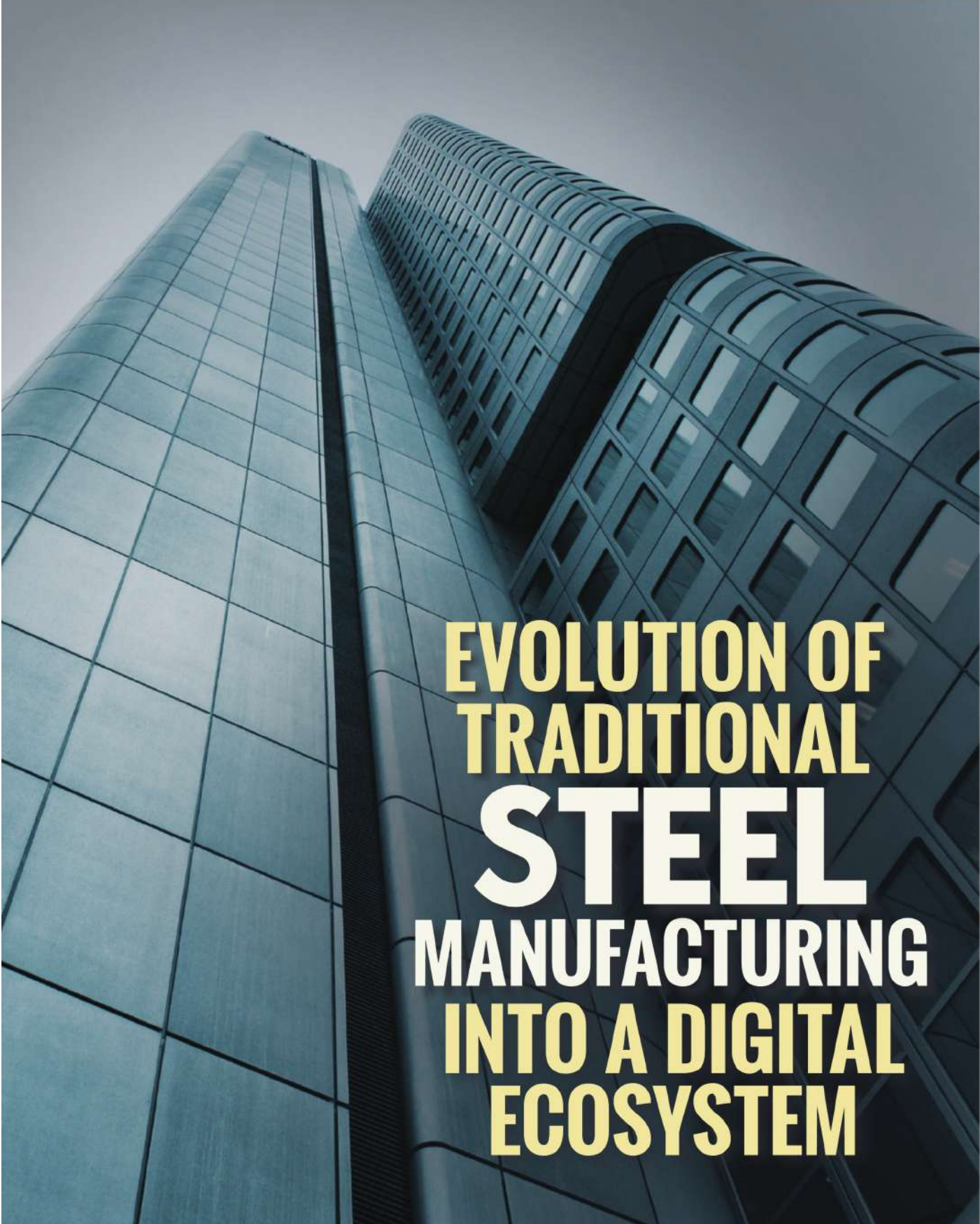
ABHYUDAY JINDAL,
MANAGING DIRECTOR,
JINDAL STAINLESS

Abhyuday lives his dream of creating a stainless India with people he counts as his biggest asset – his employees. His 3-word philosophy of Leading with Empathy forms the cornerstone of culture and endeavour at Jindal Stainless.

I often ask myself what the ideal work space of the future would look like. In my opinion, it will be highly technology-driven with the IT team as a core business-enabler, way more sophisticated than it is today. As we enter 2020, an age where AI and VR are becoming visible phenomena, there is a dire need to adapt to newer technologies. After all, change is the only constant. And that constant is evolving like never before!

The first industrial revolution in the eighteenth century introduced mechanisation through water and steam power. Nearly a century later, mass production and assembly lines using electricity were welcomed in the second industrial metamorphosis. This transformation led to further development of trade and necessitated quick turnaround in an efficient and economical manner. The third paradigm shift introduced technology through computers and automation, changing the fabric of manufacturing like never before. Today, fuelled by data and machine learning,





**EVOLUTION OF
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the manufacturing sector is striding towards Industry 4.0, aiming to revolutionise production processes once again - only this time digitally!

Steel manufacturing has traditionally been manpower-intensive. An amalgamation of raw material selection, intricate continuous production processes, complex chemical reactions and analytical calculations, international supply chains, unique customer requirement, inter- and intra-communication, amongst other factors, makes the steel industry a highly specialised and capital-intensive sector. As Industry 4.0 unfolds, these aspects automate through an efficient and precise decision-making process reducing the need for human intervention. However, the key to a successful future digitisation depends on how the processes remain stable with higher accuracy each time.

When we decided to go paperless in 2017 by digitising our entire material procurement process right from indent creation, purchase order conversion and release, to delivery follow-ups, and receipt of materials, we were merely getting our foot in the door in the vast potential of technology. Traditional manufacturing set-ups in India need to evolve quickly to catch up with the rest of the world. Being a millennial, I am personally invested in digitising processes at our manufacturing set-up in Jindal Stainless and have taken up several digital reforms to improve production efficiency and increase customer satisfaction.

Speed & Accuracy

With great digitising, comes great manufacturing power. I believe digitisation is a pre-requisite for any manufacturing company that caters to rapidly changing consumer

requirement and short life span of product innovation. The modern machinery needs to be adaptable and efficient while adhering to quality standards.

I was very keen to first bring about a change in the mindset of my workforce and then equip them with technology, to have that edge over peers in our industry. Keeping this in mind, Jindal Stainless unleashed a massive digital revolution in 2017 by upgrading its ERP applications and migrating to HANA Database on Cloud. It enabled business trans-

team has taken this digitisation wave further by allowing all units to communicate in real time. This has made the production process highly interconnected and easy to monitor as we now have a digital receipt of every product in the furnace. This, for me, is nothing less than magic.

Setting up a 'Smart Factory'

While increased production is one thing, how efficiently we achieve it is another. At a time when the world is fraught with scarce natural re-

AS DIGITISATION TURNS NON-DIGITAL FORMATS OF INFORMATION INTO DIGITAL ONES, CUSTOMERS TOO BECOME A PART OF THE MANUFACTURING PROCESS

actions and reports to be 10 to 15 times faster. After this, in January 2018, the company's in-house experts undertook successful cloud upgradation for one of its plants in Indonesia. This was followed by the Company becoming one of the first in the world to adopt BW/4HANA, the world's fastest data warehouse and reporting system, in 2019. More recently, the Company has also enabled level-2-process automation for its Argon Oxygen Decarburization (AOD) converter to ensure efficiency and product quality, in line with the latest manufacturing trends. Our

sources, it is imperative to upgrade the current manufacturing setup and drive production growth with minimal impact.

The manufacturing industry is in a transitional period and is expected to take a giant leap in the future with the advent of smart factories. These high-end digitised manufacturing set-ups are envisioned to enable efficient production with improved connectivity, intelligence, flexible automation, and minimal human intervention. Industry 4.0 comprises cyber-physical systems and Industrial Internet of Things

(IIoT) that make smart factories a reality. Cyber-physical systems bring technology and operations together, ensuring tandem between them for smooth and faster processing. The IIoT, a total product data loop, refers to the overall set up of machinery, devices, sensors, etc., that enable data transfer and communication with minimal human-to-human or human-to-machine interaction.

Digitising processes also tackles an organization's multi-location manufacturing struggle. With an inter-connected network, data is easier to share. Moreover, operations do not suffer with emergency shut-downs or downtimes at certain locations. Work is seamlessly handed over and production continues across locations. Hence, at Jindal Stainless, we ensured a simultaneous adoption of SAP HANA at our overseas manufacturing facility in order to maintain consistency across operations.

As the largest stainless steel company in India, we want to lead by example in the manufacturing industry. The company continues to automate its processes, right from rolling and finishing to reducing waste, and equip its employees with the latest skills in order to ensure quality and consistency.

A Real-time Customer Experience

As digitisation turns non-digital formats of information into digital ones, customers too become a part of the manufacturing process. Various processes requiring to-and-fro company-customer intervention while placing orders, payments, service-checks, etc., can be taken up online in a user-friendly and real-time manner. This reduces cycle-time for the company through a robust net-



work of inter-connected data hubs. Further, with real-time reporting in place, 100 percent traceability of intermediate and final products is made possible.

In the era of e-commerce, customer expectations have greatly increased when it comes to service quality and transparency. Moreover, the customer seeks a higher service value in exchange for any transaction. We had to think beyond our operations and that's when we decided to opt for customer-friendly platforms. With the adoption of SAP HANA, Jindal Stainless launched several operational excellence initiatives and improvements in material procurement processes. These included digitising statements, master data management tools, raising purchase orders, customer communication, etc. Moreover, the company recently switched to a dynamic e-commerce platform, SAP Hybris, for its domestic business that enabled to build upon customers' trust, confidence, and transparency. The platform provides individual dashboards for customers for placing orders, checking billing details, reports, grievance redressal, live vehicle tracking, etc. The platform also enables customers

to participate in stock-lot material auctions available at manufacturing facilities and yards, and a robust feedback mechanism for consistent and smooth communication across relevant stakeholders.

The Way Forward

The dawn of Industry 4.0 integrates businesses with ever-dynamic technology, thus making the former more advanced, self-sustainable, and less human-dependent. I believe that digitising will not only speed up manufacturing businesses, but will also foster innovation. The success of any organization lies in effective communication and data exchange between its departments, and digitisation will ensure that.

Rapid product iteration will make prototyping, testing, analyzing, and refining of new products possible with the help of efficient and intelligent systems. This will further expedite with seamless data sharing across departments, facilities, and system softwares by the virtue of advanced systems. Thus, there is a vast potential for organizations to tap into innovation trends, market opportunities, and consumer demands like never before. 