

Invented for life



BOSCH



A CENTURY OF TRANSFORMATIVE LEGACY



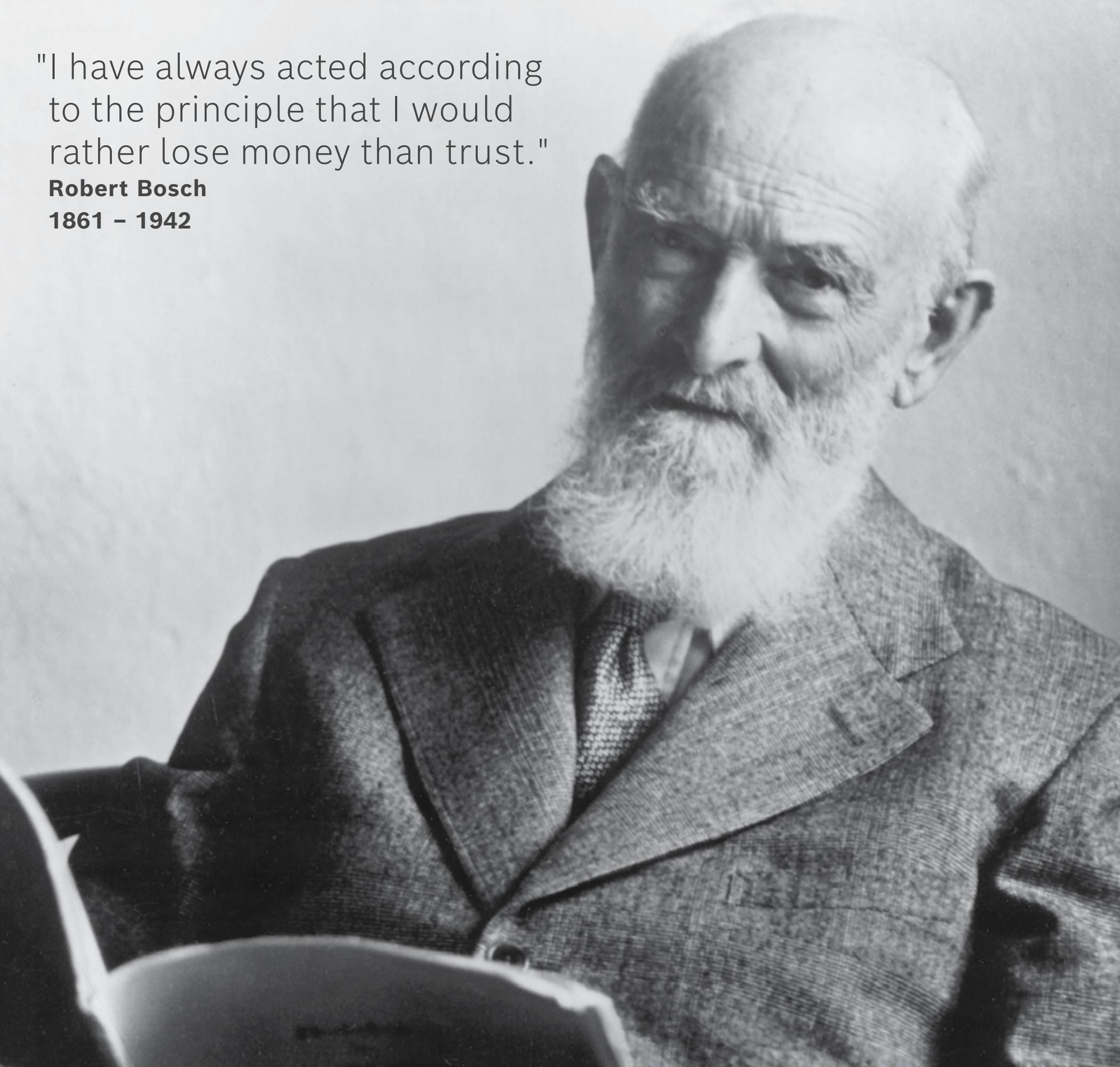
100 Years of
Bosch in India



"I have always acted according to the principle that I would rather lose money than trust."

Robert Bosch

1861 - 1942





Foreword

Stefan Hartung

Chairman of the Board of Management of Robert Bosch GmbH

Happy Birthday, Bosch India is now 100 years young.

I still very much remember my first visit to India many years ago and already then being struck by the energy, enthusiasm and passion of the country and its people. That same passion and drive was reflected amongst the associates of Bosch India. I went back to Germany after my visit feeling inspired and energized by what I had witnessed.

Bosch has indeed come a long way from its humble beginnings in India with just one sales office in Kolkata in 1922. The company now has 18 manufacturing plants and 76 locations across India. We employ around 31,500 employees in the country – and it is one of the youngest employee bases of all our regions. Given India's rightly deserved reputation for being an IT powerhouse, it should come as no surprise that one of our largest software R&D centers is in India.

You can read about these achievements – how we developed in the country and moved early on to establish, and grow our mobility, consumer goods, building and energy solutions, industrial technologies and software divisions, and other key business milestones in this special publication, “100 Years, 100 Stories of Bosch India”. These stories reflect our deep and abiding relationships with multiple stakeholders internal as well as external that have been instrumental in spurring the growth of the company.

These stories also lay the foundation for our growth in the coming century – our future cannot be imagined without reflecting on what we have achieved in the past and an honest assessment of the present.

At Bosch we firmly believe that the opportunities for growth in our traditional and emerging businesses in India are immense. There are still areas for us to make a positive difference in people's lives and there are more stories that wait to be told where the innovation and creativity of Bosch India associates will play a starring role and we thrive to turn these inventions into technology beneficial for the masses.

We are "Invented for Life".

Here's to the next 100 years of sparking and executing the next big idea!



Leader's message

Soumitra Bhattacharya

Managing Director, Bosch Limited and President, Bosch Group in India

I have been with Bosch for nearly three decades now. Bosch is “different” and it’s not rare to find people associated with the organization multiple decades. For me the most powerful sentiment has been Bosch’s Values and Purpose which I have found to be truly unique to the organization.

“I have always acted according to the principle that ‘I would rather lose money than trust.’” These values handed down to us from our founder Robert Bosch have stayed true till date. We have recently enhanced with an increased commitment towards sustainability and protecting the environment – key issues of our times. These values have been the impetus for the transformation of Bosch in India to a technology agnostic company, diversified into different business entities and spending almost ~6% of revenue on R&D.

It is rare for a corporate to realize a unique milestone marking a centenary in a country. And this has been possible by constantly innovating and making products and solutions, specially developed and designed for local needs. In India, we are home to nearly all global Bosch businesses. India as the headquarters for Bosch Global Software Limited(BGSW) demonstrates how India is now emerging as a technology powerhouse. We are “Make in India” since the last 69 years and constantly working to bring Advanced Technology from our global portfolio to suit Indian innovative and affordable needs. Additionally, we are innovating with the launch of two major Project Houses of Electrification and Mobility Solutions in the last 4 years which will further help us diversify our portfolio.

The 3-box approach – to protect our Core business, to rewire our Core into adjacencies, and foraying into new business areas, was the crux behind our transformation program ‘Lakshya’ launched in 2017. It revolves around the 5 central pillars of Growth, Collaboration, Startup culture, Great place to work and Customer centricity.

Goodwill and trust for Bosch are not earned solely through developing new avenues for growth – its also our deep-rooted sense of being a socially responsible corporate. We are filled with pride and immense gratification with our track record in our social engagement endeavors, which has been acknowledged by the Central and State Governments and public at large.

Even as we celebrate the achievements of the past, Bosch India firmly has its gaze on the future. We co-created our purpose statement with Spark.Nxt to future-proof and define the way forward. These are challenging times for the world – but if there’s one organization that’s able to turn challenges into opportunities and make lives better, it’s Bosch. We are Bosch and We lead Bosch will remain etched in the mind of all Boschlers as we start our journey for the next 100 years.

I hope you enjoy reading these stories and join us as we celebrate 100 remarkable years of Bosch India and the transformation which will help us face the future with courage and determination.

Happy Reading!

From the Editor's Desk

My first interface with the Bosch brand was out of the necessity enforced by the pandemic. During the lockdowns, like many Indian households struggling to juggle between “Work from Home” and “Work For Home” commitments, had me looking for a dishwasher. After a slight wait, the much in demand Bosch dishwasher came to my rescue and truly made our lives much easier, by living up to its repute of “Invented For Life”.

Fast forward few months: I joined the Bosch Group in February 2022 in its centenary year in India. Amongst the myriad plans, one of the most inspiring projects was the Bosch India Coffee Table Book: 100 years, 100 stories – capturing the transition and transformation journey. It is an attempt to bring alive the human endeavor behind many of our achievements from a cross section of the organization and stakeholders from the ecosystem.

It was possibly the best induction I could have asked for, interviewing our stakeholders who have been pivotal in this journey. Much of the content gathering for this publication was underway by the Corporate Communication team. As I traversed through the vast and rich trove of materials in our archives, I was impressed by the obvious affection and esteem that invariably most stakeholders had for Bosch India.

Spread across five themes ranging from the genesis of Bosch in India to Spark.NXT - Paving the way for the future, this Coffee Table book captures an array of stories lived and experienced at Bosch over the century and promises to be an inspiring read.

For me it's indeed an immense privilege and matter of deep pride to bring out this publication to honor the company's centennial in India. Each story in the set of 100, has been carefully handpicked to reflect the unique impact Bosch has had on the people both within and outside the organization, the larger Bosch Group and the industry at large. These stories are human narratives, of our rich legacy, told through the perspective of those who know it best.

Publication like this are a once-in-a-lifetime opportunity to look back and look forward to a bright future, that will spark conversations.

I hope you get as much pleasure reading these stories as we had in putting them together for you. And as you go through the pages of this book you gain a better understanding of what makes Bosch a company unlike no other.

Happy reading!

Shakambhari



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From the Joint Managing Director's desk

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THE GENESIS OF BOSCH IN INDIA

DAWN OF A NEW ERA

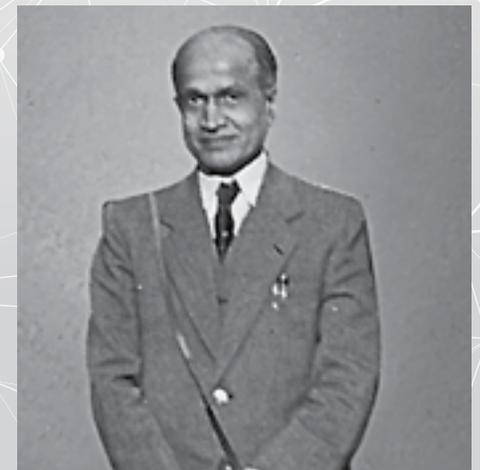


Building Bosch on a platform of collaboration

“Our strategy in India...of limiting ourselves simply to imports, will not yield success in the long term. If we continue to pursue this strategy, we will be completely squeezed out of the Indian market.” Internal analysis of 1920s did not mince words regarding Bosch’s future as a sales agency in India. Since its entry into the Indian automotive market, Bosch sales had not seen any discernible growth, due to the strong British and US automotive suppliers already in the country. A newly independent India had shifted away from the British policy of India as an exporter of raw materials and consumer of finished goods. Instead, the Indian government was stressing indigenous industrialization over importing essentials. India’s first Prime Minister Jawaharlal Nehru emphasized the importance of a self-sufficient economy and increasing agricultural production and public sector industries in his first five-year plan, released in 1951.

Jawaharlal Nehru urged his close friend, Raghunandan Saran, a freedom fighter, and son of the owner of the Ghaziabad Engineering Co. (GEC), to aid in creating a self-sufficient industry. Saran realized that for this to happen, automotive parts would need to be manufactured indigenously, rather than be imported.

Towards which he approached Bosch to expand its operations in India. On 11 December 1951, the discussions came to fruition, and the Motor Industries Company Limited (MICO) was founded in Chennai. MICO commenced operations with only two employees – Saran, and K.C. Varma, who helped it secure financial backing. The company headquarters was based in Saran’s house, where it remained until the first MICO manufacturing plant and office was set up in Bengaluru, in 1953.



The founders of Bosch India, KC Varma (L) and Raghunandan Saran(R)▶

Bosch's Chairman Emeritus



Construction site
of Bosch plant ▲



◀ Bhailal C Patel, one of the
founders of Bosch india

Sometimes the greatest opportunities arise from the worst of times. The economic aftermath of the Second World War, for instance, reinforced the importance of international cooperation for prosperity.

“The losses led to the realization that countries could not live in isolation but would have to come much closer to each other. What applies to countries applies to companies. Working together leads to mutual understanding and benefits many instead of a few,” observed Hans L. Merkle, former Chairman, Robert Bosch GmbH, underlining the new direction of multinational partnership for Bosch.

Meanwhile, a newly independent India was looking to spur industrial development. In 1950, Bhailal C. Patel, approached Bosch to expand its automotive operations beyond sales and set up an Indo-German technology partnership. Patel had enjoyed a long stint with Kino-Bauer – a Bosch Group company – and thus understood Bosch’s new strategy of growing with local partners.

Patel, who is the third founder of the Bosch in India, partnered with Raghunandan Saran, former freedom fighter and the inheritor of Ghaziabad Engineering Company, to start negotiations with Bosch in 1950, which culminated in the establishment of MICO in 1951. Patel was a member of MICO’s directory board from 1955 onwards and became Chairman in 1969. Under his guidance, MICO shares were listed on the Stock Exchange and work began on the company’s Nasik plant.

Recognizing Patel’s services, Robert Bosch GmbH’s directors honored him with the title of Chairman Emeritus and a gold medal. Patel served MICO with distinction, witnessing the company’s Silver Jubilee milestone, remaining Chairman Emeritus until his demise in 1983. MICO later became Bosch Ltd. in the year 2008 and continued to be the only publicly listed company in the Bosch world.

Foraying into the Indian automobile industry

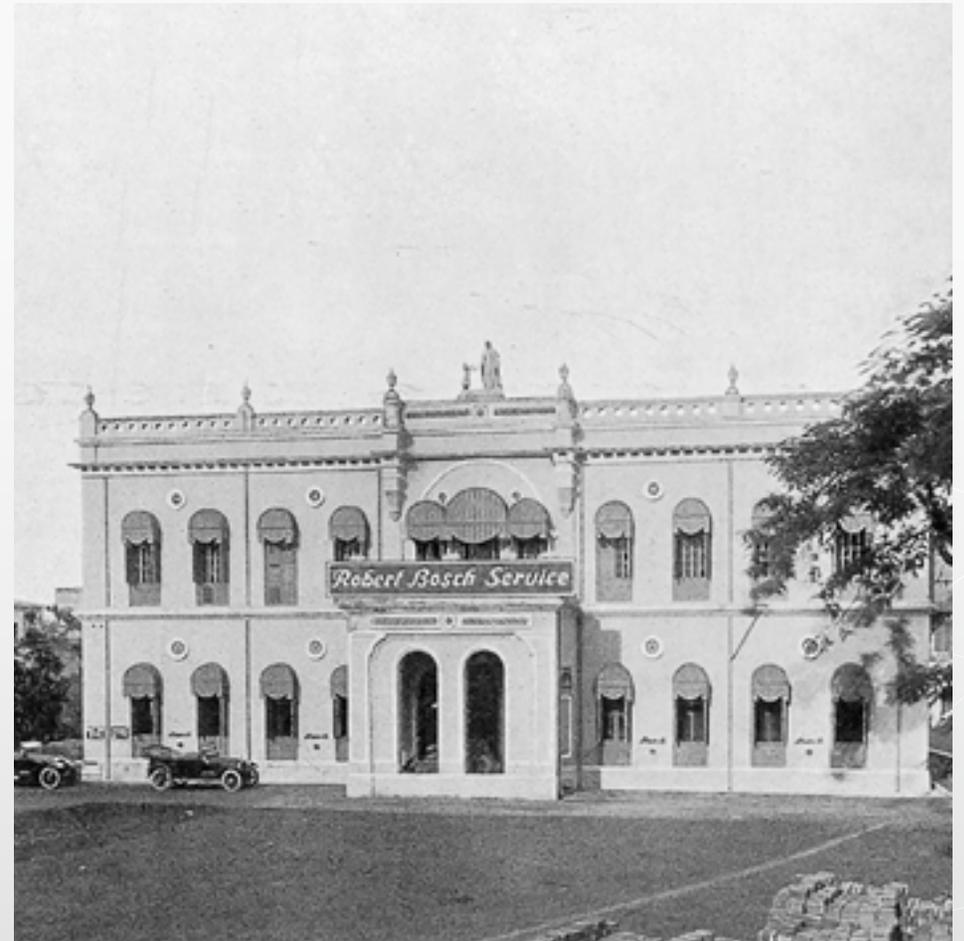
The year was 1897. India had just witnessed her first car in Kolkata (then Calcutta), the capital of Bengal and India's industry, trade, and commerce hub. By 1916, there were over a thousand cars on Indian roads, confirming that India's mobility revolution was already underway. After the First World War,

India became one of the first countries where Robert Bosch signed partnerships and established contacts, building a continued presence in the country.

In 1921, a network of licensed repair workshops, known as the Bosch Car Service garages, was set up around the country. By 1922, Bosch officially entered the Indian automotive market as a sales agency, providing spare parts for the repair of the automobiles in the country.

Natural progression led Robert Bosch to set up shop in the Bengal Presidency, the economic and cultural nerve centre of the British Raj. Here, he was aided by a former business partner, the Hamburgbased multinational C. Illies and Co.

Till the 1930s, though, the Indian automotive industry continued to be small, and consisted only of imports. Bosch's partnerships across the world ensured that iconic products like the Bosch sparkplugs and magneto ignition became essential parts of the imported automobiles driven in the country.



▲ Bosch's first sales office in Calcutta (now Kolkata) in 1922

Why Bengaluru?



▲ Old administrative building, Adegodi, Bengaluru

Bengaluru had been an Italian Prisoner of War Camp during the Second World War. Once the war ended, and India gained her independence, the Prisoners of War (PoWs) were repatriated. As a part of the fledgling Indian government's push for industrialization, the PoW camp land was re-purposed towards the setting up of industries.

The liberalization of India's industrial policies, coupled with the city's mellow climate and ample resources, made Bengaluru an ideal choice for setting up the first MICO manufacturing unit in the 1950s. Despite the Indian government's push for public sector company, there was an influx of skilled engineers looking to work in both private technical organizations, allowing MICO to advance its expertise in the coming decades. "From the early 1950s, MICO has been a jewel in the crown of the salubrious and technically strong Bengaluru, a rare private sector manufacturing enterprise amongst several massive public sector industries," says K.R. Sudarshan Rao, former Plant Manager (Technical), Bengaluru Plant.

Furthermore, people like Raghavendra Rao, former senior General Manager in Bosch India, helped create a hub of specialized engineering talent in Bengaluru. "I graduated from an engineering college in Bengaluru in 1971. At that time, the city was known for public sector companies, with very few private sector companies. Despite this, MICO was still known as a technologically advanced organization, famous for the training and discipline it instilled in its employees. Though the MICO team visited my college in my final year, the company was already on my wish list of places to work," he declares. The greenfield operations of companies like MICO set the stage for the transformation of Bengaluru into the IT (Information Technology) haven that it is today.



MICO
Bosch Group

A 70-year long promise

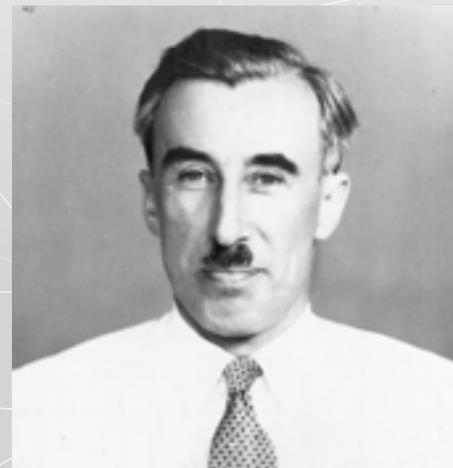
In 1952, the MICO family grew by one, with the arrival of E. Lang from Germany. Initially joining as a factory manager, Lang rose to become the company's first Technical Director in 1954. On July 16, 1959, that Lang noticed something odd about his workers. As recalled by SAS Murthy, Personal Department, "Lang entered the canteen and immediately likened it to a lunch home, with people eating food but not sitting together. He asked some of the employees sitting there why it was so, and they told him they did not want others to know what type of food they were getting from home, because it was of inferior quality and sometimes little in quantity. Lang instantly declared that people coming to work at MICO needed good food. From then on, he ensured free meals at work for all employees."

Since then, Lang's promise has continued to be a cornerstone of Bosch's relationship with employees. He also ensured that all financial transactions between the company and its employees would remain confidential, establishing a level of trust that translated into lifelong loyalty to the company. Lang continued to serve as a full-time director of MICO from 1954 to 1959. He died in an unfortunate accident in Delhi in 1959 and was laid to rest at the Indian Christian Cemetery in Shanthinagar, Bengaluru.

Today, the manufacturing operations have moved to Bidadi, and the associates still celebrate Lang's birthday, every year by worshipping and offering flowers to his photo.



▲ Employees during lunch break in Bengaluru plant



◀ E Lang, former Technical Director, Bengaluru plant

Prussakowski's loyal and inspired workforce in Nashik

In 1969, when F. Prussakowski was made the General Manager of the Bosch plant, he was the sole German at the site. Praising his team of hardworking Indian engineers, technicians, and advisers at the company's new Nashik plant in Maharashtra, he said, "India is a beautiful country with rich natural resources and the workers there are second to none."

At the end of the Nashik project in 1974, three young engineers from Bosch Germany were employed at the factory, which is one of the important establishments of Bosch in India for the last four decades. Deemed as a great challenge for those who were involved in it, Prussakowski believed that the project emerged



as an outstanding success due to six years of strenuous work put in by the Indian employees. From supervisory staff, engineers, technicians, administrative and commercial personnel to foremen, setters and workers, everybody pitched in to kick start the factory. Spread across 400,000 square meters with four manufacturing hangars, the factory is a feat of logistical and technological excellence.

Viewing this success in retrospect, Prussakowski once said in an interview, "I can only say that they have gone out of the way to give their best. For me, it is proof, that with proper training, guidance and most important of all inspiration, Indians can achieve anything." K.P. Rajagopalan, from the Production department, who worked closely with Prussakowski at the time, says, "A gem of a person, his active participation on the shopfloor kept the employees motivated. His knowledge, fast decisionmaking skills, and quality oriented hard work was truly inspirational. All of us loved him and were incredibly happy to work under his leadership."

After serving for 16 years in India, Prussakowski returned to Germany, a contented chief and mentor to his MICO-Nashik employees. On his return he said, "I am grateful to them, for their cooperation and the loyalty they have given to me and to Bosch during my time in Nashik."

◀ Franz Prussakowski during ground breaking ritual for the plant in Nashik

The rise of Bosch Rexroth India

Established in 1974, Bosch Rexroth India, also known as Drive and Control India (DCIN), has a long-standing history in the country. For over four decades it has been serving customers successfully through its production facilities in Ahmedabad and Bengaluru and supporting sales activities through regional offices across the country. The company is a proud contributor to nation's progress with its innovative products and solutions specifically in the domains of Industrial Hydraulics, Mobile Hydraulics, and Factory Automation.

Since the beginning, Bosch Rexroth India has experienced a remarkable growth. While promoting localization, digitalization, innovative solutions and sustainability of machines and plants, the company has ensured its customers stay ahead of the curve. Some of its key contributions are in the areas of - Metallurgy, Plastics, Bulk Material Handling, Machine tools, FMCG, Printing, Construction and Agricultural equipment.

Bosch Rexroth's presence in India was further strengthened in 2013, when a new state-of-the-art manufacturing facility was commissioned in Sanand, Gujarat. One of the key plants in the international production network with technologically intensive products delivered to global markets, it goes beyond routine production to play the role of a technology center. Also, what adds to its pride is that it is already carbon neutral. "At Bosch Rexroth, we believe and restate our commitment towards our customers with state-of-the-art products and best-in-class solutions, while committing for carbon neutrality and safety of our associates and stakeholders," says B V Ramesh, Managing Director, Bosch Rexroth India.

With its gear pump manufacturing facility in Hejjala, Bengaluru and application centers and customizing unit; DCIN is developing cutting-edge solutions, which meets the requirements of not only local, but also global customers.



▲ Bosch Rexroth India

India: From a famine-struck nation to a food superpower



▲ Mechanized farming helped revolutionize agriculture.

It was not with pride that Prime Minister Indira Gandhi requested US President Lyndon B. Johnson to send food shipments in 1966 – 14 million tonnes – to rescue 90 million Indians from imminent starvation. When the call ended, she told her adviser Sharada Prasad, “I don’t ever want us to have to beg for food again.”

That year, the monsoon had failed farmers. That decade, the agri-policy had failed India, because it had attempted to increase farm output by expanding farm acreage instead of yield.

Then came the Green Revolution. It hinged on using high yielding variety seeds, which needed irrigation equivalent to an “artificial monsoon”. Bosch’s diesel engine pumps played a key role in supplying the crops’ irrigational needs and helped trigger a record-breaking bumper crop.

Suddenly, India transformed from a nation dependent on shipments of food and grain to producing so much that it had to be stored in schools and theaters. The face of Indian agriculture changed, and demand for diesel-powered irrigation pumps - developed by Bosch engineers came to the rescue. By 1977, Bosch India was manufacturing 106 types of multi-cylinder pumps and 68 types of single-cylinder pumps.

In 1995, Bosch India became the Bosch Global Development Centre, producing a range of multi-cylinder diesel fuel injection pumps nationally renowned for their high production standards. The pumps not only powered agricultural pump sets, but also diesel engines, replacing the wheels of bullock carts, and allowing people and goods to travel nationwide with ease. As an ode to the Inline pump, K.R. Sudarshan Rao, former Plant Manager (Technical), Bengaluru Plant, says, “Much like Queen Elizabeth who has reigned for 70 years even as leaders of the world have come and gone, the Inline pump has been serving humanity for several decades, even as all other products inside and outside Bosch have changed.”

Bosch and Infosys: Going back a long way

The early years of Indian IT did not witness sure-footed ascendance; they are better described as a journey of grit against the toughest of odds.

For example, amidst policies that restricted access to world-class tech, Homi J. Bhabha, the father of India's nuclear program, had his team hunt in scrapyards for parts to make IT apparatus. In 1961, he wrote, "In a big country like India, I think there would be a legitimate case of having two computing centers and getting two computers..."

Bosch, then MICO, could not even import its own computer systems from international markets; the only hardware it had in 1971 was a punched-card system for payrolls. In 1972, the company rented an IBM 1401, which was soon outdated in the face of the company's technological ambitions. IBM's exit from India in 1976 halted MICO's IT expansion plans, as there were no domestic companies who could provide a higher grade of computing.

Hunting for a vendor with a duty-free computer import license, MICO chanced upon Infosys in 1982. Infosys had an import license for a Data General (DG), which they hired out to MICO. MICO also contracted Infosys to provide training on COBOL (for business programming) and online programming. Infosys would also help MICO digitize their payroll, inventory, production, quality, sales, billing, sales, and finances.

And so, Infosys relocated from Pune to Bengaluru to deliver upon the robust contract that had given it a strong footing in its early years.



▲ Computer department of Bosch in the 1980s

A period of accelerated growth



▲ Aerial view of Naganathapura plant, Bengaluru.

As an automotive parts pioneer in India, Bosch, then known as MICO, contributed almost 90 percent to the market sales in the product. However, as the company looked to expand in 1981, the Monopolies and Restrictive Trade Practices Commission (MRTPC) suddenly became interested in its dealings and sought to stop MICO from acquiring market leadership.

However, by 1985, industry demands had increased so much that the government was forced to give MICO its license to expand. The company, in turn, not only expanded and modernized its plants, but also set about diversifying its operations. Its new plant at Naganathapura, Bengaluru, inaugurated in 1988, was the first step in this direction.

Initially, MICO's spark plug production was shifted to this plant, enabling the company to ramp up production for the iconic spark plugs, which were in great demand across the country. By 1989, the plant was also manufacturing starter motors, alternators, and several hydraulic system components, which found application in tractors, excavators, and the steel industry. MICO also decided to develop in-house technical capabilities. Initially, technical know-how was restricted to the development of more efficient fuel-injection systems. In the years since, the indigenous production of technically superior products has contributed to a significant increase in fuel efficiency across India.

Bosch and India's liberalization: Economic freedom of India

It was 1990. Saddam Hussein had annexed Kuwait, triggering a massive increase in world crude oil prices. The ripple effects of this were felt across the world, including in India. By 1991, India was facing an economic crisis, with its foreign exchange reserves at their lowest, causing a steep depreciation of the rupee. The Government of India rose to the occasion with several dramatic and memorable reforms. On 24 July 1991, the government announced one of its most landmark reforms - the opening of India's markets to Foreign Direct Investment and the liberalization of the economy.

For the automotive industry, this reform meant an immediate freedom from the 'Licensing Raj', thus provided the industry a much-needed impetus to grow and develop. For Bosch, the liberalization allowed the brand to make the most of the economic reforms, while contributing to India's growth. An influx of automotive parts competitors inspired a period of expansion, diversification, and production of innovative products within Bosch, making the company better suited to meet the demands of an evolving automotive market in India.

From 1991 onward, a highly competitive and quality-driven environment came to define Indian industry. The increased presence of foreign-owned companies like Bosch, their products, and the innovative technologies they brought into the country, unleashed an era of innovation that truly highlighted the value of India's economic reforms, and ably lifted the country out of its crisis.



▲ The automotive accessories business received a clear boost after the liberalization of Indian economy

Packaging that delivered



▲ The first Bosch packaging machine launched in India for salt industry

In 1861, two engineers, Friedrich Hesser and Otto Geiger, founded the Hesser Company in Bad Cannstatt, Germany. Initially producing automatic envelope-folding machines, Hesser quickly grew into a worldwide packaging specialist. In 1969, Bosch acquired Hesser, setting the technical standard for packaging across the world.

In 1995, Bosch launched its packaging technology business in India, at the MICO plant in Bengaluru. Initially, the company focused on confectioneries and pharmaceuticals. This expanded in 1997, when MICO launched the TW100 NEL, a machine which could package large volumes of corrosive products, like detergents and salt, in a reliable and efficient way. Two years later, MICO brought out Terra 25, a 'form, fill and seal' machine, to meet the packaging demands of the Netherlands, Brazil, and India.

A machine developed to help in packing 'Laddus' at the Tirupati Temple in Andhra Pradesh was a 11-month long formidable venture. The temple authorities were satisfied with the machine's performance of delivering on its rated output of 20,000 'Laddus' per day (about 30 Laddus per minute). "For the young MICO Packaging Machinery team this proved that 'if you are confident and believe in yourself, the world will have confidence and believe in you'. In this case, divine grace was the additional driving force," says S Ramachandran, former manager, Packaging Division.

In 2012, Bosch expanded its packaging operations with the opening of a new plant in Verna, Goa, which housed the latest machines and technology. In 2018, Bosch divested the entire packaging machinery business based in Waiblingen, Germany, along with its 6,100 associates in 15 countries to focus on digitalization, mobility, and connectivity.

Harnessing the IT talent of India

The computer and software policy of 1984 opened up the import and export of software and hardware in India. Several companies capitalized on this liberalization by setting up dedicated software facilities in the country, creating a talent pool of IT professionals. Many companies chose to open their offices in Bengaluru, setting the stage for the city to become the next Silicon Valley. In 1998, Bosch, too, chose to harness this talent by creating a dedicated software and technology solutions subsidiary, situated in its main production branch in the city, and took advantage of the city's technical expertise.

According to former Bosch employee Venkatarajan V.M., “From 1990 till 1997, we made significant efforts to market Indian talent to different Bosch divisions. Undertaking a constant recruitment process, we reached a critical mass volume of a strong development team of over 500 software engineers, who worked for Bosch in Bangalore.”

This subsidiary, formerly called Robert Bosch Engineering and Business Solutions Private Limited (RBEI), now Bosch Global Software Technologies Private Limited (BGSW), has become the largest software development centre for Bosch outside of Germany. BGSW is a global hub for software with over 25,000 associates worldwide that cater to customers and partners from various industries in their digitalization journey. The company has filed over 800 patents and has provided digital solutions across various sectors.

On the journey from RBEI to BGSW, Dattatri Salagame, CEO, President and Managing Director, BGSW, says, “We have grown in multiple dimensions evolving into the largest technology center for Bosch outside of Germany and having footprint of product engineering for every business of Bosch. While the origin of the center is India, we expanded our talent base to Vietnam, Mexico and Poland. This name change captures our technological and business advancements and better portrays our ability to build 'Fit for Future' technology products and services.”



▲ Bosch Global Software Technologies Private Limited (BGSW) headquarters in Bengaluru

Making machines for today and the future



▲ Bosch Manufacturing Solutions – ATMO-6IN

Bosch's "Technik fürs Leben" (Technology for Life) motto is a little over a decade old, but for Bosch Manufacturing Solutions – ATMO, which is Assembly Systems and Special Machinery division, the rise of Industry 4.0 (I4.0) has charged it with renewed purpose.

A harmony of generation-defining technologies interconnectivity, automation, machine learning, and realtime data - I4.0 is helping companies stay alive in a faster, more demanding world of business. For Bosch, the beating heart of I4.0 is ATMO, a provider of customized system solutions for assembly, processes, and services. Here, developers, engineers and project managers, technology and UX experts accompany all projects from the first design idea to implementation and beyond - along the entire product life cycle.

ATMO sees generations of experts work closely and very flexibly together: the young bringing innovative ideas and the long-term employees adding time-honed insights to bring them to fruition. There are nine ATMO locations across the globe, including one in India - ATMO-6IN.

Started in 2007, ATMO-6IN has grown into a team of 83 associates, who bring together deep production knowledge and strong capabilities to develop new technologies, machine concepts, and machining processes for global markets. "ATMO6 is a strong and fully committed team developing strongly required competences of the future and bringing it into challenging projects regionally and globally to support our Bosch India Manufacturing story," says Karsten Mueller, Executive Vice President, Manufacturing with responsibility for Quality, Bosch Limited. ATMO-6IN is building competencies in artificial intelligence, machine learning, and mechatronics to augment Bosch India's manufacturing strategy. These capabilities will not only give an edge to Bosch's own manufacturing strategy but also help in making India a global manufacturing hub. "Made in India" with German precision – that's as good as it gets!

Transitioning from MICO to Bosch

When Franz Fehrenbach, the then chairman of Bosch, paid a visit to the company's Jaipur plant as CEO, he asked A. Krishna, the then Jaipur Plant Manager (Commercial), Jaipur Plant, "Krishna, which brand do the general public of India better relate to - Bosch or MICO?" The response? "MICO, of course! It has a far higher recall value." Krishna vividly recalls the incident in 2004 that triggered the brand's transition. "Those were the heady days of high growth for MICO," he reminisced. "All of us at the senior level dreamed of India becoming an important manufacturing hub for Bosch and generating at least 25 per cent of our turnover from exports.

"I did not, at that time, understand the multi-layered, deep question that Fehrenbach had asked, and that the hallowed MICO brand name was a self-limiting shackle to realizing this vision." To put it simply, the Bosch name did not have the same brand equity that MICO did in India and we needed to alter that. The three-year project to change the brand name was initiated soon after.

"Over time, the advantages and merits of this strategic branding shift became clearer to all, and any initial skepticism gave way to a groundswell in favor of this move," said Krishna. "Interestingly, associates who joined after 2008 fully embraced the new Bosch identity, highlighting the globalization of our collective mindsets that was starkly different to my response to the CEO of Bosch in 2004. The journey was complete!"



▲ The management team at the entrance of corporate office of Bosch in India, unveiled the renaming of MICO to Bosch Limited in February 2008

The electronic heart of Bosch beating stronger



▲ Bosch Automotive Electronics India Pvt. Ltd. (RBAI) corporate office, Naganathapura - Bengaluru

In many ways, the history of automotive electronics was sparked off by Bosch. Over 100 years ago, Bosch applied for its first patent for an electronics product – an engine ignition unit controlled via electronic tubes. That experiment failed, but 40 years later, Bosch attempted using consumer electronic semiconductors (from TVs, et al), so that electronics could be implanted and used in cars. Starting at a time when electronics were completely uncharted territory for cars, Bosch's decades of iterative innovation set it on course to emerge as a global automotive electronics leader.

After spurring on their demand, Bosch set up a dedicated electronics manufacturing unit - Bosch Automotive Electronics India Pvt. Ltd. (RBAI) - in 2009, in Naganathapura, Bengaluru. The plant is today recognized as a Bosch global benchmark in lean manufacturing and operations digitalization. Supported by Bosch's global centers of competence and production networks as well as strong local engineering, the unit's quick technology adoption and high-quality standards have distinguished it across the globe.

Here, teams are continuously upskilled in intensive training that has made them capable of meeting expectations at a global level. In the 1950s, electronics comprised maybe one per cent of a car; today, electronics content comprises as much as 40 per cent of a car's total cost. With Bosch now experimenting to take cars from vehicles to Internet of Thing powered devices, the future is looking more exciting than ever. It is for this reason that RBAI proudly proclaims: "We are the electronic heart of Bosch".

Bosch and the new Asian tiger

The story of Bangladesh's transformation must be told, again and again, for it validates the power of hard work and enterprise. In 1970, it was ravaged by the world's deadliest cyclone. In 1971, it almost succumbed to a bloody genocide that left the world hopeless of its future. "If development is possible in Bangladesh, it is possible in any other country," it was said.

Bangladesh then hurtled through military coups, political turmoil, poverty, and famine. But then, Bangladesh rose from the ashes, going on to not only create an economic powerhouse that outrivals its peers in the South Asian region, but achieve astonishing feats in poverty alleviation, healthcare, education – all in four decades. Its smooth upward growth trajectory put it on Goldman Sachs's Next Eleven (N11), countries predicted to become some of the world's largest 21st century economies.

So, it was no surprise that in 2012, the Bosch Group announced that it had set up its fully-owned subsidiary in Bangladesh – Robert Bosch (Bangladesh) Limited. The move was aimed at tapping the nation's growing sectors that were key to Bosch: Automotive Aftermarket, Security Systems, Power Tools and Thermotechnology. It is also recognized that Bangladesh's multi-million dollar infra blueprint would create a potential goldmine of opportunity for Bosch.



▲ Dr. Steffen Berns - former Managing Director, Bosch Limited & President, Bosch Group India - addresses the inauguration at Dhaka.

The best is yet to come from Bosch in the Emerald Isle



▲ Bosch sales office in Sri Lanka

After Sri Lanka acquired independence from the British in 1948, Germany took keen interest in developing road transport to enable the movement of passengers and goods in the country.

The sizeable population of German origin buses, trucks and cars in the island nation created a natural demand for Bosch automobile parts. Over the past 60 years, Bosch has become a household name and developed a strong brand presence in the country.

Waiting for the appropriate moment to establish a direct presence in Sri Lanka, in 2015 Bosch established Robert Bosch Lanka Private Limited (RBLK), a subsidiary of Bosch Group. RBLK quickly expanded its channel presence across the island in a short period of time. Today, Bosch products are available in almost all over the outlets throughout the island nation.

The key benefit of their direct presence is increased availability. Bosch products are made available to channel partners and service centers within four hours within the Colombo district and within 24 hours anywhere outside of it. Bosch's determination to serve this market by advance planning, stocking, and delivering in the quickest possible time has made this possible.

Furthermore, Bosch established a logistic process to enable easy access to ZEXEL spares mainly used in Japanese origin vehicles, within four weeks at their warehouse, where customers were happy paying less for the supplies. In 2020, Bosch opened a diesel center in Colombo, adding a new Bosch Diesel Service partner.

"The best is yet to come; this beautiful island nation is reeling under economic crisis now and is expected to bounce back soon," says Swaminathan R, former Managing Director, Bosch, Bangladesh and Sri Lanka.

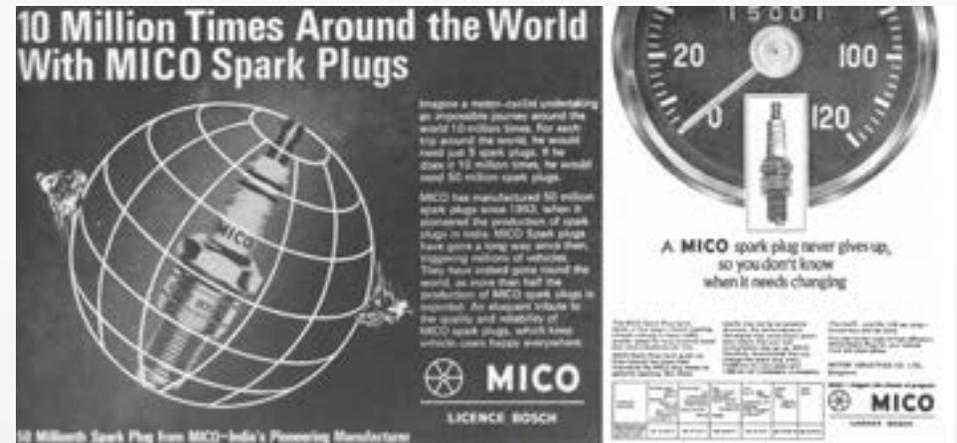
Beginning of a deeper communications strategy

MICO's technical expertise had enabled it to carve out an industrial monopoly as a manufacturer of spark plugs and diesel engines. However, as the company grew bigger, the management understood the need for a greater relationship with the public and decided to expand its Corporate Communications department.

"MICO wanted to advertise itself as a high precision manufacturer, as well as increase attention on its excellent training center. MICO apprentices would often be awarded first prizes, and this used to be published in newspapers frequently," said Mr Sethuram Seshadri. Mr Seshadri was working as a journalist in Mumbai when he chose to join the Corporate Communications department at Bosch. "After I briefly outlined a plan to disseminate information about the company devoted to employee welfare and the public interest, I was offered a job on the spot," he recalled.

One of Mr Seshadri's fondest memories involved an advertising campaign. "MICO wanted an advertisement which includes all the activities of the company. It had to be done within 15 days. Advertising agencies said they could not do this within that short timeline. So, I took the camera and went to the factory, took pictures, and asked the team to create design layouts. The directors liked it so much that the advertisement was published in national newspapers."

During his time, Mr Seshadri helped set up an internal communications network that aided the management and employees in discussing internal issues with each other. His tenure also saw the publication of the MICO Wheel, a journal that provided internal company news to the large roster of employees.



▲ Old print Ads of Bosch products



◀ Sethuram Seshadri, First head of Corporate communications, Bosch India

Vocal for local at Bosch Building Technologies



▲ Bosch Speakers with amplifier

The Make in India initiative is, first and foremost, a paradigm shift: Why should India import what it can manufacture on its own? Why should it not bring the benefits of local manufacturing to India Inc., and Indian people? At Bosch's Building Technologies (BT) division, this paradigm shift has spurred on an ambitious vision of localization. The BT division - which offers cost-effective and intelligent building technologies for public and commercial spaces - has migrated multiple products to localized manufacturing.

Indian products will be used to fill the gaps in the Indian BT portfolio, after a deep dive of local market needs. By unlocking cost efficiencies (on savings that include import duties, among others), BT aims to penetrate the mid-price point segment. The move promises to strengthen BT's market share, establish it as a highly competitive player in the industry, and garner a significant advantage in the market's mid-price point segment.

"The localization program is of strategic importance for BT India's growth story. With an interesting mix of Global and Local products we can offer cost effective solutions to the Indian Customer. I am happy that our Local for Local (LfL) program has matured to a state where we have now been able to successfully export to other countries in the Asia Pacific region. This is a proud moment for the BT India Team," says Viswanatha Raju K, Head - South Asia, Bosch Building Technologies. But the benefits go beyond the company. Along with the immediate benefit of creating more jobs and supporting ancillary industries, it will enable BT's clients in India Inc to address the important topic of 'Total Cost of Ownership'. A simple shift to 'Make in India' can unlock a cascade of benefits.

How Bosch home appliances make life easier for consumers

For generations, Bosch home appliances have contributed to making everyday life easier. As remarkably undemanding helpers the company has continuously met the highest demands of consumers. In 2011-12, Bosch and Siemens Home Appliances Group (BSH), known as the largest manufacturer of home appliances in Europe was made available across India in two phases.

The initial product launch was through leading multi-brand retailers in Tamil Nadu, Karnataka, Andhra Pradesh, and Delhi-NCR region and in the second phase was pan-India. To begin with, an international range of washing machines, refrigerators, dishwashers, and cooking appliances were introduced. These were the most in-demand products from the brand at that point in time.

Since then, Bosch Home Appliances continue to provide intelligent, reliable, and appealing solutions to make life a bit easier every day. They underscore Bosch's ambition to create technology that always serves a purpose: products are there whenever people need them and harmonize with the home environment when they're not – always supportive, never obtrusive.

One of the most striking innovations in recent times has been the top load washing machine. Just 45 cm in width, it is the perfect solution when space is at a premium. With 'inspired by hand wash' and 'No damage' principles, the machine is built with an advanced VariInverter motor for consumers to experience an energy-efficient, durable and quieter performance.

Growing at a 25-30 per cent rate, BSH wants to continue the momentum focusing on categories such as washing machines, refrigerators, and built-in appliances, and aims to become a Rs 5,000 crore company by 2026.



▲ Inauguration of manufacturing facility for Bosch Home appliances in Chennai

Tasteful ads that echo Bosch's quality standards

Every drop of diesel oil counts. Get the best out of it.

The shortage and high price of fuel oil make it imperative to achieve economy wherever possible. You can save scarce fuel by following these simple tips.

Do

- maintain an optimum speed of 40 to 55 km/hr
- minimize use of brakes
- avoid sudden shifting of gears

Don't

- ride on brake and clutch pedals
- accelerate suddenly
- let the engine idle unnecessarily

Guard Against

- under-inflated tyres
- incorrect wheel alignment
- slipping clutch
- dragging brakes
- leaking fuel lines
- clogged air cleaner and exhaust systems

Reasons That

- the fuel injection pump is calibrated correctly and the injectors work smoothly with the right opening pressure
- the fuel filter inserts are replaced at recommended intervals
- only genuine spares are used to replace worn-out parts—reconditioned parts can cause serious and costly damage to the system
- your vehicle and fuel injection equipment are serviced only at authorized service centres

Help the nation conserve limited fuel resources. Save fuel.

SAVE FUEL



TATA
ENGINEERING AND LOCOMOTIVE
COMPANY LIMITED
Bore Well Road,
401, Malabar Hill, Mumbai-400 034

MICO
LICENCE BOSCH
Motor Vehicle Company Limited

As a leading supplier of technology and services in the areas of Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology, innovative thinking has always been a Bosch hallmark. This aspect is visible in every facet of the company from development and production to even the advertising of the finished product.

A study of the Bosch advertising tradition will prove that it has faithfully echoed the company's quality standards right from the start. An article published in 1919 in Bosch-Zunder – the associate newspaper founded in the early 20th century, when Bosch began systematic advertising, corroborates this claim. The article captures what was then (and even now) is seen as the Bosch motto - that a high-quality product is the best advertisement for the company. The article emphasized that people expect Bosch to embrace 'tasteful and excellent advertisements' which reflect one's primary style.

Bosch started advertising the importance of quality internally, as well. "Introduction of the DS Mission Q initiative in MICO helped in achieving reduction in complaints from customers," says MC Ramakrishnan, Vice President, Quality. In India, MICO stressed upon the philosophy of constant innovation through its distinctive advertising. This marries the Bosch tradition of advertising with the message that in India too, the company continuously developed inventions that change people's lives.

Current advertising work in India carries this doctrine forward. For example, in August 2020, Bosch India launched a new digital campaign titled 'Indian Kitchen ka Dishwasher'. Besides educating consumers and busting myths about dishwasher usage, the campaign is aimed at highlighting how it can be used in the most efficient way, and what devices are compelling alternatives amidst a pressing water shortage crisis.



▲ This advertisement which appeared in Mico's corporate magazine Mico Wheel in 1974 also reflects company's partnership with one of the big industry leaders.

◀ MICO Spark Plug poster

Towards an electrifying turnaround

In life, as in business, things often do not go according to plan, and perhaps no one at Bosch is better placed to understand this than the India leadership of Bosch Electrical Drives (RBDI).

In June 2020, the company set about trying to end a decade-long legacy of losses by attacking many of its inherent challenges. It re-cast the fundamentals of acquiring businesses, due to which they had turned out to be non-profitable. RBDI had also waged a decade long war on cost. Cost efficiencies – including zero-based costing – had been brought to supplier planning, machinery, equipment, and manufacturing planning. Now, the company is exiting such businesses, and is more selective about what it plans to invest in and acquire, says Deepanshu Dubey, Regional President, Electrical Drives, India. “We are taking conscious decisions to localize or trade parts,” he explains. Break-even is now on the horizon.

“The company is betting big on electrification,” says Deepanshu. The electric two-wheeler segment offers robust potential, due to which RBDI is opting for full-scale local manufacturing to avail benefits arising from policy-linked initiatives and offering competitive solutions to customers.

Business transformation needs people transformation, towards which RBDI has rolled out skilling initiatives and dialogue to build greater internal cohesion. Today, the people of RBDI are united by a common goal – to emerge as India’s most preferred partner for e-mobility solutions. This unanimous sense of mission has put RBDI on track to an electrifying transformation.



▲ Associate at work in Bosch Electrical Drives (RBDI) plant in Oragadam, Chennai

Beginning the Bosch journey in the Himalayan nation



▲ Inauguration of Bosch Nepal office

Robert Bosch once said, “We should all strive to improve on the status quo: none of us should ever be satisfied with what has been achieved but should always endeavor to do better.” Bosch’s collaborative relationship with SAARC countries, with its primary offices in Sri Lanka, Bangladesh, India, and supply offices in Bhutan reflects this sentiment.

The newest and most recent addition to the company’s presence in India’s neighboring nations is the sales liaison office in Kathmandu, Nepal, which was inaugurated on May 2, 2022, in the presence of Bosch channel business and service partners in the country.

Bosch’s presence in Nepal will focus on providing products and services in the following segments – Automotive Aftermarket, Power Tools, and Building Technologies. Most importantly, this office is being set up at a time when the Government of Nepal’s focus on infrastructure development programs and increased construction has led to high demand for the vehicle industry.

There cannot be a better way to celebrate the 100-year legacy in India, than opening of the sales liaison office in this beautiful Himalayan country. “With our state-of-the-art customized products and solutions, we aim to serve the Nepali market with the best of German engineering in the mobility and beyond mobility spheres and forge a longstanding partnership between Nepal and Bosch,” says Swamy Swaminathan, the then SAARC Head of Bosch.

The plan is to grow Bosch’s market presence in Nepal to over 1000 outlets including service partners, and treble revenue in three years.

Much like how Bosch pays back to the society in many countries, its journey in Nepal is not purely commercial. Bosch supports ‘Project Community Learning and upliftment programs, vocational training programs and health awareness in the cities of Okaldhunga and Pokhara with the focus on girl child development.



POWERING INNOVATION WITH ICONIC PRODUCTS



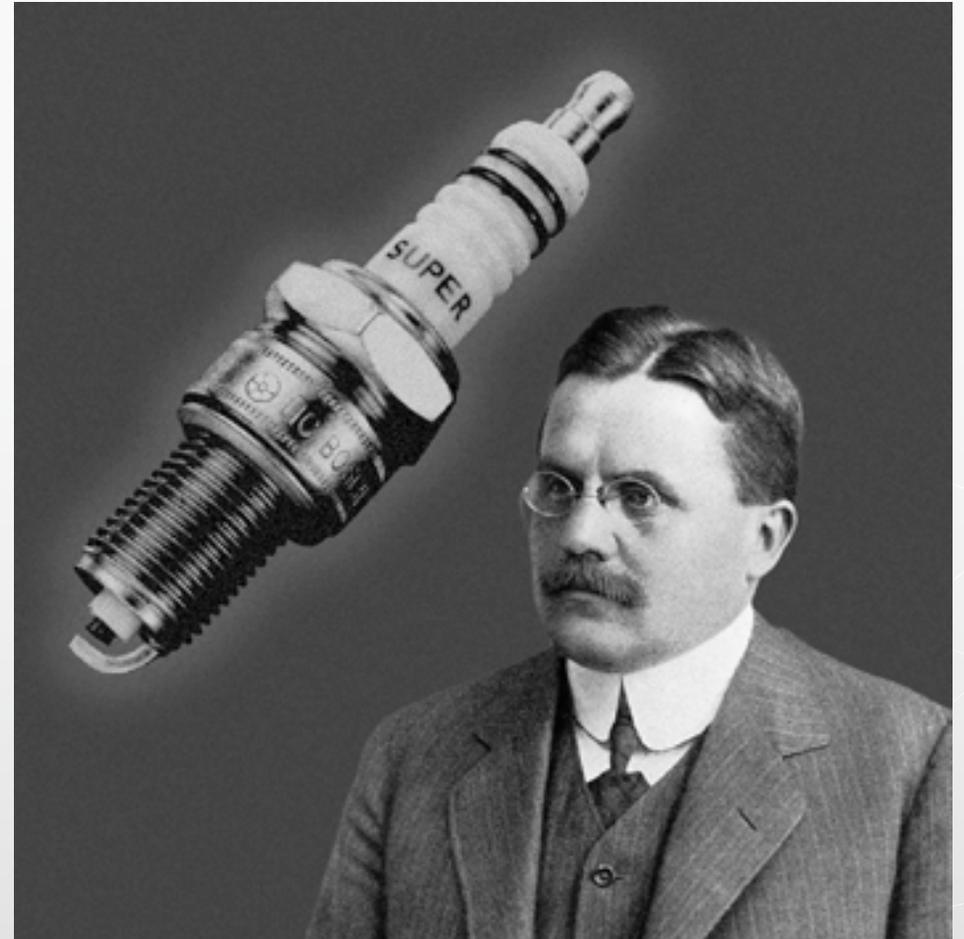
Sparking the transformation of an iconic product

Spark plug designs that included two discrete electrodes had been around since 1860 and had been used in ignition experiments with little success. All this changed in 1901, when Gottlob Honold, Robert Bosch's head of development, created a ceramic insulating body and used heat-resisting alloys for the electrodes. This allowed the high-voltage current to jump the gap between the electrodes in the form of a spark – giving rise to the first spark plug. In January 1902, this spark plug was guaranteed a successful future, as Bosch was awarded a patent for the invention.

In 1922, as Robert Bosch attempted to enter the Indian automotive market, it was his iconic “spark plug” that helped him gain a foothold in the country. The Aduodi plant in Bengaluru, set up in 1953, was intended to manufacture spark plugs for Indian and global consumers.

Since 1902, Bosch has manufactured over 20,000 varieties of spark plugs. While Bosch's original claim-to-fame innovation - magneto ignitions - have long disappeared, spark plugs continue to be manufactured through the ingenious manufacturing process developed by Gottlob Honold and Robert Bosch in 1901. Bosch manufactures over 200 million spark plugs every year, and they continue to be integral parts of automobiles worldwide.

In 1990, the manufacturing of spark plugs was shifted from Aduodi to the new Bosch Naganathapura Plant. Recently, on 7 January 2022, Bosch commemorated 120 years of the spark plug – its oldest product in India – with a record highest-ever production volumes in 2021 and a jump in profitability. With a significant increase in its exports, its transformation continues this year. What was a ‘Local for Local’ product, is all set to go global in line with the government's new manufacturing strategy of ‘Make in India, for the World’!



▲ Gottlob Honold, inventor of the spark plug

A bit of music for the drive



▲ Blaupunkt Music system, a Bosch brand

With Indian car consumption going up thanks to liberalization in 1991, consumers began demanding a more enjoyable driving experience. Thus began the expansion of the automotive accessories market. In addition to marketing several automotive products made by other companies in India, Bosch also entered the consumer electronics segment. As a first step, Bosch started the manufacture of the world renowned Blaupunkt brand of car audio systems at the Naganathapura plant.

Owned by Bosch, the Blaupunkt brand was synonymous with quality and innovation, and guaranteed consumers the best sound in entertainment electronics. “Blaupunkt was the first car multimedia brand to enter India through the organised sector and achieved phenomenal growth and market share. It contributed to the increased share of electronic and software content in vehicles, laying the foundation for innovative growth in multiple sectors such as infotainment, telematics, mobile applications and connected cars for Bosch in Indian auto OEMs,” explains Ajay Sahney, former head of Blaupunkt Division.

Initially, the Naganathapura plant manufactured three car audio systems - Arizona, Munich, and Jackson. Soon after, General Motor's Opel Astra cars were fitted with Blaupunkt's Radio 620 units. Blaupunkt quickly became the sole supplier of original audio equipment for Tata Motors, Mahindra Renault, Hindustan Motors, and Reva Electric Car Co., in addition to being a genuine accessory provider to General Motors India, Ford India, and Mahindra & Mahindra. In 2008, Bosch Car Multimedia GmbH sold the trade components of Blaupunkt to the Munich-based company AURELIUS, allowing Bosch to focus on its OEM businesses.

Powering a Nano revolution

“Nothing is really impossible if you set your mind to it... What we have done is given the country an affordable car.” When Mr. Ratan Tata said this at the commercial launch of Tata Nano, he was living up to the aspirations of the automobile fraternity and common people around the world. In 2008, India introduced the world to its cheapest automobile. Despite a price tag of only USD 2,500, the Tata Nano boasted of a superior and technically sound gasoline injection technology that was specifically developed by Bosch for the car.

Bosch created a special gasoline Engine Management System (EMS), as well as a customized starter motor and generator. Muthuswami, a Bosch Limited engineer who was part of the project team at Tata, remembered his experience of working on the car: “Bosch supplied three sets of all the Engine Management System components, which were selected specifically for this small engine. We had fun and at the same time took risk to see the engine first fire as all the components were hand-made proto samples.”

Today, affordable cars are desired by both emerging and developing markets. By producing flexible product concepts, intelligent fuel injection system solutions and short development cycles, Bosch has been able to cut costs and deliver the best at optimal prices to consumers across the world.

“The Nano gasoline and diesel engine management approaches were a paradigm shift in mindset, end-to-end systems thinking and modular concepts. In a way, this approach paved the way for evolution of the 2w fuel injection and other low-cost system concepts,” says Sandeep N, Executive Director & Executive Vice President, Sales – Bosch Limited.



▲ Ratan Tata during the launch of Tata Nano car

Be safe, brake



▲ Bosch Antilock braking system

Wheel lock after engaging the brakes is every motorist's nightmare. In 1936, Bosch took on the issue by registering a patent for a "mechanism to prevent locking of the wheels of a motor vehicle". But it was not until the advent of semiconductor technology a few decades later that Bosch understood how to control braking pressure at high speeds.

This led to Bosch bringing out the Antilock Braking System (ABS) in 1978, starting decades of iterative development. ABS brought about unprecedented road safety. With several studies showing that ABS could result in reduction in injuries from motorcycle crashes and mitigated two-wheeler accidents, the ABS – which went from a luxury feature to a standard fitment – quickly became one of Bosch's iconic products.

On December 31, 2005, Bosch took over India-based Kalyani Brakes, creating the Bosch Chassis Systems India Ltd. (RBIC) with the aim to make India a global hub for ABS manufacture. By 2013, Bosch was the only automotive supplier to manufacture the ABS in India.

Today, the ABS is used by OEMs nationwide, and ABS products match Indian market requirements with precision, thus garnering a 50 per cent market share. The world-class braking system components manufactured at Bosch's large state-of-the-art plant at Chakan, Maharashtra, meet global auto benchmarks and can make enough ABS systems for 3 to 4 million cars every year. "Pioneering safety in India since 2005 with our state-of-art technology products like ABS and ESP, our purpose is 'Saving Lives and More'. The company is planning to invest over 10 million euros in the coming year. We are ready to meet future demands with increasing safety awareness and expected ESP legislation in India. With a young and agile team, RBIC will continue to provide best-in-class products and services for customers," says Avinash Chintawar, Managing Director, RBIC, Regional President Bosch Chassis Systems.

A power vaahan

A second-generation artisan, M. Jeykumar was used to applying traditional tools and methods to create his handicrafts. However, a chance encounter with a big blue van completely changed Jeykumar's way of doing business. Launched in 2006, the blue 'Bosch Vaahans' made the rounds of villages in Karnataka, introducing rural artisans like Jeykumar to Bosch power tools.

"We couldn't teach these carpenters their craft," said Mohandasan, the head of the project in its initial stages, "rather, we could upgrade their skills by teaching them how to use new power tools. So, a table that would take a carpenter 20 days to create could instead be made in four to five days." The project, a collaboration with Indian Bank that aimed to position Bosch power tools as "income generating tools," was inspired by former President of India, Shri Dr A.P.J. Abdul Kalam's vision of 'Providing Urban Facilities in Rural Areas (PURA)'.

Jeykumar was one of Bosch Vaahan's converts. "I have seen modern machine tools in many places I have been to, but never bought one," Mr Jeyakumar said. "The camp organized by Indian Bank helped me to buy these tools."

The Bosch Vaahan project eventually expanded to four vans and in the process, it not only helped rural artisans, but also provided employment to 30 individuals who were hired as salesmen to sell the power tools. For Jeykumar, the Bosch Vaahan meant one thing: power tools to power his workshop.



▲ A Bosch Vaahan introducing rural artisans to Bosch Power Tools

Efficient solutions to save energy, reduce carbon footprint

Leading industry players in India are reducing carbon dioxide (CO₂) emissions by adopting energy saving measures as part of their corporate sustainability campaign. Bosch believes that energy saving achieved is equivalent to energy generation achieved without having to invest in a new plant.

Launched in 2014, Bosch Energy and Building Solutions India (BEBS) is an internally nurtured start-up that focuses on the potential of energy efficiency (EE) for energy saving and the resulting cost benefit and CO₂ emission reduction among industrial customers.



In the early stages of establishing this business, it was a big challenge to attract the best talent from the industry to drive this business. However, with collective effort from the core team and support of the human resources department, the company was able to build a highly competent team to offer the best solutions to customers.

Today, BEBS India consists of a small team of experts formed through external hiring and internal transfers. Being in the turnkey project business, the team's mantra is to focus on three pillars: Acquisition, Execution, Cashflow (AEC). Acquisition of projects with right solution and cost structure is key to successful execution; and implementing these projects need great focus towards ensuring Cashflow as well. The entire BEBS India organization is focused on this 'one team one goal': Right project acquisition and excellent execution that ensure cashflow.

While implementing energy savings measures, most customers focus on close monitoring of the energy consumption to have better understanding of the energy utilization by different processes that helps achieve better maintainability of the systems. "The EE business at Bosch is all about solution selling with best ideas that can generate good customer interest, as we operate in a product agnostic way. Our best asset is our highly skilled people, and we would like to continue to develop the people competencies to offer the best-in-class solutions to our customers," says Mohandas Mekanapurath, Business Head at Bosch Energy and Building Solutions India.

◀ Launch of Bosch Energy and Building solutions in India

A4000 pump – remarkable sustainable innovation for a clean future

Innovations make the future secure, but only if they are sustainable. Bosch in India is committed to developing innovative products and provide services to meet the stringent emission norms of the future. The A-Pump, a mainline product of the company, is a case in point. Launched in the 60s, these family of pumps catered to a full spectrum of diesel engines and were used in a range of earth movers.

The legacy of the A-Pump was further extended with the launch of the A4000 variant in 2010. This new pump – an ideal example of innovation – is produced for HCVs (Heavy Commercial Vehicles) and MCVs (Medium Commercial vehicles). Manufactured in accordance with the Bharat Stage (BS) III and TREM (tractor emission) standards for agricultural tractors, the first A4000 pump was supplied to Ashok Leyland.

A game changer for India's commercial vehicle and off-highway segments, the pump resonates with the Government's Make in India initiative. By increasing pressure capability and improving timing control, along with combustion optimization, the in-line pump helps reduce carbon monoxide (CO) emissions by an impressive 50 per cent. The sustainable capabilities of the A4000 Pump have not just earned it reputable customers, but accolades too. On April 5, 2011, it was crowned the CV Component of The Year at the second edition of the Apollo CV Awards held in Mumbai.

The awards honor the champions and stalwarts of the industry – people and organisations, who establish new benchmarks in not just product performance and service, but also create value for the industry. This modern Inline fuel injector pump truly stands out as one of Bosch India's many remarkable offerings.



▲ A4000 Pump being assembled at Bidadi plant

Securing people and premises at metro stations across India



▲ Bosch Closed Circuit (CC) camera range

India's metros have brought the trinity of safety, comfort, and affordability to citizen transportation. They have reduced the number of vehicles and commensurate emissions from mobility. In some cities, just having a metro nearby has catalyzed renewal in neighborhoods once considered too far-flung.

But what happens when you pause a lifeline? Whether a systems glitch or a malicious act, it could stop a city in its tracks. Preventing this is Bosch's state-of-the-art technology –inclusive of cameras and recording systems. The cameras not only offer direct surveillance but also helps capture large volumes of data to feed a constant stream of actionable insights that help metro staff to act decisively. They help staff to monitor critical areas and immediately respond to potential threats with the help of Bosch's Intelligent Video Analytics (IVA). They also help prevent potential disruptions, identify unruly behaviour among crowds and help steer crowds during emergencies.

“Most of India's metro projects are secured with products and solutions from Bosch Building Technologies, including Video Surveillance, Access Control, Public Address and Building Integration Systems. We are particularly proud that our clients include the Delhi Metro, India's largest and busiest metro with approximately 2,700 trips per day and over 285 stations. We designed intelligent surveillance right from the early stages of the Delhi metro and executed multiple projects using our best-in-class analytics and cameras. This was a unique and living experience of collaboration with a knowledgeable and rightfully demanding customer,” said Sudhir Tikku, Country Head - South Asia, Bosch Security Systems.

So, when India takes pride in its Metro rails, they take pride in the invisible layer of people, technology, and processes that make it all possible.

Going digital for a customer-centric future ready business

Digitalization enables businesses to embrace the future of work. Technologies empower the path to changing operational models and provide new revenue and value-producing opportunities. Always ahead of the curve, Bosch Power Tools (PT) India has put its strong belief in digitalization to effective use. With a strategic approach to increase revenue, the company has optimized business processes for sustainable double-digit growth.

A purpose statement enumerates PT's key objectives. They have pledged to support an agile way of working through effective features deployment and utilization of PT platform by the sales team, along with driving the ease of doing business for PT dealers and simplifying internal and external communications.

An array of digital offerings fulfills this purpose. A B2B portal promises swift response and solution to placing orders and business queries. MyBoschbuddy is a local tool to support PT sales and business partners in managing daily operations such as targets vs achievements, payable information, and agile business communication, among others. The SAP Cloud for customers (C4C) is one of the key CRM solutions to manage customer relationships. Software solution BASS – Bosch After Sales Service Portal - offers ease of operation and agility in service turnaround time and BeConnected is a digital solution to connect users, dealers, and products.

Additionally, Secondary Sales Digitalization and Product recommender projects are in progress to improve the data accuracy in various analysis like demand planning, listing of products, and product promotion.

For Bosch PT, going digital is not just about introducing new tools and technologies. Rather, it is a medium and an opportunity to create improved products and services which are closely aligned with customer preferences.



▲ Connected Bosch Power tools

Developing the world's most sophisticated common rail diesel injector systems



▲ Common rail diesel injection system

Access to fuel efficient vehicles is vital for facilitating seamless movement of goods and people. Coupled with world-class manufacturing capabilities, they can help fuel a nation's growth and catalyze economic progress.

Launched in 2006, Bosch India's first manufacturing facility for Common Rail diesel fuel systems (CRDI) – a key component of modern mobility – is a testament of its commitment to India's progress. It was also a clear sign of the confidence it displayed in its flagship entity MICO, to drive growth in the country. Aligned with its innovative approach to building technology, the new Bengaluru-based production line began with an initial installed capacity of up to 1000 pumps per day.

During 2005 and 2008, Bosch had already announced an investment of Rs 1800 crore in India. Of this, Rs 550 crore was used to establish and expand common rail system production in Nashik and Bengaluru. The company had been manufacturing common rail injector components at its Nashik facility since the beginning of 2006 and set out plans to start production of complete common rail injectors from the same facility in 2007.

Designed and engineered with every component representing a unique technology, the Bosch Common Rail Injector operates up to 2,050 bar pressure of injection – equal to the weight of a sedan on the nail of a human. With multiple injections of up to 8/stroke it maintains the quality and performance of the car. Most importantly, its ability to inject the precise amount of fuel into the combustion chamber at the right time and in the right quantity, makes it the world's most sophisticated common rail diesel injector design.

Journey to launch pad with Bosch Rexroth

Bosch Rexroth is renowned for its Drive and Control technology, supporting customers to stay ahead the curve.

Being the leading specialists in the field of drive and control technologies, Bosch Rexroth India, also known as Drive and Control India (DCIN), successfully contributes with innovative concepts for machine and plant manufacturers across the industry segments. Over these years, it has proved as a successful technology, innovation and engineering company which makes customers win.

Bosch Rexroth India partnered with the Indian Space Research Organisation (ISRO) to provide the complete system solutions for engineering and commissioning of traction trolley drive for the mobile rocket launching pad for Chandrayann 2. The scope of the project included light weight and compact overload protection, known and trusted hydraulics power units, and motors. Bosch is proud to be associated with this project and being part of the nation's progress.

Today, it drives the digital transformation of factories, exceeds the limits with connected Hydraulics with its unique industry expertise. The company has become synonymous with specialized and highly customized products and solutions as witnessed in our many success stories.



▲ ISRO Rocket launch

An experience of monumental sound



▲ Statue of Unity (Saradar Vallabhbhai Patel)

The world's tallest statue was inaugurated on October 31, 2018, at Sadhu Bet Island in Gujarat by Prime Minister Narendra Modi. The statue, named the Statue of Unity, is of the visionary Indian leader and statesman, Sardar Vallabhbhai Patel. At 182 meters tall, the statue is one of the few man-made structures visible from space. The monument's site is equipped with the latest in projection and sound technologies. And among the hi-tech equipment that enhances the visitors' experience is Bosch's Electro-Voice sound system.

The Electro-Voice system installed at the site comprises as many as 56 Electro-Voice loudspeakers mounted at different zoned locations along the pathway leading to the statue. These loudspeakers are powered by EV's CPS multichannel amplifiers. These powerful multi-channel amplifiers have reduced the need for additional rack space in the Control Room, while the Netmax N8000 Digital Signal processor allows one to remotely monitor and control the sound system.

The system works in a completely exposed outdoor environment, where it is subject to prevailing weather conditions. The white speakers were chosen to ensure they fit in with the overall aesthetic of the project site. So, if you are planning a visit to the Statue of Unity, keep a lookout for Bosch's Electro-Voice systems that bring the monument's sound to life!

Expanding local offerings with new refrigerator factory in Chennai

India's tremendous manufacturing potential makes it capable of stealing the title of the 'Factory of the World' from the global manufacturing behemoth China. In line with its 'Make in India' commitment, Bosch continues to extensively invest in expanding local offerings. One such offering is the refrigerator factory set up at the Bosch and Siemens Home Appliances Group's (BSH) 44-acre facility in Chennai, Tamil Nadu.

After a ground-breaking ceremony in June 2018, the unit, which spans the factory with two platforms spread across five acres, commenced operations in 2021. Aided by advanced automation, it can manufacture four lakh refrigerators per year – or the equivalent of one refrigerator every 43 seconds, each unit defined by an even and superior finish that stands for Make in India quality. This year, the factory has produced 90,000 units of refrigerators. The target of manufacturing 400,000 units for domestic consumption as well as export to other emerging markets will be reached by 2025 when the next assembly line is being planned. To support this target, the facility will provide direct employment opportunities to over 500 people by 2027.

"The BSH management has given us an excellent opportunity to study the pain points and user requirements of Indian consumers. Local for Local products developed in Bengaluru and products manufactured at a lean local factory, ensures Bosch technology and quality products at highly competitive prices. This is just the beginning of many emerging market products and services to follow in the future," says Rakesh Desai, Chief Technology Officer and Chairman of the Board, BSH.

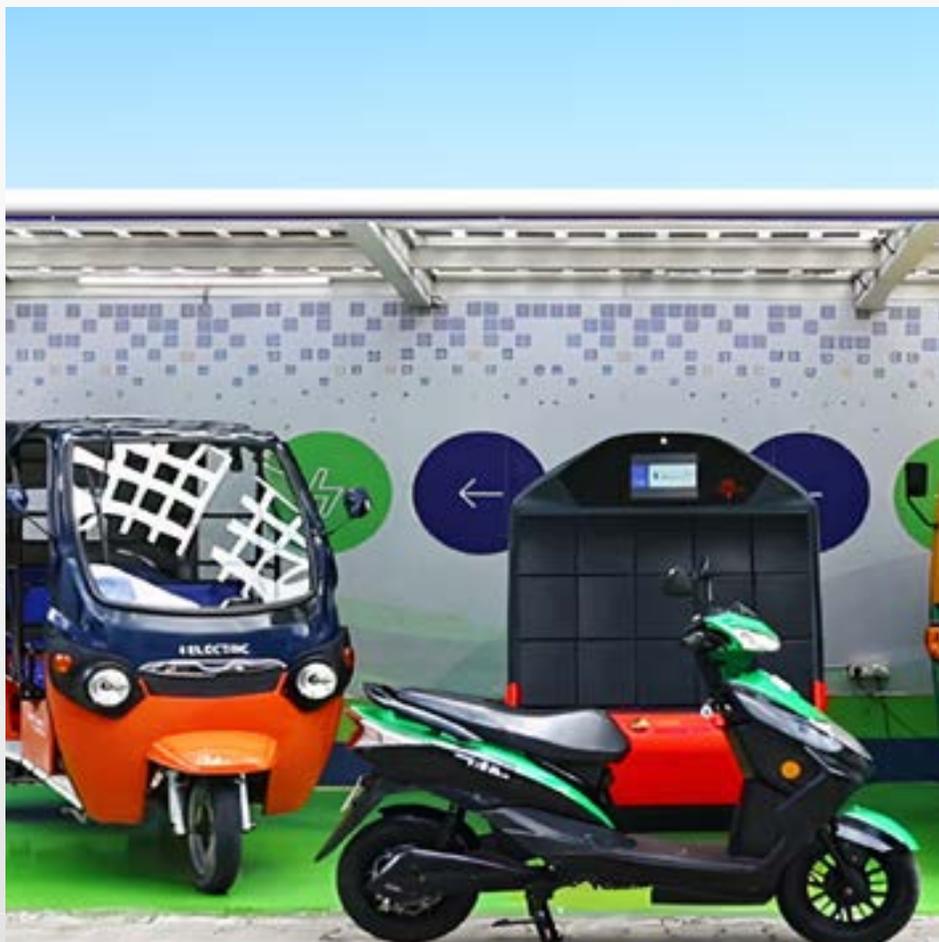
BSH brings over five decades of global experience in manufacturing top class refrigerators across fifty countries, with India ranking the third largest country (unit based) in the cooling category. Committed to bringing the best-in-class German technology in India, the refrigerator factory is part of BSH's investment of 100 million euros over the next 4-5 years across building brand and technology center.



▲ Assembly line at Bosch Home appliances Chennai Facility

◀ Manufacturing facility for Bosch Home appliances

A partnership built on energy realism



▲ SUN Mobility quick interchange stations

What is the future of mobility?

This question, which has vexed companies and policymakers alike, is better answered considering two facts. First, cost. Electric cars are still too expensive for a price conscious India. Second, energy density. The equivalent of USD 200,000 worth of the best EV batteries can only store the energy equivalent of an oil barrel. While a \$20 oil barrel can store the energy equivalent of \$200,000 of the same batteries.

Even if today's batteries improve by 200 percent, they still will not beat oil's energy density. R&D will take time to close the gap. In the meantime, internal combustion engine (ICE) and electric drivetrains will have to co-exist, an understanding that was articulated by India's Prime Minister Narendra Modi in 2019 when he said ICE and electric can "co-exist, co-create, and learn from each other".

This energy pragmatism has shaped Bosch's partnership with EV energy solutions provider SUN Mobility. Bosch, which has been pursuing innovation in electric mobility since 1967, sees EV technology as a vital pillar of its four-pillar approach towards mobility – Personalized, Automated, Connected and Electrified. And SUN Mobility brings its proprietary modular battery solutions to make it easier to charge EVs across the country.

"Energy as a Service (EaaS) or battery swapping is certainly a major enabler for early adoption of EVs in commercial use cases. We believe SUN Mobility has built good technology to play a strong role in this space in India and beyond. Bosch made a strategic investment in SUN Mobility to enable them to be a market leader in this segment," says Guruprasad Mudlapur, Joint Managing Director, Bosch Limited. It is only through such partnerships that a greener future of mobility can be realized.

A smooth transition to India's BS6 emission standard

Humanity does not have a Planet B, and thus we must navigate Earth away from irreversible climate change. The collective agenda has united countries and companies in a critical endeavor to curtail emissions.

Responding to this global imperative, the Government of India instituted the Bharat Stage Emission Standards in 2000, to bring down vehicular emissions. The emission standards called for the Indian automobile sector to leapfrog from BS4 to BS6 emission standards from April 1, 2020. As the world's largest automotive component supplier, Bosch commenced a partnership with OEMs in India to bring forward an affordable indigenous solution that could support the ambitious feat.

The implementation BSVI in the gasoline and diesel powertrain space as well as in two wheelers was a true showcase of the capabilities of the Indian Automotive market, especially in India's Tier 2/3 cities that have good existing local supply base to Tier 1 cities and OEMs to realize ambitious targets.

Jan-Oliver Röhr, former Chief Technology Officer and Joint Managing Director, Bosch Ltd. and currently working in Bosch Germany, was the architect who made the BS6 implementation successful.

Recalling the feat, he says, "Bosch India showed courage as we offered solutions that were not yet proven or existing elsewhere while fully complying with all regulatory and even stricter internal standards. We won back projects and gained a lot of confidence from all customers, all that was acknowledged by many customer awards."

Bosch India could rely on the continuous support from Bosch Powertrain solutions team worldwide, collaborating seamlessly to make Powertrain Solutions in India an acknowledged partner for global projects.

Bosch invested Rs 1,170 crore on factories, capacities, infrastructure, and research and development (R&D) to develop solutions and sustainable components tailor-made for Indian

markets. These included the CP4i pump, CRI 14-S2 injectors, Engine Control Units, among others, vital components of achieving the BS6 emission targets.

Consequently, Bosch successfully supported India's transition to BS6 Stage 1 norms on April 1, 2020 even amidst a pandemic-led nationwide lockdown. Guided by the RB/GF-182 directive, Bosch has supported customers not only with systems and components, but also with a robust set of complete system calibrations. Bosch is now working closely with customers to launch BS6 Stage 2 applications, which will be implemented from April 1, 2023.



▲ BS6 components manufacturing

Pole to pole, powered by Bosch



▲ Drive sponsored by Bajaj and Bosch Polar Odyssey

Bosch vehicle technology helped three riders riding on Bajaj Dominars to embark on what would be a ride of a lifetime - from the Arctic to the Antarctic, covering more than 51,000 km across 15 countries over four months. The bikes were equipped with features such as Antilock Braking System (ABS) to ensure safety of the riders, and the advanced Bosch Engine Management System (EMS) to guarantee a smooth, efficient and trouble-free ride.

When you ride from Earth's one pole to another, you come across challenges from terrains, climatic conditions, and unforeseen encounters. The riders faced weather including heavy snow, rains and slush and loose gravel across Alaska, off-road sections of Mexico, temperatures from -22 to +54 degrees in Death Valley, USA. This is the world's First Polar Odyssey by an Indian motorcycle successfully completed without any breakdowns.

Bosch's sophisticated ABS with wheel speed sensors helped riders stay in control of their vehicles in situations where they had to apply brakes suddenly, preventing the motorcycle from capsizing by averting wheel lock and enabling them to maintain traction with the ground. With this odyssey Bosch reinforced its reputation of being a technology partner for Indian 2-Wheeler fraternity. Hats off to our riders Avinash PS, Deepak Kamath and Deepak Gupta.

The superior EMS from Bosch includes components such as fuel injection and supply, air management, ignition, exhaust, as well as engine control units to facilitate powerful, reliable, and synchronized performance for two-wheelers. It also allows them to fulfil new emission regulations, globally. "Backed by our technological and manufacturing strength, we aim to be the preferred solution provider for the two-wheeler and powersports industry. Our innovative solutions will make riding safer, more efficient and fun," says Manohar Halahali, Regional President, Two wheelers and Powersports, Bosch India.



EMBARCKING ON A SOCIAL ENGAGEMENT JOURNEY



Bosch India Social Engagement – A cover note

In line with the parent company's philosophy of giving back to the society and focusing on the societal engagement work done by the group companies of Bosch in India since its inception, the Bosch India Foundation was registered as a voluntary organization in 2008. Primavera, another charitable trust, funded and managed by Bosch employees in Germany, was formally registered in India in 2013. Amendment in the Companies Act in 2013, incorporating the provisions of 'Corporate Social Responsibility' and thereby group companies starting their individual CSR departments, enabled the structuring of 'Bosch India Social Engagement' more formally with each one of these three pillars focusing on the welfare of their respective target segments of the needy in the society.

With the company's legacy of running German Model of Apprenticeship Training in Bosch Vocational Centre since 1960, upskilling the youth and making them employable was an obvious choice as the major thrust area of Bosch India Social Engagement. More than 50,000 youth have since been trained through the network of BRIDGE centers spread across the country. Skill entrepreneurship and micro-rural entrepreneurship courses have inspired the youth to start their own profitable ventures, while retaining the spirit of 'social entrepreneurship'.

With child health, primary education, women empowerment, water conservation, and rural development being ongoing focus areas, Bosch was one of the first few companies to commit Rs 50 crore to combat Covid-19. The company undertook measures

such as setting up of a mask manufacturing line, supporting migrant workers with meals and ration packets during the worst phase of the pandemic, enabling reverse migration of workers, upgrading government dispensaries, and providing urgently needed ICU equipment to the hospitals.

"The discrete CSR initiatives of the various Bosch entities in India, which evolved organically, are now morphing into a powerful 'One Bosch India Social Engagement' to create a far higher impact on the society. One of the top responses in any employee survey is the pride that Bosch India employees take in the CSR activities of the company. Our next focus will be to enhance impact further with enhanced employee volunteering and leveraging partnerships," says Suresh BR, Chief Human Resources Officer (CHRO), Bosch India.

According to Dr O.P Goel, former Member Secretary, Bosch Limited CSR Steering Committee and Head – Bosch India Foundation, CSR, and Skill Development (superannuated in April 2022), "Government of India's interest to scale-up Bosch's successful skilling initiatives at the national level is a dream come true for the Bosch Social Engagement Team. The commitment and dedication of the BRIDGE team is the key factor behind this successful journey.

The stories that follow represent the testimonial of lakhs of beneficiaries in the country.

Read On!

The power of Bosch vocational center



▲ Apprentice getting skilled at the BVC

After completing her Karnataka Secondary School Leaving Certificate (SSLC) exams successfully, Ramya wanted to pursue hands-on, practical training rather than plain theory of electronic engineering. She discovered that her ambitions could be fulfilled at the Bosch Vocational Center (BVC) in Bengaluru. An epitome of the German model of vocational training, customized to the Indian context, the BVC has emerged as a premier national skilling center for the country.

At BVC, Ramya learned the electronic mechanical trade through practical sessions inside the plant and excelled in her apprenticeship. Her hard work and motivation won her the “All India Competition for Apprentices”. Along with the accolades, Ramya also received her job offer letter in person from the Prime Minister of India, Shri. Narendra Modi. Ramya’s impressive success story is undoubtedly one of the many being written at the BVC, since its inception in 1961. Established to counter the shortage of technical talent in the country, the BVC is renowned for producing high-quality manpower in the form of world-class technicians, equipped with the know-how and skills to compete at a global level.

The center, which has won the prestigious “Best Establishment Award” from the President of India 54 times, has also produced 245 Gold Medal winning apprentices at the national level. Trade apprentices trained here in nine technical trades are certified by the National Council for Vocational Training (NCVT), Government of India. As for Ramya, she now works in electrical hardware design and is chasing many more goals.

Making less-educated youth employable with BRIDGE

Developed as an end-to-end solutions model after thorough needs assessment of both industries as well as learners, BRIDGE prepares students to find the first jobs by training them in industry demand-driven modules. Apart from soft skills, the paramedical course covers topics like Basic Life Support, Cardiopulmonary Resuscitation, First Aid, etc.

BRIDGE has proved to be a wonderful initiative that has provided opportunities for a better future to underprivileged youth such as Mary Lidya and Suraj Kumar.

Two years ago, Mary, a Class 10 student from an underprivileged family from Kolar Gold Fields (KGF), lost her father to Covid-19. Having already lost their mother earlier on, she and her brother had no idea about what to do. BRIDGE came in as a much-needed ray of hope for the siblings.

She enrolled herself for a paramedical course at the nearest BRIDGE center at Sri Mahaveer Jain College, KGF. After two months of classroom training, she secured on-the-job training at Sambhram Hospital, and became job ready. “BRIDGE has made me confident to face challenges,” says a self-reliant Mary, who now has a job at Rainbow Hospital, Bengaluru, earning a monthly salary of INR 10,000 which the Bosch-BRIDGE team helped secure.

Similarly, Suraj from Patna, Bihar was keen on pursuing higher education after Class 12 but his family’s financial condition forced him to put his aspirations on hold. During this time, he got acquainted with the BRIDGE program, which was being offered at the local Aryabhata Institute of Nursing and Paramedics, and that too for free. “Besides the course curriculum, the soft skills training helped in personal improvement, which was helpful while finding a job,” explains Suraj, who now works as a pharmacy assistant in NESTIVA Hospital with a monthly salary of Rs 8100.



▲ Paramedics Training as a part of BRIDGE training program

The seed for skill development excellence



▲ Prime Minister Modi and Chancellor Merkel at Bosch Vocational Center

Bosch's Vocational Center was destined to be a success from the start. Originating as a tool room apprenticeship scheme in 1953, it evolved into the full-fledged MICO Vocational Center (MVC) in 1960 – the same time as when the Government of India was promoting the idea of skilled manpower in the country. The Vocational Center was so successful that it formed the basis for the Indian government's Apprentices Act of 1961, making it mandatory for all industries to train apprentices.

Since inception, Bosch has provided theoretical knowledge and hands-on training combined with industry exposure guided by technical experts. The Center has trained over 5000 apprentices, based on the German Dual VET model (adapted to Indian industry needs) that emphasizes quality and finish.

Success stories include people like Mr Prasanna Kumar SV, who joined the center as an apprentice. Kumar received both theoretical and practical training in a variety of functional areas, providing him the perfect grooming to take on different tasks within the company. It is no wonder, then, that Kumar rose from a humble apprenticeship to become a Vice-President at Bosch, having worked his way through the Manufacturing, HR, R&D and Purchasing departments.

The vocational center has set the standard for similar centers across Bosch Plants in the country. In 2015, Prime Minister Narendra Modi and German Chancellor Angela Merkel visited the center. During their nearly two-hour long visit, the two leaders, accompanied by a high-level German delegation, took a keen interest to inquire about Bosch's research, engineering and vocational education activities in India.

Train the Trainer - contributing to nation building

One of the biggest challenges of India's skilling industry is the acute shortage of trained and motivated trainers. Bosch, through the 'Train the Trainer' (TTT) program, developed exclusively for the trainers of the BRIDGE program, is addressing this gap, and scaling up its vocational training initiative.

Before training BRIDGE students, every trainer attends the weeklong TTT program, to equip themselves with the right and requisite skills. These certified Bosch trainers are trained to identify and respond to the unique learning needs of the BRIDGE students who are unemployed or dropouts. Besides getting an overview of the BRIDGE course content, trainers learn how to mobilize students, deliver the modules, counsel students, and guide them for job placements.

Narrating her experience of being a Bosch TTT, Smita Sahu says, "The TTT program was organized so that all participants not only gain domain knowledge but also learn how to lead a healthy life. The training methodology involved role plays depicting the situations derived during the counselling sessions of parents and students, conducted at the time of onboarding them to the BRIDGE program. It was the icing on the cake that helped us learn the concept easily." Bosch also encourages TTT participants to pursue job skills training as a professional career.

Over 2000 trainers have been trained so far through the program and 26 Trainers and Master Trainers have been trained and certified through the Management and Entrepreneurship and Professional Skills Council (MEPSC). About the BRIDGE program she delivered, Smita says, "By motivating these students to do better for themselves, I am contributing my little bit towards nation building."



▲ BRIDGE - Train the Trainer Program

Nurturing skilled artisans with thoroughness and passion



▲ Model ITI inauguration by Shri Rajesh Aggarwal, current Secretary, Ministry of Skill Development and Entrepreneurship, Govt. of India

Bosch Vocational Center (BVC) has a long history of training, where people are trained in industry-related skills. After understanding the skills required in the artisan domain, Bosch started the Artisan Training Center in 2015 to fulfill the need for high quality carpenters, plumbers, and electricians. A super trainer from Germany helped set up the world class center to train the trainers in Bangalore.

The Bengaluru-based center focuses on imparting soft, technical, and business skills to candidates who are Class 10, 12 or ITI pass outs.

This nine-month training program is based on the German concepts of Gründlichkeit (thoroughness) and Leidenschaft (passion). The world-class curriculum and hands-on practice with the latest equipment that is in sync with the current requirements of industry, including Bosch Power Tools, helps trainees become competent artisans employable for the modern industry and consumer needs. So far, Bosch has established 22 artisan training centers including three Master Centers each in Karnataka and Maharashtra.

The rest are multiplier centers including the ones in Gangaikondan and the Karnataka State Reserve Police campus in Bengaluru. One such multiplier center has been set up at The Art of Living Foundation. At the inauguration of the Bosch-Art of Living Skill Center in November 2020, Gurudev Sri Sri Ravi Shankar said, “Bosch is renowned for precision and always set a high standard for skills. Our values of enthusiasm, commitment, caring and sharing resonate with Bosch, leading to this CSR partnership. We are delighted to have developed this center for creating opportunities for a brighter future for our nation’s youth.”

A unique initiative for skilling and capacity building

Making youth employable and eliminating unemployment from India are Herculean tasks that require collaborations with like-minded partners. With the introduction of the New Education Policy 2020 in India, focus on skill development at universities has intensified, and this is where industrial collaborations assume great significance. Universities are the best places where the youth can gain knowledge as well as hands-on skills training with industry-relevant practical exposure to become job-ready.

To promote skill development in institutes of higher education in the country, Bosch India has developed a unique social engagement initiative called the Industry Academia Collaboration for Skill Development (IACSD). The initiative seeks to fundamentally help in reorienting India's higher education system to include skills training and capacity building.

Brought to life after deep discussions with selected senior university leaders and Bosch in 2019, the IACSD covers five areas of collaboration: Skill Development of Youth, Trainers Capacity Building, Developing Industry-ready Social Service Professionals, Capacity Building of Non-Profit Sector, and MSME Capacity Building. So far, the company has collaborated with 25 universities and 200 colleges. Bosch will offer short-term courses with certification and will support incubation of student start-up projects. Another objective is to conduct the BRIDGE Train the Trainer in the University campuses to supply a steady stream of trainers not only for BRIDGE, but also other government skill development opportunities.

Expressing her gratitude towards Bosch team members, Dr. Manjula Jain, Associate Dean-Academics and Industry Academia Collaboration Lead at Teerthanker Mahaveer University (TMU), Moradabad, says, "The university management including our chancellor and members of the Board are immensely happy about this wonderful collaborative journey with Bosch to help skill India."



▲ Vice Chancellors conclave under Industry Academia Collaboration

Creating entrepreneurs for a better skill ecosystem



▲ Pawan Kumar, entrepreneur from Purnea, Bihar

When Pawan Kumar from Bihar's Purnea district was introduced to Bosch's Skill Entrepreneurship program, he was barely making ends meet as a tutor and struggling in his search for better career opportunities. Things are different now. "Today, I am filled with happiness to see the smile and change in life of our trainees," says Pawan.

Bosch is going beyond skilling the youth and training the trainer, to build 'skill entrepreneurship', which offers young professionals an opportunity to develop their own training start-up. This is both in the interest of giving back to society and creating a revenue-generating business model.

Having benefitted from Bosch's program, the tutor-turned-skilled entrepreneur says, "I got a lot of new ideas and was highly motivated. Post training, Bosch gave me an opportunity to run their BRIDGE Caregiver program at a center of my own." This initiative helps participants understand the importance of skilling and entrepreneurship, comprehend India's skilling ecosystem and skilling needs, identify the requirements for setting up a Skilling Center and learn skill entrepreneurship management for sustainability and scalability.

For Bosch, entrepreneurship is an important tool to harness the huge potential of India's working-age population and channelize it in the right direction. The National Skill Development Corporation, Ministry of Skill Development and Entrepreneurship, Government of India has taken note of the success of Bosch's initiative and is planning to scale this up at the national level. Partnership discussions are at an advanced stage.

The Skill Entrepreneurship program resonates closely with the Government of India's initiatives to reap the benefits of India's massive demographic dividend by creating pathways for vocational students to branch out on their own, into India's skilling ecosystem. Bosch is currently training 200 Skill Entrepreneurs, many of the trainees who have completed the program are now setting up their own skilling centers.

Training NGOs for a deeper impact

Non-governmental organizations (NGOs) are the foot soldiers that can drive deep change at the grassroots level. Given the support and expertise NGOs can provide to both corporate and governmental interventions, besides running their own, Bosch decided to focus on the capacity and knowledge enhancement of these able partners through 'Saksham: An Initiative to Engage, Enable and Empower'.

Supported by Bosch and conducted by Vishwa Yuvak Kendra (VYK), the program trains NGOs on the concept of corporate social responsibility (CSR). The series of five training programs of two days each discusses and devises how NGOs, academicians, and corporates can come together and contribute jointly to the development of society. Registered NGOs (Society/Trust/ Section-8 company) are trained, and priority is given to small and grass root level organizations. Planned workshops also help understand the obstacles that NGOs face, along with realizing their development goals while enhancing the abilities that will allow them to achieve measurable and sustainable results.

"Drawing inspiration from the success of Samarthya Pariyojana, Bosch and VYK organized Project Saksham. Both trainings have helped in capacity enhancement of over 600 NGOs. Working with Bosch on this project helped us understand the importance of equal involvement of all stakeholders to ensure sustainable development," says Uday Shankar Singh, Chief Controller, VYK.

Bosch's efforts towards capacity building are already showing positive results. NGOs trained under the program have now become more organized with their vision and mission. Practices such as rigorous brainstorming within the team, and reporting (monthly, quarterly, and annual) on the activities conducted through the year have streamlined the process.

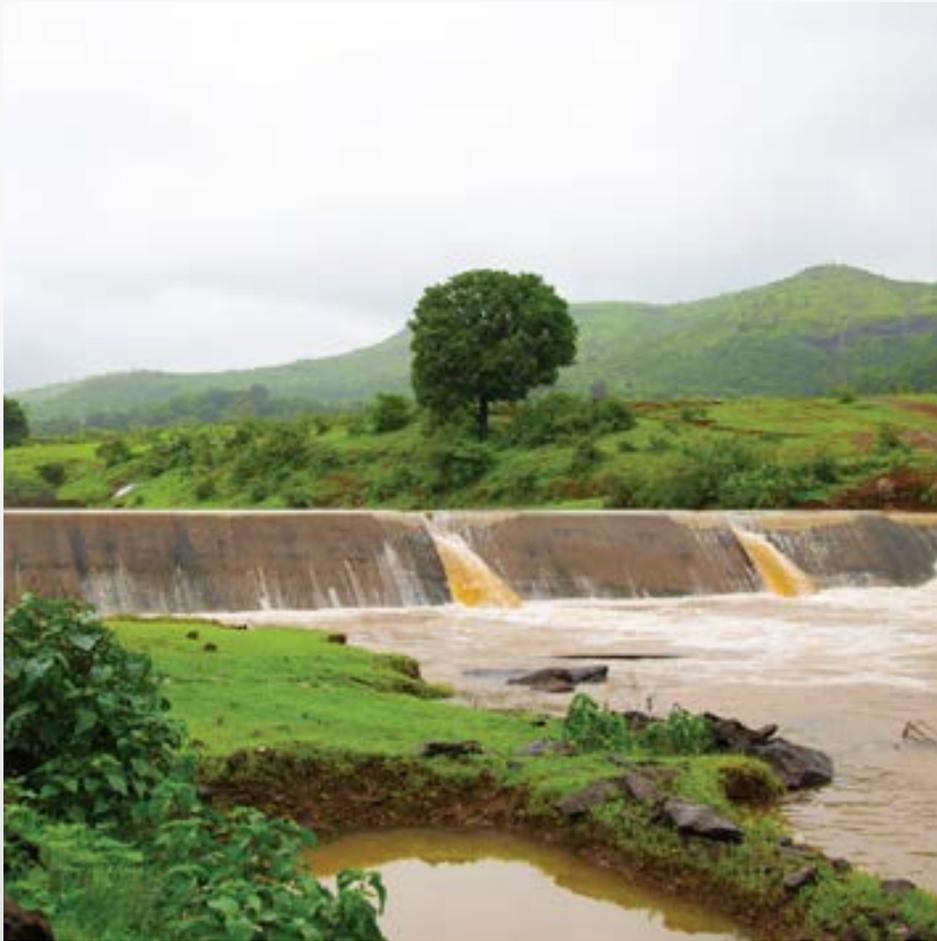


▲ Interactive session with the NGOs



◀ Appreciation certificate to Vishwa Yuvak Kendra Team

Check dams in Nashik to keep a check on water conservation



▲ A Check dam in Trimbakeshwar, Nashik

Water is the source of all life and is placed at the center of economic and social development.

Bosch's neighborhood CSR project initiated by the Nashik Plant management to address seasonal water shortages, despite copious rain received in this ancient city, is a testament of how the company has helped boost government interventions.

In Nashik, the Darna, Gangapur, Chankapur, Mukane, Ozarkhed, and Waghad lakes have been formed by constructing check dams across rivers during the British era. Today, only a few of these dams are functional, while many need to be renovated. In 2015, the team at the Bosch Nashik Plant identified an old and non-functioning water conservation infrastructure built at Trimbakeshwar, during the drought of 1972.

Known as 'Cherrapunji of Maharashtra', Trimbakeshwar, home to one of the 12 Jyotirlingas, receives more than 2500 mm of annual rainfall. On the contrary, lack of water has been the root cause of unemployment, food shortage, and debt for the people living around the city's religious center.

Rising to the occasion, Bosch built temporary check dams in the form of 'Vanrai Bhandras' across small streams to increase water availability. The team then began to identify more check dams that needed renovation. "Water being life, this initiative brought life back into the tribal villages at Trimbakeshwar. I remember the blessings by an old man who said Bosch will live more than 100 years for making life livable," recalls H.B. Thontesh, the then Plant Manager (Commercial), Nashik Plant.

Subsequently, 80 Vanrai Bhandras were built through the state government's flagship Jalyukt Shivar scheme. Through this government and local community partnership, Bosch has developed 16 check dams including the renovation of six percolation tanks, benefiting 7,000 people and 10,000 livestock in Nashik.

Helping bring clean drinking water to Rajasthan

Not every person in India has access to clean drinking water. It is inaccessible, especially to those living in remote villages across several states in India, even today. Rajasthan is one such state, identified by the Ministry of Health and Family Welfare, Government of India, as affected with high fluoride content in drinking water, a leading cause of fluorosis (a crippling bone disease).

The city of Jaipur, for example, depended on the Ramgarh Dam as its surface water source throughout the 1900s, which became nonviable, leading to a shift to complete dependence on groundwater. The overexploitation of groundwater concentrates the inherent salts, fluorides, and other chemicals, causing increased health risks.

When Bosch swung into action in 2008, to construct Reverse Osmosis (RO) plants it became the harbinger of clean drinking water for the inhabitants of the villages located around the company's Jaipur Plant. Says Shyam Sharma from Jaipur's Mathurawala village, "I can now ensure that my family has a healthy future. This water is safe to consume and is cheaper than bottled water, which is not a financially feasible option for me or the other families in my village".

So far, 30 RO plants have been set up that provide filtered water for a nominal charge of 0.20 paisa per liter, benefiting nearly 25,000 families (1.25 lakh community members).

For the effective building and running of the RO plants, Bosch has set up a 'Tripartite Partnership Model' which includes three stakeholder groups: the Village Panchayat, the local Registered Society, and Technical Experts including the Bosch team, which funds the construction. Recognized by the Confederation of Indian Industry (CII) with a CSR Best Practice award, this initiative provides ATM cards to villagers to procure water with smart card recharging facility.



▲ RO Plant in Rajasthan

Rejuvenating Bengaluru's Shanumangala Lake



▲ Aerial view of Shanumangala Lake

Kempe Gowda, the founder of Bengaluru, and his successors built over a hundred lakes and tanks in the city. Besides providing local communities with water for drinking, irrigation and other daily purposes, the lakes were the key to maintaining the city's ecological balance. But with rapid urbanization and discharge of effluents into the water bodies, these lakes began drying up, posing a threat to biodiversity.

Shanumangalalake, located adjacent to the Bosch Plant in Bidadi, is one such water body that had lost its charm in the last few years. Along with marine pollution and regular dumping of the village garbage, the lake was also facing accumulation of silt and a reduction in the lake's storage capacity due to the blocking of the catchment area.

Recognising the lake's significance for the town and nearby communities, Bosch initiated restoration activities in 2017. Key areas of intervention included construction of a cattle trough outside the tank area, desilting, bund strengthening, shrub clearance, treatment along catchment area, formation of walking paths, construction of drains, barbed wire fencing, chain link fencing and plantation, among others.

"Rejuvenating Shanumangala Lake had been a very satisfying experience. The process was full of challenges. However, looking at the revival and restoration of the lake's ecology, I feel proud as a Boschler for being part of this endeavor. It is indeed a worthy investment towards promoting sustainability," said Rajendra S., Senior General Manager, Technical Functions at the Bosch Bidadi plant. The company's commitment towards preserving biodiversity and working towards the sustainability of the communities it operates in, has resulted in Shanumangala offering the sight and experience of a beautiful and eco-rich park, which was inaugurated in February 2020.

Dumping garbage into the lake has stopped completely. Increased freshwater availability has not only led to new flora and fauna growing around the lake but is also drawing several birds.

PAWS for a cause: Saving the Slender Loris

It was a chance presentation on wildlife conservation by wildlife photographer Diinesh Kumble that introduced Bosch employees to the plight of the Slender Loris. Two decades ago, he explained, it was easy to spot the tiny creatures dotting lantana bushes and bamboo groves near water bodies in the Western Ghats, from Coorg to Kanyakumari.

But the tiny creature known as “Kaadu Paapa” in Kannada (baby of the forest) is on the verge of extinction. Believed to contain medicinal and ‘magical’ properties, the loris’ body is sold for a premium in the black market by villagers. Loris’ are also smuggled to feed India’s massive illegal pet trade.

The presentation compelled Bosch India to add Slender Loris conservation as part of their CSR and start the Photography and Wildlife Squad (PAWS).

Bosch volunteers visit loris habitats in Karnataka and Tamil Nadu to speak to villagers about how the tiny primate benefits them. “The Loris is very helpful for farmers as it eats insects, garden lizards, rodents which can potentially harm the harvest,” explains BV Gundappa, environmentalist. In classroom sessions, ‘Boschlers’ use tree plantations and awareness drives to bring to life the role they can play.

Bosch’s efforts have paid off. The population of the Slender Loris is growing steadily. It is a testament to how community outreach is closely interwoven with conservation efforts. More importantly, it is a humble contribution towards sustaining the ecological balance of India’s Western Ghats.



▲ Slender Loris spotted in the wild

Building a sense of community in south India's first biodiversity park



▲ Remodeling of Madiwala Lakeshore children's play area by Bosch India

The Chola kings, famed as legendary lake-builders, are believed to have dug out Bengaluru's 280-acre Madiwala Lake in one night. The folklore is not surprising; history tells that King Karikalan Chola built the world's oldest water regulating structures, while King Rajaditya Chola built India's largest man-made tank.

But the lake's royal history became as irrelevant as the lake in the 1990s, when its water became too polluted to drink. Madiwala lake faded from public consciousness, until a discovery a few years ago revived civic interest. A survey had revealed that diverse birds and fauna were thriving in the lake and its wetlands.

The finding compelled Dr K. Kasturirangan, former ISRO chief and the then chairman of the Karnataka Knowledge Commission, to propose that Madiwala would be the site of South India's first biodiversity park.

The project caught Bosch's attention. In 2017, Bosch launched its first Madiwala project - a plant to convert garden litter into compost for park manure. This was followed by the remodeling of the park's children's play area with new equipment, and the renovation of a sanitary complex.

Bosch also worked with local authorities to establish a Park Development Committee to maintain and manage the park. "Bosch has equipped Madiwala lake with a bio-composter, and a wonderful play development area and made certain that no tree was cut while creating this play area. This enhanced the vibrancy of the lake. We appreciate Bosch's responsible actions and commitment towards society and the environment," Siddaramappa, Deputy Conservator of Forests, Karnataka Forest Department.

With these assets given to Karnataka Forest Department to manage the park, Bosch's efforts have demonstrated how development can be achieved through social projects which imbibe in their users a sense of community ownership.

Gifting every child a healthier tomorrow

The iron link between student health and learning was best captured by the World Health Organization when it noted, “To learn effectively, children need good health”.

In 2010, a Bosch community survey of government schools near its plants found that poorer children lacked healthcare and sanitation, due to which many perform poorly or drop out early. The findings inspired Bosch’s Child Health Development Program (CHDP). The program brings pediatricians, ophthalmologists, and dentists to 300 government schools near its plants in Bengaluru, Bidadi, Nashik and Jaipur, where they tend to the students, free of cost.

To ensure that the treatment does not stop after initial diagnostics, ailing children are taken by Bosch’s NGO partners and volunteers to specialists. From dental scaling and eardrops to supporting surgery for heart defects, CHDP’s annual check-ups have unencumbered lakhs of students to strive and achieve at school.

The program also stresses the importance of cleanliness and personal hygiene, with a special focus on the unique needs of adolescent girl children. Separate toilets have been constructed for boys and girls, who have been taught that they must do their bit to keep the toilets clean.

CHDP’s blend of curative and promotive health interventions goes beyond enabling school performance; its scale is supporting a larger vision of health equity. Its 70,000 direct beneficiaries act as powerful force multipliers, bringing to their homes, families, and communities important health messages, across urban and rural India, and helping them unlearn generations-old habits.



▲ Upgradation of primary healthcare center in Adugodi, Bengaluru

Supporting Akshaya Patra to feed millions of students nationwide



▲ Akshaya Patra Foundation

For a hungry child, there's nothing more important than their next meal. Hungry children are less likely to attend school, and they are more at risk of behavioral issues. As the Ministry of Education puts it, "hunger drains them of their will and ability to learn".

For Bosch, fighting child hunger emerged as an opportunity to do good. Bosch supported the construction of a mega-kitchen for NGO The Akshaya Patra Foundation (TAPF), which runs the world's largest school meal program, in Jigani, Karnataka. The kitchen, towards which Bosch donated Rs. 70.46 million, is a computerized, fully automated marvel that transforms hundreds of tons of ingredients, in four hours or less, into 25,000 tasty and nutritious delicious daily meals.

Bosch's contributions also include employee volunteering and donations, which have enabled TAPF to feed 1.8 million children every day. Bosch has also donated vans that allow the NGO to support its massive consignments.

Interestingly, TAPF staff are regularly trained in globally benchmarked standards, including Six Sigma, GMP, Lean and Kaizen, and ISO 22000 Awareness to continually enhance the NGO's standards of efficiency.

The NGO's nationwide network of kitchens, rigorous processes, and corporate support exemplifies how the desire to do good can change lives. It is a beacon of hope in the lives of many underprivileged children, who would otherwise be destined to hard labor. Every warm meal gives them a little more energy to pursue education and break out of the cycle of poverty and malnutrition.'

Fitting the shoes on India's Olympic long-distance champion

Kavita Raut was born to run. Born in a tribal family from Savarpada, a hamlet 80 kms from Nashik city in Maharashtra, Kavita was the girl who ran with lightning speed. And she did this barefoot – because she could not afford shoes. In her own words, she “chose running as it can be done barefoot and without spending any money”. While her talent did not go unnoticed in the sports circle of Nashik and earned her a good coach in Vijender Singh, buying good quality running shoes remained a challenge.

In 2000, when she participated in the Junior National Meet at Bengaluru, running with shoes was mandatory. But she could not perform up to her potential, as the shoes - which she had to borrow at the time - did not fit well.

A simple act of kindness by Reinhard Flörl, former Plant Manager (Technical), Nashik plant, played a crucial role in changing her life. Reinhard, in his personal capacity, was so moved by Kavita's determination that he gifted the Arjuna Awardee her first pair of running shoes in 2003. “Bosch came to my aid at the right time,” says the athlete, remembering Reinhard's generosity.

Kavita shot to fame at the Commonwealth Games, New Delhi in 2010, when she became the first and only Indian female athlete to win a bronze in the 10,000 metres run. After winning gold in the women's marathon event at the 12th South Asian Games, she became the fourth Indian women to qualify for the women's Marathon at the Rio Olympic Games 2016.

Yet again, Reinhard sponsored her sports shoes. “Appreciation of this kind goes a long way as a motivator - I am truly thankful to Bosch,” says the proud Olympian, who is now known as the ‘Savarpada Express’.

Reinhard remembers his contributions to Kavita's achievements with a deep sense of humility. “I have tried to help Kavita realize her dreams of running. The few pairs of shoes I have given her over a few years are close to nothing compared with the girl's achievements. I hope she is doing what she seems to love.”



▲ Reinhard Flörl, former Plant Manager (Technical), Nashik plant with the athlete Kavita Raut

When a salary bonus transformed a small-town school



▲ Rangarao Desai standing against the backdrop of a renovated Jawahar Nagar school

A bonus rewarding employees for persisting through a difficult 2020 charged Bosch's Rangarao Desai with purpose. Months prior, he had visited Raichur, his hometown in Karnataka, after a stint at Bosch Brazil. Here, Rangarao had visited his alma mater, Jawahar Nagar School. "I was passing by my school and happened to look into the compound. Disheartened to see the status, I shared the current pictures of the school building on social media along with my thought of celebrating Holi," he explains.

Even as the pandemic's second wave was underway, Rangarao knew he had to act. That he had extra money from the bonus emboldened his resolve. But there was only so much he could do alone. "Initially, the biggest challenge was to reach school alumni and involve them in this initiative," says Rangarao. He then shot a video message recorded from the school grounds, just before Holi. "Instead of throwing colors in celebration on each other in a pandemic, we could use colors to bring new life back to our school," he said in the message.

The message spread. Two days later, 75 enthusiastic volunteers assembled at the school. They spent five hours cleaning the premises, painting the walls, and planting saplings donated by Green Raichur, a local organization. Four skilled painters also worked an additional four days to repaint the entire school. "The (school) management was stunned...the children who returned to school after the festive holidays were overjoyed," he remembers. For Rangarao and friends, the Holi of 2021 will always be a memory of perseverance and purpose. "The response was awesome, and we all together made it happen," he says.

Girls-only batch of plumbers take on gender stereotypes

For decades, the plumbing profession has been male-dominated – but Bosch is doing its bit to change that. In February 2022, 24 women completed a three-month plumber training program from the Bosch Artisan Training Center (ATC) at the Government Industrial Training Institute, Pune.

Among them were five speech-and-hearing impaired candidates, for whom ATC hired a lady translator and interpreter. All five have secured jobs in the construction sector. “It was a great learning experience for us to have a batch full of girl students and make it more inclusive with specially-abled candidates in Artisan Training,” says Ajay Akhare, who heads the center.

Founded in 2015 to train young professionals in carpentry, the center has expanded to plumbing and electrical. ATC staff have been assisted by Bosch plant officers in Pune. “I have completed the three-month course of Bosch India Foundation. Earlier, we wondered whether girls can (learn) plumbing, but now I’m sure girls can do many things. Due to this course, I have learned spoken English, and was easily able to crack the interview. I got a good job in a construction company. I want to tell all the girls to get this training and become self-reliant,” says Ashwini, an alumna.

“My daughter completed their training at Bosch ATC. I am also a plumber. So, I checked their knowledge and found that both are performing extremely well...I am...thankful to Bosch for developing (their) careers,” says Madhukar Wakode, a parent.



▲ Girl students undergoing training at the Bosch Artisan Training Centre

Masking India against the pandemic



▲ Bosch Automated Mask Line at Naganathapura plant

Two dates will forever punctuate human history: March 11, 2020, when Covid-19 was declared a pandemic, and June 5, 2020, when the World Health Organization (WHO) asked the public everywhere to mask up. Though masks were – and continue to be – the single most important intervention in the fight against the virus, the world simply did not have enough.

Their production had taken a two-fold hit. The pandemic had frozen global supply chains while soaring case numbers ramped up their demand from the healthcare sector. The world suddenly needed more masks – urgently. Almost two weeks after the WHO's June announcement, Bosch launched a fully automated mask production line at its Naganathapura plant, capable of manufacturing one lakh masks a day. Designed by Bosch Global, the line was manufactured locally by Bosch's machine building division at a record speed of 11 weeks. A total of 25 Mio Masks, RBAI-20 Mio and ATMO-5.2 Mio masks were produced.

Most of the masks were immediately dispatched, free of cost, to Covid-19 warriors across the country, including police personnel, municipal corporation workers, community health workers, NGOs, healthcare staff, and ASHA and Anganwadi workers. Masks were certified before release and mask bacterial filtration efficiency of 99% was achieved. The line is still running in ATMO6 in Naganathapura.

As one of the thousands of players within India Inc. to step up to the government's call for healthcare support, Bosch's efforts galvanized India's PPE sector. Just months prior, the world's perceptions of India's approach to mask production were colored by stories of Indian doctors using helmets and raincoats instead. However, from mass-producing three layered masks from Naganathapura, Bosch India had donated four million masks within a noticeably brief time.

The Spark of Joy

They say, “Nothing is better than the will of determined human beings”. The satisfaction of bringing a smile on someone’s face is a joy second to none. Primavera, a charitable trust funded and managed by Bosch employees in Germany, has been bringing joy to many young lives with its various activities, for over two decades. “Spark of Joy” is a philanthropic mission that has resulted in an annual fundraiser event that acts as a beacon of diversity, passion for the arts, and most importantly, the undying spirit of helping children in need. It is a platform for in-house talent across all Indian locations and has been pivotal in being the change in all the projects that Primavera supports.

The event provides a boost to Primavera India that is aided with the generous contributions that flow in from Germany, providing a deeper intervention in the existing projects and to begin newer ventures.

Armed with this spirit of volunteerism, the associates of Bosch and the artists that flock to the Spark of Joy event have amplified the reach of these projects that aim to enhance the country’s less-privileged children. Every smile that they spread adds fuel to their mission of ‘Sparking Joy’ and promoting the spirit of volunteering, because the satisfaction of spreading smiles and bringing about change is paramount. “The Spark of Joy is a magical union of passionate people and a powerful purpose. An experience where the Spark of Boschlers bring Joy to the lives of the underprivileged,” says Karthik Chandrashekar, Lead - Employee eXperience at Bosch India.

Spark of Joy is a testament to the drive and enthusiasm of Primavera India and all the associates who have made it their mission to provide more to children, anchored by the hope of better opportunities. With the 8th Season in the making for 2022 the journey continues.



▲ Bosch associates at Spark of Joy

Fighting hunger in the pandemic



As the Covid-19 lockdown commenced and businesses shut down operations in March 2020, a constant aching hunger became the fate of India's migrant workers who had begun walking perilous thousand-mile-long journeys to their home villages. For laborers whose daily meals were bought with their daily wages, the lockdown had severed their link to food. As case numbers soared, social distancing mandates prevented many from stepping out of wherever they had found shelter.

Understanding the need at hand, Bosch immediately put its canteens in its plants across the country to work. Every day, canteen workers at Bosch plants would cook large volumes of nutritious food. To ensure that the food reached its intended beneficiaries, Bosch staff would go out on regular food drives, driving across their respective geographies to make regular deliveries. To augment its efforts, Bosch joined hands with the Art of Living Foundation to distribute dry ration kits to families.

Bosch distributed over one lakh meals and supplied 3,000 families with ration kits. Though a humble contribution, but every meal mattered to the hungry, and every effort counted for the country. Drop by drop, every contribution by citizens, companies, non-profits, and government entities shaped up a veritable tsunami of altruism and hope.



▲ Cooked food distribution during the pandemic

◀ Dry Ration distribution during the pandemic



EMPOWERING PEOPLE



A journey of many firsts

Be it the best rotary hammer to fit your drilling needs, a versatile router for woodwork, or a laser tape for simplicity and accuracy in measurement, Bosch Power Tools (PT) is a one stop shop for all construction needs.

A manufacturing pioneer with more than two decades worth of experience, Bosch PT has helped its dealers build technologically advanced and innovative products and digital portfolios. This has resulted in the end users getting access to affordable solutions for a better life.

As the first dealer in Bosch PT, SB Corporation, Mumbai, has had many firsts. From being rejected for a dealership because it was proposed to be headed by a woman to completing 26 years with the company, this dealer's journey is an interesting one.

SB Corporation was the first authorized service centre, the first Bosch dealer to get a tool order, first to secure an order amounting to INR 1 crore and logged in steady performance over the years.

The highlight of the journey was the close workings of the Bosch team with the dealer team in a competitive market. What has worked in Bosch PT's favor over the years is that it has distinguished itself as a brand with a strong user-customer connect and technological innovations. Moreover, it has strengthened its position as a trustworthy industry leader, thereby increasing its market share across segments.

"Although the Bosch brand is highly appreciated in India, the PT market is very competitive. Our close association with the company has helped us achieve our goals," explains Nayna Sachde, Director, SB Corporation.



▲ Bosch Power Tools dealer office SB Corporation, Mumbai

The first woman social counsellor at Bosch



▲ Radhamani RS, Social Counsellor

Today, almost every organization across industries invests in the mental well-being of its workforce. But back in the 80s, when hardly any industry, let alone a company, had even thought about it, Bosch, then MICO, realized the importance of it. To that effect it became the first company to introduce a position of an in-house social counsellor at the plant site in Naganathapura, Bengaluru.

Since the concept of a social counsellor was new and most of the employees working on the shop floor at the time were at least 47 years of age, Bosch wanted to hire a woman in her 30s with relevant qualification for the job. Radhamani, who had just moved to Bengaluru from Hyderabad, following her husband's transfer to the city, was found to be the right fit for the job, after several rounds of interviews. With a Post-graduate degree in Social Sciences and an M.Phil. in Psychiatric Social Work from the National Institute of Mental Health and Neurosciences (NIMHANS), she was looking for something meaningful and relevant to work in her field in the new city. A job at a reputable company like Bosch was like a dream come true.

Radhamani, who believes that the position was created because of the engaging and positive culture at Bosch, worked at the company for 25 long years. During this time, she counselled and worked with several Bosch employees and their families and helped them address their problems. As a one-person team, this was quite a tall task for her, as not everyone was willing to be open about their issues.

But with adequate support from her superiors and shop floor managers she was quite successful in helping several employees overcome their challenges be it at work or home. "I am proud to be associated with Bosch because it has given me an identity and respect. I could not have asked for more," says the now retired social counsellor, who cherishes every moment she spent on employee well-being.

Bringing together nostalgia and precision at the 2010 Auto Expo

Few know that a small section of the 2010 Auto Expo in Delhi marked the coming together of three greats – a legendary bike, a bike aficionado mechanic, and a set of truly excellent power tools.

The bike was the Hero Honda CD-100, the first four-stroke engine bike to hit Indian roads. Its best-in-class mileage and fuel efficiency were matched by its handsome frame; actor Salman Khan had declared it “the finest-looking bike in town” in its debut ad in 1985. Since its launch, it had reigned on India’s roads and commanded young aspirations.

The mechanic was Shamun Khan, who first dismantled a Hero Honda CD 100 Deluxe down to parts, and then reassembled it – in 49 minutes and 13 seconds. Surprisingly, Khan, who had been tinkering with bikes and cars since the age of 12, had never attempted the feat before. For onlookers, the bike also marked a nostalgic contrast to the Expo’s glitter and glamour.

And of course, Khan’s swift and precise workmanship - which earned him a record recognized by the Limca Book of Records – was achieved with a set of Bosch Power Tools. In his hands, a Bosch Cordless Impact Wrenches and Screw Drivers were no less than a surgeon’s instruments. The entire feat was accomplished on a single charge at the Bosch Power Tools stall area, a showcase of the robust runtime offered by the premium Li-On batteries.



▲ Shamun Khan at 2010 Auto Expo in Delhi

Subsidized modern power tools for rural artisans of Andhra Pradesh



▲ Chandrababu Naidu, former CM, Govt of Andhra Pradesh launching the Adarana scheme

India is home to many skilled artisans; however, their true potential remains underutilized due to financial constraints in procuring modern tools.

To help artisans overcome this challenge and enable access to modern tools, the Government of Andhra Pradesh launched the Adarana scheme in 2018. The aim was to provide subsidized modern tools to rural artisans to empower them to produce better quality products, increase productivity, increased incomes thereby enhancing their lives. Bosch Power Tools (PT) have been a key participant under this initiative.

Bosch PT's stall at Adarana exhibitions provided access to artisans a variety of tools for trades such as carpentry, electrician, blacksmith, stone cutting, building construction, among others. The array of power tools such as sanding machines, drilling machines, wood cutting machines, planer, cordless screwdriver, on display with demonstrations of the products envisaged keen interest from the participants.

Around 24,000 artisans were provided with Bosch PTs under this subsidized scheme of the state government. The company also ensured free training and after sales service of these products to the artisans. Using them increases their productivity and helps improve their earnings at least five times, thereby enhancing their standard of living. "We are empowering rural artisans in the state - the Bosch way," says Swaminathan R, former Managing Director, Bosch, Bangladesh and Sri Lanka.

When Bosch employees entertained the country

A German acting in a Kannada film? Speaking a language alien to alien language, the words of which were, according to him, “all similar sounding”? The very idea is unimaginable.

But when the Director of Max Muller Bhavan was asked to recommend a German expatriate for a role for the 1987 film ‘Manavararu’, his first thought was to turn to Ralf Leyendecker, Manager – Quality Assurance, Bosch India.

Leyendecker fitted the bill, and successfully pulled off his character of a spiritually inclined European drawn to India’s philosophical heritage. He found the entire experience to be novel, and a welcome change from his everyday routine.

He was not the only Boschler-turned-actor, as the MICO Fine Arts Society served as a springboard from which many Bosch India associates jumped into filmdom. Another employee, APN Rao (Goods Inwards) went on to act in 25 films. Chandra Sekhara Rao (Elements Barrels) not only acted in films, but also appeared in the famous India TV serial, Malgudi Days.

Another employee, G Srinivasa Murthy, an engineer with Bosch for 30 years, has acted in several theater plays, most notably reprising the role of Bheema in ‘Muddannana Promotion Prasanga’ (a comedy social drama) and as Kabeera in ‘Taledanda’ (a social issues drama). He says that support from the Bosch Fine Arts society has allowed him to express his creativity on stage. “I have received a good response from co-workers by helping me with shift changes,” he says.



▲ G Srinivasa Murthy, Bosch Bidadi Plant associate

Women in Bosch India: From humble beginnings to a powerful presence

In 1995, Bosch India's workforce comprised only a handful of female employees, most of them working in secretarial roles. At one point there were over 50 secretaries – all females. Moreover, no female, except for the IT department's senior employees, would venture onto the shop floor because it was a male bastion.

A small connect session called Secretaries Day, which was covered by the in-house magazine MICO Wheel, to highlight the stories of these female employees, served as a turning point in 1998.

After a few years as secretaries, women were given an



opportunity to rotate across functions such as Human Resources, Purchase/Logistics, Finance, and IT. Lateral hiring in these segments, resulted in a shift of attitude that women colleagues can do much more than work only in secretarial roles.

In 2011 Bosch in India embraced more diversity in the workplace. Top-down targets were set to increase the number of women in technical roles. To break the bias against women, Backstage@Bosch was introduced, wherein female students shadowed manufacturing managers to experience the workings of a shop floor.

Bosch's concerted efforts paid off and today, Bosch Limited (RBIN) boasts of 10 to 11 percent female workforce. In the last five years, an additional focus area has been to increase the women in leadership roles. Currently, there are five percent women leaders in RBIN and 10 percent in Bosch Group in India. Keeping with the efforts to increase the female ratio, a target of 20 percent by 2023 has been set.

Compared to 1995, today, there are multiple platforms for women in Bosch India to help amplify the female voice through mentoring, communication with the senior leadership, or women's forums.

As Lalitha S, who has grown from an Executive Assistant to General Manager and RO representative for Diversity, Equity and Inclusion, says, "We, the women at Bosch, feel more powerful and at ease working in a manufacturing environment. From humble beginnings, we have progressed to become more powerful women in the company."

◀ Lalitha S, General Manager and representative for Diversity, Equity and Inclusion at Bosch Ltd

Supporting the start-up ecosystem to put India on the global innovation map

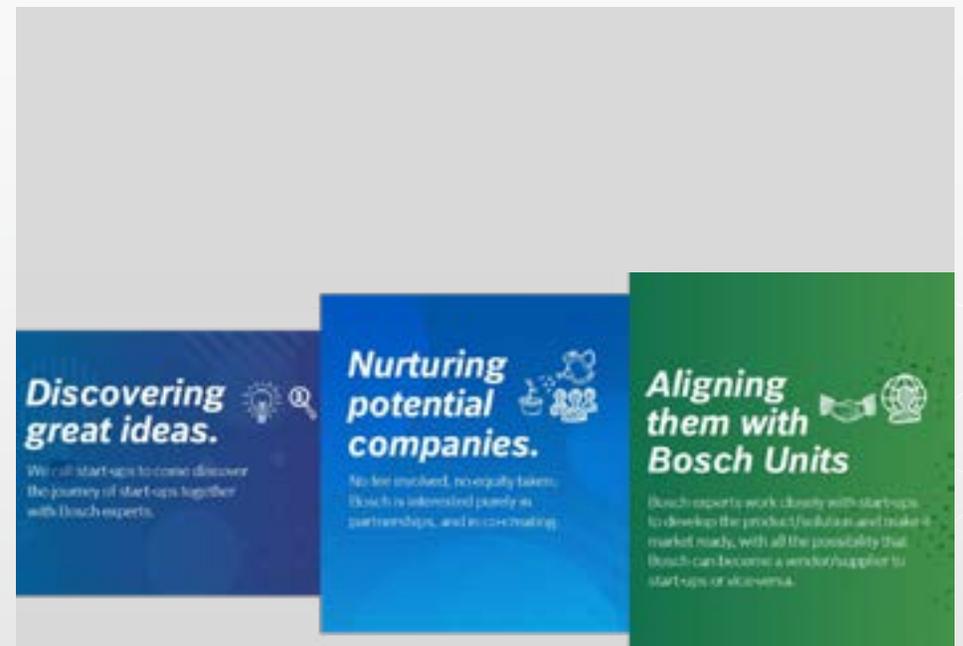
With 100+ unicorns valuing up to a total of Rs 30,000+ crores, India's vibrant start-up ecosystem is teeming with remarkable talent. Bosch in India is on a mission to leverage its technical and business capabilities to support this ever-expanding start-up ecosystem. Together with start-ups, the company sought to put the country on the global innovation map. This quest resulted in the genesis of the Bosch DNA Nxt Startup Alliance Program in 2016. The program helps 'D'iscover the start-ups in Bosch interest area, 'N'urture startups for a period of 16 weeks and 'A'align startups with Bosch business units for creating value-based business impact.

The main objective is to work with innovative startups and explore the opportunity to co-create the product/solution or explore partnership to go-to-market through potential engagement models. As Uday Prabhu, Chief Innovation Officer, Bosch Global Software Technologies Pvt. Ltd. says, "Our tag line 'Invented for Life' is a strong testimony to our innovation DNA. The coming together of Bosch and the startup ecosystem is a perfect recipe for the topics of tomorrow."

Every year, the program receives over 800 applications based on identified themes under areas such as Smart Living, Health Tech, Agri Tech, connected industry, Automation and Next Gen Mobility. 'Pitch Days' followed by technical deep dive sessions lead to a cohort of 15-20 startups qualifying for an intense technical and business mentorship, with access to the company's cutting-edge technology solutions and infrastructure.

"DNA Nxt program is a flagship from Bosch which is an epitome of collaborative play in the ecosystem with the global Bosch business units, global start-ups, functional partners, government entities and venture capitalists coming together to make a positive difference to the community" states Hemanth Sheelvant, Program Director – DNA Startup Alliance.

During the five-year long journey, DNA program has received over 5000+ applications, with over 85 start-ups graduating and over 20 successful long-term business engagements taking place in this period. The 6th edition opens in 2022.



▲ Bosch DNA Nxt Startup Alliance program



Journey from a Graduate Trainee to a Managing Director

Bosch's culture of providing diverse and equal opportunities for all-round development and recognition has been Saritha Poovanna's biggest motivator. During her career, she experienced a high level of respect for diversity of thought and balanced communication. She believes that many factors have led to the company's success and enabled the development of the people involved. These include Bosch's readiness to challenge the status quo, the culture of continuous improvement and strategies for transformation.

In the 22 years that Saritha has been with Bosch, she has grown and developed from a technical graduate trainee (TGT) to



Managing Director of Bosch Automotive Electronics India Pvt. Ltd. Her experience spanning 10 different roles, with 15 multiple supportive managers, and diverse teams and colleagues in Bosch India and Germany, was encouraging and inspiring. "My career has been an array of experiences, challenges, highlights, lowlights - and each of these have contributed to my continuous learning, development and career growth," she says. Her development that came with role changes was further fortified by other development interventions. For example, she had the opportunity to be certified as an OD practitioner and as a coach, which enabled her development as an individual as well as a leader.

Both people and policies at Bosch made the challenge of balancing her professional and personal life easier.

"Support at work was extremely valuable, both when I was transitioning into a new role, and while handling the demands and challenges of my roles," she explains. For instance, when she stepped into her role as the head of manufacturing, a few people were apprehensive about whether she, as a woman, could handle the complexities of manufacturing and the demands it made on her time. However, with her team's support, her understanding of the nuances, over a short period of time there was a higher level of acceptance. Especially when people understood that she would leverage her strengths, continuously learn, and could lead the team for their development and for organizational success.

Over the years, Saritha has improved her leadership capabilities based on feedback from colleagues, continuous learning, mentoring, coaching from managers and peers, and working with diverse teams in India and Bosch globally.

◀ Saritha Poovanna, Managing Director of Bosch Automotive Electronics India Pvt. Ltd.

The pursuit of competence building at Bosch

Bosch employs Learning and Development (L&D) as a valuable tool to create a conducive learning environment for employees right from the time they enter the organization and enables growth for all. On the L&D continuum, Bosch focuses on five disciplines - Personal Mastery, Mental Models, Building Shared Vision, Team Learning, and Systems Thinking. It follows the process of Competence Management at Bosch that ensures the systematic and managed identification and development of professional and methodical competencies to achieve business goals.

The Bosch Learning Campus (BLC) is a one-of-a-kind learning space where German engineering coalesces with the rich Indian culture and heritage. A world-class space that inspires learning, collaboration, and innovation, it represents the vision of Bosch encompassing a holistic learning environment to shape new-age skill development for future-ready employees. With state-of-the-art facilities ideal for training, team building, personality development and strategy-making sessions, the BLC open area is a great place to inspire every mind!

The learning that takes place at the Bosch Training Centre India (BTC-IN) is credited to Peter Senge, Fifth Discipline Senior lecturer at MIT Sloan School of Management and Founder of the Society for Organizational Learning. The BTC-IN works as learning consultants to the business through various stages. These include analyzing learning needs of every business tied up to the organizational goals; defining the learning objectives and outcome; designing learning solutions; identifying learning partners (Internal/ external), rolling out niche/ flagship learning programs and leveraging Bosch Learning Campus for all face-to-face learning interventions.

BTC-IN has trained 11505 associates (till 2021) with the number of participant man-days being pegged at 15709.



▲ Bosch Learning Campus (BLC)

The transition from a Bosch apprentice to a world class athlete



▲ Paralympian Surjeet Singh

Employees are a company's most valuable assets. At Bosch India, employee development is not restricted to their career within the organization, but also outside of it.

Surjeet Singh, who joined Bosch India in 1989 from MICO Vocational Centre, is one such asset. From an apprentice in the 80s to an athlete par excellence today, Singh's unstoppable winning spree has earned him impressive accolades over the years.

In 2004, Singh participated in the Para-Olympics in Athens, Greece, where he represented India as one of the 16 athletes from the country and the only participant from Bosch India.

That same year, he competed at the British Open Athletics in Birmingham, UK, bringing home two golds and two silver. He made waves at the ISO-D world athletics meet in New Zealand winning two silvers and two bronze medals. At the Open Athletic Championship 2005 in Berlin, Germany, he won a silver in shotput, got the fourth place in discus throw and fifth in javelin.

When Surjeet was elected to represent India at his first international event, Ramprasad, the then Secretary for Bosch Sports Club, personally put in a word for him with M. Lakshminarayan, the then Joint Managing Director. "The company took care of 75% of my tour expenses," says Singh.

Surjeet left Bosch India in 2017 to join the Sport Authority of India in Bengaluru. Today, he is passing on his legacy to the younger generation.

"Without Bosch it would have been impossible for me to achieve and excel in sports and my career. My tenure of 27 years was really the best life - I was always happy," he says.

A 'Boschler' with a keen eye for cost-efficiency

Not many 20th-century business tycoons have been as assertive about paying high salaries as Robert Bosch. "I don't pay good wages because I have a lot of money; I have a lot of money because I pay good wages," he famously said. Remuneration reflected the willingness to create - in his words - the "the best of the best" products.

It is no surprise that this combination of excellence and reward drew Srinath Shastri to Bosch. "The salary, the knowledge, the respect and market recognition - it was very high," recalls Srinath. Bosch engineers, he said, could "work anywhere in the world". And so, he joined the Components division in 1969, inspecting Automotive Turn parts, before long stints across departments, each benefiting from his fastidious eye. He proudly recalls that once, when he learned that the company was importing a German-made part, he found a supplier making it for much less in Tamil Nadu.

In October 1974, his track record earned him a cash prize and salary increment from Hubert Zimmerer, then Managing Director at Bosch. Srinath retired after 37 years, during which he had saved the company Rs. 20 million by implementing various efficiencies. His Bosch relationship continues - his son is working in the company's CTG department as a Senior Officer. "Bosch is not a company," he says. "It is a temple for our family." Bosch has been privileged to work with people who exemplify the best of Bosch values.



▲ Srinath Shastri

Stepping on the accelerator like never before



▲ BGSW DNA team with Sastra Robotics

At Bosch India, successful innovation focuses on generating ideas, understanding the disruptions of technology, building an innovative culture, and an efficient and effective implementation. With the Bosch DNA Startup Alliance Program, startups are getting a chance to venture into the marketplace and embark on an acceleration journey, like never before.

Sastra Robotics, a Kerala-based startup that builds and delivers robotic solutions for human-like automated functional testing of real physical devices, is one of the many success stories that have graduated out of this unique program.

As part of the alliance, Sastra tried to build a complete intelligent robotic platform that can be trained to mimic human actions and result in quick turnaround time. The robot reduces 70 percent of testing cycle time and 30-70 percent go-to-market time. It increases the quality of work, is three times faster and safer, and is an ergonomic solution. The startup's target audience are automotive, aviation, industrial, medical, fintech and home appliances.

“The mentoring from the program helped us enhance our product in terms of reliability, safety, endurance, and performance to prepare for global deployments,” says the founder Aronin P, about the Bosch DNA program.

The startup secured a new business opportunity with Bosch Engineering and Business Solutions (RBEI), which is now Bosch Global Software Technologies Private Limited (BGSW), Bengaluru, for the Human-Machine Interface (HMI) testing. Two units have been installed to create a testing platform for automotive Infotainment system.

While graduating from the alliance program in 2019, Sastra Robotics won the Investor's Choice award which included inputs from internal stakeholders and key mentors.

Unwavering commitment to quality management

When Sudharshan Rao joined Bosch after graduating from The National Institute of Engineering (NIE), Mysore in 1971, Bosch, then MICO, was still a relatively unknown company in India. However, the then, 20-year-old Rao was excited to move to Bengaluru and embrace city life. Starting on a monthly salary of Rs 450 as a Foreman in a production workshop to becoming the Vice President of procurement, he is one of the many success stories at Bosch.

In this four-decade long journey at Bosch, Rao has witnessed and participated in the growth of manufacturing that is held in highest regard in the entire country. He reveres the fact that of all the products developed by the company or were brought in from Europe, such as the iconic inline multicylinder pump remains a mainstay product. As the departmental head, he was personally involved in the changeover from the short path cyanide furnace to the superior sealed quench furnaces - a big leap technically, quality and environmentally.

Between 1998-2002, when Rao took over Plant TEF division (Technical and Engineering Function), the then Joint Managing Director M. Lakshminarayan gave him the task of improving the conditions of the Jayanagar plant and making it comparable to any Bosch plant in Europe. The reconditioned and refurbished plant was highly appreciated by Franz Fehrenbach, who visited the country at the time.

Rao feels that 39 years is a long time to be in a company. "But not when you love the job and have been part of so many milestone projects and significant organizational changes," he says. From the sports club that was built in the 70s and known to be one of the best facilities in Bengaluru to the canteen known for hygienic and good quality food, Rao misses the joyful days spent at Bosch. For him, the essence of Bosch is in the unwavering quality management and taking care of its people.



▲ Sudharshan Rao, former Vice President at Bosch Ltd

A unique employer that provided the freedom to work



▲ K.P. Murthy, former Senior General Manager, Bosch Ltd

At a time when the industry was not hiring engineers for Power Tools, K.P. Murthy was the first of the two qualified engineers to qualify for a job with Bosch Power Tools (PT) tools, over 40 years ago. “My engineering background has helped me to mix the techno-commercial approach and understand the purpose for which these tools are meant,” says the power tool pioneer of Bosch, then MICO.

The first ever power tool built by Bosch was a Shear, model number GAC 3.5 and the first customer of the product was the Hyderabad-based Nagarjuna Tobacco Enterprises Pvt Ltd.

Of all the leaders that Murthy has worked with, he looks up to Dr Albert Hieronimus. “Dr Hieronimus had an excellent quality of reaching out to people and charming them, thus getting things done,” explains Murthy. His most memorable events while working at the company were when he got the opportunity to connect with the late President of India, Dr A.P.J. Abdul Kalam, and Dr Sam Pitroda.

Murthy’s association with Bosch continues post his retirement from Bosch in 2021. In his second innings as an institutional businessman, and as a strategic consultant, he works towards bringing in some institutional connects with important people into the PT division, so that these specific objectives have been fulfilled in the right way.

The Bosch recipe for longevity: Quality consciousness and an open culture for learning

In 1990, when Bosch had started developing embedded software for Powertrain, R.K. Shenoy's German colleague, Mr. Gerstung, had flown in to assist in developing a team in India. During one of the meetings, he outlined the importance of quality and safety using the example of an air crash that had taken place in Bengaluru. The accident was a result of a failure in the fly-by-wire.

“Since we were going to build a software for drive-by-wire, we had to ensure that it was free of any defect – that was the only way we could be successful,” shares Shenoy, for whom this meeting asserted the value of quality consciousness they follow. Currently a Member of Executive Leadership Team and Senior VP, Bosch Global Software Technologies, he believes that it is also a fine testament of the importance of system engineering for safety critical application.

As electronics engineer in Industrial Automation, Shenoy was recruited from campus under the Tech Graduate Training program in 1986. He believes that an ‘open culture’ at Bosch enables open access to information across the organization, providing many great learning opportunities. Looking back, he credits the culture of “placing a high value on innovation and out-of-the-box solutions” for the success the company has found in many of its endeavors.

What is even more remarkable, in Shenoy's opinion, is that Bosch makes a conscious effort to dedicate 94% of its profits towards the Bosch Foundation, which is used for global humanitarian projects. “This showcases the ethos of the company. We are not a profit-optimizing company but are driven by making a positive impact in the world,” he adds.

For Shenoy, Bosch's tagline “invented for life” and its vision for creating thoughtful solutions to improve quality of life is what keeps someone like him, an “engineer at heart”, motivated in the long run. Till date he remains inspired by Robert Bosch's approach, “I would rather lose money than trust”.



▲ R K Shenoy, Member of Executive Leadership Team and Senior VP, Bosch Global Software Technologies

ON INVITATION





From Local-for-Local to Local-for-Global

**Bernd Bohr, Former Chairman,
Automotive Group, Robert Bosch GmbH**

The role of Bosch India in the context of the globally active company was purely local-for-local, in the beginning. The Indian market with its needs in, on and off-highway products were addressed with a strong local organization then, under the brand MICO. Beginning nineties, Bosch India became a step-by-step contributor to the global business of Bosch; first and foremost, in software, but also by taking over the global responsibility for complete product groups and in part becoming the fully responsible window for a group of non-Indian customers. What is covered by just two sentences here was a challenging and sometimes adventurous journey over two decades and is presumably continuing till today. The challenges are manifold, but the key to any successful international collaboration is mutual: understanding, trust, and respect. Working across thousands of kilometers, bridging time zones and diverse cultural backgrounds in a business which requires meeting schedules to the day and cost targets to the cent, is only possible with a “all for one and one for all” mindset. As the tone is set by the top, contributing to building the management teams of the Bosch organizations in India was always key for me and I must say, I am proud of what Bosch has achieved here.

From “watching from the sidelines” to becoming a “key player in the court”, India kicked the ball into a new playing field altogether. The automotive market is always said to be “global”, but it has very strong local priorities. Japanese customers are focused on comfort, so products need to be extremely quiet. Germany is all about high-end and premium, for the US products need to be robust at low cost. As a global automotive supplier, there are two ways of looking at this situation: one is to complain about the complexity this is creating, not allowing for “standard” products across the world. The other is to use diverse customer wishes to challenge the engineers to find a solution for these specific requirements, without sacrificing others.

In my words: Learn from one region and sell it to other regions. While China largely replicated European/Japanese and US automotive technology, Indian OEM were in many ways more demanding to

receive solutions for the very price sensitive Indian markets. The most exciting learning experience for me was the work we did for the Tata Nano. In the beginning, the engineers, especially those in our German organization, did not believe that the cost targets could be achieved. But once they accepted the challenge and the Indian-German teams jointly put their energy and ingenuity to work, they came up with technical solutions, which they didn’t imagine to be possible before. So, the vision of Ratan Tata for the “One Lakh Car” gave a catalytic push to our global company. Engineers were proud of proving that Bosch was able to achieve “premium value for money” as well as “high end technology for premium cars”. It broadened the perception of Bosch with its international customer base and the technological concepts developed for the Nano were later migrated to many platforms.

Bosch India is a confluence of two cultures. Working across cultures is - at its very core - bringing the right group of people together and building leaders, who love the challenge of working beyond their own cultural frame. Easily said, one can never rest at ease and believe “mission accomplished”. It needs constant awareness, adjustment, and charging with new energy. The stereotypes are all still there and falling into the “Them-and-We-trap”, the “these Germans ...” or “those Indians ...” thinking is sometimes only a couple of steps away. Positive examples of joint achievements, role models in the development of leaders, constant exchange of future leaders between the cultures - not in a way of training but as deep immersion - all contribute to the stability of such a joint venture.

I was honored and privileged to have had the Board-responsibility for Bosch India for 10 years. Having before lived in Japan, India exposed me once more to a culture, which was unknown to me. I thank everyone with whom I worked, both within Bosch as well as with customers and stakeholders, for having had the patience to acquaint me with India, for respecting that I sometimes purposefully disagreed to do it “the Indian way” and for trusting me, that all of this was with the intention of doing the best for the company.



Bosch India: The most interesting and satisfying chapter of my career

Dr. Albert Hieronimus, Former Chairman and Managing Director, Bosch Ltd.

Congratulations to Bosch India on successfully operating for 100 years in the country. I'm proud to have been a part of this success story. My association with Bosch India started in 2003 when I joined the then Motor Industries Co. Ltd. (MICO) (now Bosch Limited) as Managing Director. I remember it as one of the most interesting and satisfying chapters of my career.

I found a highly motivated team who were passionate about driving the transformation in the Indian automotive industry towards cleaner and safer cars with state-of-the-art technology from Bosch with growing local content. The team played a key role in improving Bosch's footprint in the other market segments served, such as Power Tools, with the same passion. A team like this could safeguard high market shares and establish Bosch India as a preferred supplier with excellent customer relations in almost all market segments.

Among the key technological milestones, I was fortunate to lead Bosch India during the production of the first Common Rail Injection System for Mahindra Scorpio. The project had an application time of just 15 months.

On June 1, 2006, we rolled out the first Common Rail High-Pressure pump at the Adugodi location. Several key customers were present for the occasion, and I remember that the facility at the time was rated to be among the best production lines in the Bosch world. I also remember the immense sense of pride and accomplishment when Bosch India developed the smallest Common Rail System for Tata Nano, the "People's Car."

My tenure as Managing Director ended in 2008 – it was in February of that year that MICO was officially renamed Bosch Limited. My association with Bosch India continued as I had the opportunity to serve as Chairman of the company till 2013.

All these years later, what remains in my mind, are the personal friendships and enduring relationships with former colleagues and the satisfaction of having been part of this great organization. I wish Bosch India continued success as it ventures into the next century.



My ties with Bosch India have lasted longer than my tenure

**Franz Fehrenbach, Former Chairman,
Robert Bosch GmbH**

In 1996, I switched from automotive electrics to the diesel division. Right from the start, I became aware of the huge importance Bosch India – or MICO as it was back then – has for Bosch's diesel activities. This was why I lost little time in making my first major trip to India. It came about in 1997, and I accompanied Mr. Schnabel, who was then the President of the Diesel Systems division.

We visited all the main Bosch locations in India. These first impressions were overwhelming and are still deeply ingrained in my memory. I will never forget how interested and inquisitive our Indian associates were, right from the start. They latched on to all our information and explanations and – even more impressively – put them into practice. And when I visited them the next time, they would proudly demonstrate what they had done. But there was something else I clearly felt during this first visit to India – the warmth and affection many associates showed me. For me, this mutual affection is something that has lasted to the present day.

Equally unforgettable for me are the impressions of my first car journey to Nashik. I experienced several near-misses, and the contrast between Bosch orderliness in our plants and the standard of luxury in hotels and in our guesthouse in Nashik, on the one hand, and, on the other hand, the life on the roadside I saw as I drove to our plants. All these images have left an indelible mark on my mind.

I was also extremely fortunate to have people as partners who could explain India so well to me. Over the years, they helped me understand India a little better. Out of the many people who helped me, I would like to mention three explicitly: V. K. Viswanathan, M. Lakshminarayan, and Soumitra Bhattacharya. We have become very close personally over the years, and I now count them among my friends.

In 1999, I became a member of the MICO Supervisory Board and its Chairman on September 16, 1999. I remained in that position until mid-2003 when I became Chairman of the Bosch Board of Management. Seen in the context of Bosch India's 100-year history, this was a relatively short period of time. But for me personally, my ties with Bosch India lasted much longer than the roughly four years I was on the MICO supervisory board – for decades, in fact. While it was not my direct responsibility to support its successful development, I was able to provide support indirectly via associates and executives. My period of involvement with India was in fact longer, lasting several decades.

I wish Bosch India a prosperous continuation of its special success story.



A strong team with a shared vision is essential for success

Peter Tyroller, Former Member of the Board of Management, Robert Bosch GmbH & Former Non-Executive Director, Bosch Ltd.

The period from 2013 to 2020 was an unforgettable period for me; it was then that I served as a Board Member for Bosch India. As I rewind to those years, I am flooded with myriad memories.

But three things stood out the most for me in these seven and a half years.

First, I was impressed by the culture of this great country and its passionate people. Second, I recognized the huge market potential of a country with 1.4 billion people. And the third thing is that I also realized that India is like a Bollywood film – full of ups and downs, but always with a happy ending.

So, what does it mean to be responsible for India? You need to believe in the country and to convince the ones who are far away that India is a good country to invest in. This sounds easy, but it isn't, especially when China took all the attention of divisions and business units.

In such a scenario, how does a company achieve success in India? A competent and passionate local workforce, with a strong will to succeed and one that will never give up is vital.

In my experience, building bridges wherever needed to read the other person's mind to start a fruitful dialogue is important to take the right decisions. But this can only work if you are backed up and supported by a strong team, which shares the same vision. On this occasion, I need to thank the Indian team, who always supported me by doing this.

At Bosch India, we believed a lot. Heavy investments in new buildings like Adegodi, for increasing localisation of production, and in Bosch learning Center to enable learning and development of the workforce are fine examples of this.

As Bosch India celebrates its 100th anniversary this year, I would like to congratulate the company heartfully for all their achievements. I wish all of you a splendid future and thank you once again all of you for your continuous support during my time. All the best! I live with the best memories!



A champion with a promising future

Dr. Stephan Grabherr, Deputy Chief of Mission, Embassy of Germany in India

When I was in Bengaluru in November 2021 visiting the Bosch Campus, I experienced first-hand the unwavering spirit of innovation and cutting-edge technology.

As I have no engineering background, I trust those professionals who can explain state-of-the-art technology to me in simple words. Therefore, I was enchanted to meet friends at Bosch, headed by President and MD Soumitra Bhattacharya, who led me through their marvelous showroom, explained the company's scientific achievements and let me sense an atmosphere of moving technology forward.

Bosch is not only a champion of researching and developing useful products but follows the guiding principle that technology should serve the people. I am convinced that the long-lasting success and remarkable tradition of Bosch make for a promising future when new forms of mobility and renewable energies will shape our realities around the globe.

During Dr Grabherr's visit to Bosch India, he was led by Mr Soumitra Bhattacharya to the Bosch Experience Center where Dr Grabherr was introduced to the numerous facets of Bosch via galleries that focused on the Founder, Old Mobility, Current Mobility, Beyond Mobility, Software, and Corporate Social Responsibility.

Like in Germany, Bosch shares a deep and long relationship with the German government in India through the consul and embassy. A great example of this is the collaboration Bosch has with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH to promote sustainable mobility solutions in Indian cities. This collaboration dovetails Bosch's technical know-how of mobility innovation with the strong local presence with GIZ's public and private sector network.



Bosch-Mahindra: A relationship built on milestone projects and world-class mobility solutions

Pawan Goenka, Former MD and CEO, Mahindra and Mahindra Limited (Automotive and Farm Equipment Business) and Independent Director, Bosch Ltd.

My first exposure to Bosch was in 1994-95 when I had just joined Mahindra after having returned from the US. During a meeting for next year's material cost budget, I came across the term "three percent plus Bosch". On inquiring, I was told, "With Bosch, we don't budget. Whatever they ask for, we just accept it."

From a premium, heavy-handed company, to the customer-centric, almost local supplier for the Indian automotive industry, we have seen a great transformation at Bosch in India. This has been made possible by successive Managing Directors (MDs), who treated India as their home country for Bosch and worked closely with Indian OEMs to understand the needs of the Indian customers and thereby provide appropriate German technology at "almost" Indian costs. This is perhaps the most important transition at Bosch.

Bosch and Mahindra have had a powerful relationship built over the years with many successful projects. A major milestone that was jointly achieved was the development of the first-ever Common Rail Diesel Engine (CRDE), which was undertaken in India in 2004. Mahindra challenged Bosch to develop the CRDE in just two years, which was a tall ask. The then Managing Director, Dr Albert Hieronimus, who had high confidence in his team, accepted the challenge and successfully delivered it, demonstrating its aggressive technical prowess and agility. This was one of the many successful projects that helped redefine Mahindra's capability on class-leading engines.

In 2007-08, Bosch helped Mahindra develop the microhybrid (start-stop) system, yet another first in India, which Mahindra adopted in all its vehicles. By defining India relevant specifications, deleting unnecessary features, and giving customers what they wanted, not what the technology dictated, Bosch delivered a cost-effective

mobility solution. Not only did we achieve 4-5% better fuel efficiency, but it was also done for almost one-third of the cost in Europe, giving a huge competitive advantage to Mahindra.

In 2010, I challenged Bosch to supply the Anti-Lock Braking System (ABS) for 50 Euros, as this crucial safety feature was unaffordable for the price points for cars in India. In return, we assured the adoption of ABS in all our vehicles, promising volumes and making Bosch the single-source supplier. The prevailing price at that time was near 100 Euro. Bosch took an aggressive approach to price and localizing as much as possible to provide an ABS in India. At a certain point, Bosch-Mahindra together accounted for over half the ABS vehicles sold in India.

What I like most about Bosch is that it was rare in the early 2000 for a European automotive supplier to provide the A-team to their unit in India with strong support from the parent firm. It is not surprising to see that Bosch has won all conceivable awards that Mahindra has given out in the supplier ecosystem. I have visited Bosch Germany more than any other supplier located outside of India, and I enjoyed the rich technical discussions. I have interacted with every Bosch Chairman and met the entire Bosch Management Board several times. The Mahindra-Bosch partnership was not all work. At our annual event called Great Escape, we witnessed the Germans dance to Bollywood tunes. Even Dr. Steffen Berns, an otherwise serious person, was seen shaking a leg.

Bosch has always treated India with very high priority and a certain affinity, even though business volumes are not very large. The respect that I have developed for Bosch over the years is what made me readily accept the invitation from Soumitra to join the Bosch India Board upon my retirement from Mahindra.



Bosch is an unrivaled market leader in India and the world over

Venu Srinivasan, Chairman Emeritus of Sundaram-Clayton Limited and TVS Motor Company

My association with Bosch India traverses four decades, and over that length of time, my admiration for the company's unswerving focus on quality and technology has grown in leaps and bounds. From fuel injection and electrical parts for automobiles and power tools to home appliances, what shines through is superior technology, unwavering attention to quality, manufacturing prowess, and precision engineering, all of which places Bosch as an unrivaled market leader in India and the world over.

It has been a privilege for TVS to be associated with Bosch India. As a quality-conscious company, Bosch India has certainly set the bar high and is an industry leader worthy of emulation.

The valued association between TVS and Bosch started with the spark plug business. The bond grew stronger with the release of the first Bosch Engine Management System project on the Apache motorcycle in 2013-14. In the past decade, we

have further strengthened our association with projects in the domains of the engine management system and safety with ABS across all two-wheeler motorcycle segments. In 2020, we embarked on the journey of electrification by being a part of the first EV 2W launch with Bosch providing key powertrain components.

My deepest appreciation and congratulations on reaching the landmark 100th year of operations in India with remarkable, unstinted service to the nation. From a modest sales office in Kolkata in 1922 to a state-of-the-art smart office at Adegodi, Bengaluru in 2022, and 18 manufacturing sites in India, it has indeed been a glorious journey for Bosch India, which is today unequivocally recognized as a trusted, household name.

I want to take this opportunity to wish Bosch India every success in the years ahead and best wishes to forge ahead from strength to strength.



Always striving to be ahead of the global technology curve

**Baba Kalyani, Chairman and MD,
Bharat Forge Ltd.**

My association with Bosch spans over more than 25 years: First in the form of a strategic partner in the brakes business and then as a member of the company's International Advisory Board. During these years, I have had the special privilege of knowing and working with Bosch stalwarts such as Hermann Scholl, Wolfgang Drees, Bernhard Bihr, Franz Fehrenbach, and Volkmar Denner, among others.

With over 100 years of remarkable history in India, Bosch is deeply embedded in the Indian manufacturing eco-system. Through Bosch, thousands of its employees and several Indian companies have been a great beneficiary of German technology, human resources training and world class research and innovation capabilities.

Bosch's transformation, over the years, has been remarkable. I have observed that innovation and technology development, which are deeply embedded in the culture and ethos of the

organization coupled with the vision to be the world leader in every segment that Bosch operates is at the core of the company's success and its rich legacy. As a company, Bosch has always strived to be ahead of the global technology curve. Seamless adoption of new technologies and integration with their product lines has always provided a distinctive competitive edge to Bosch in every field.

Hosting Dr. Scholl and Members of the Board of Management at our facilities in Pune was definitely one of the very special and most cherished moments. On a personal note, my wife Sunita and I have made great friends and carry fond memories from our rich association with the Bosch fraternity.

I congratulate the Bosch fraternity for completing 100 glorious years in India!



Bosch India is the unfailing heart of the Indian automotive industry

**Ramaswami Seshasayee,
Former Managing Director, Ashok Leyland**

Bosch is a name that has invoked awe, respect, friendship, and sometimes fear within the commercial vehicle industry in India for many decades. For most parts of the last century, Bosch was almost a single source for Fuel Injector Pressure Sensors (FIPs) for automotive diesel engines. Thus, like the spiritual atman, Bosch merely manifested itself in various forms and brands of commercial vehicles.

When Bosch sneezed, the commercial vehicle industry went down with a bad cold. In the latter years of the previous century and the early years of the present one, labour problems were not uncommon in the industry. Bosch India was not spared from this affliction. During my 13-year tenure as Managing Director of Ashok Leyland, I can recall at least three episodes of plant closure at Bosch India due to labour issues. Being a single source means that these closures had a direct and irremediable impact on our production. But, on each occasion, I was left with a feeling of deep respect for Bosch India, because of the advance and continual communication of the situation, the sense of fair play in 'rationing' the limited output amongst competing customers, and the restraint shown in not resorting to commercial exploitation. It takes a fierce commitment to customer-centricity to gain appreciation under such challenging circumstances.

We would always look forward to technical discussions with Bosch engineers because of the enormity of learning and the opportunities they provided. When India embarked on the

emission road map to catch up with the rest of the world in the early years of this century, Bosch India played a critical and useful role in shaping the future. I helmed the Society of Indian Automobile Manufacturers at that time, and I hugely benefitted from the several inputs from Bosch. The West had jettisoned in-line pumps in favor of rotary pumps and later electronic injection when they embarked on their journey to move up the emission ladder, but we, at Ashok Leyland, believed that there was still much potential left in the in-line pump to offer a cost-effective and more appropriate solution for some more levels of emission control in India. Although this stand of ours ran counter to the commonly held beliefs at Bosch, to the credit of Bosch leadership, this suggestion was taken up seriously, worked upon, and improved, resulting in the resurrection of the in-line pump to serve until BS-IV. This spirit of co-creation with the customer has been an abiding value of Bosch India.

As Bosch India celebrates a century of service to the Indian automotive industry, it can take justifiable credit for having been the unfailing heart of an industry that has taken rapid strides in moving from a floundering laggard to being at striking distance of a pole position in the world, in a few decades. Like the atman, may the organization live forever!



Offering employees the best facilities both on and off-campus

**Shivashankar T, Former Union Member,
Bengaluru Plant**

The relationship between the workers' union and the company's management is tricky. Navigating this association most amicably to fulfill the common goal of employee welfare is always the best course of action, as the union serves as the bridge between the company and the employees.

I joined Bosch as an apprentice in 1975 and was onboarded as a permanent associate in 1978. I became a union member of the association headed by the then union leader, Suryanarayana Rao. The Bosch, then MICO management, shared a happy relationship with Mr. Rao in the 1970s and the 80s, which ensured that the employees got the best amenities both on and off the campus. However, as the company grew, the management always took immediate measures to streamline facilities for the well-being of the workers.

In the 1980s, we witnessed the industry benchmark initiated by the management in transport and medical services. To ease the employees' commute to the office, Bosch management reached out to the Bengaluru Metropolitan Transport Corporation

(BMTTC) and requested to extend the BMTTC service to the Adegodi plant location, which helped workers save time and effort spent on travel. Later, the company also hired an agency to provide additional transportation services for employees to reach the plant. The company also introduced small vehicles and forklifts to ease the movement of heavy materials within the campus.

I recall that another important area where the management made a breakthrough effort was the agreement with Manipal Hospital. Under this arrangement, an entire floor at the hospital was dedicated solely to the treatment of Bosch employees. The organization extended the retirement age from 58 to 60 years for all associates, thus enabling them to receive more financial benefits for a comfortable post-retirement life.



A multinational company with a local heart

M. Lakshminarayan, Former Joint Managing Director, Bosch Ltd.

After beginning my career with Tata Motors, I moved to Bosch Ltd., then Motor Industries Co. Ltd (MICO) in May 1987. When I informed my friends about my decision to join MICO, they were full of praise for the company, but warned me that all directions came from Stuttgart, Germany—including the size of the breakfast vada!

The truth was that it was somewhere in between. It was a company based on standardization in all aspects of business, which meant that when we manufactured a product, there would be one Bosch standard only. And as a German parent, it was followed meticulously; maybe the vada parameter was exaggerated. I was used to the term “Export Quality” in the Indian industry. During my induction, both the then Managing Director, Dr. Rabus, and Plant Manager, Dr. Bartsch, clarified that Bosch had maintained one quality worldwide, and I had to adhere to it. Thus began my journey at Bosch.

As a global organization, we had the advantage of checking if the same process or product had been tried elsewhere in the Bosch World and the results of the same. This was a great advantage for technical innovation. The managers in India and Germany encouraged innovation with the target of continuous improvement in performance and reliability, reducing costs, and improving quality. We practiced Cost of Ownership during the early 90s, and today, it’s a watchword for any product.

In the early part of the 2000s, we also began a journey of BeQIK (a German acronym for Profitable growth through Excellent Quality and Innovation leading to customer satisfaction). Keeping this in mind, we practiced “Go to Gemba” not only in the manufacturing plants but also with the customers to solve problems at their roots. In India, Bosch pioneered the trend of nominating ‘Mr Customer’ as an identified Manager, who would be empowered to be an interface between the company and the Customer on Quality, Performance, and Sustenance of the same.

Bosch was at the forefront of contributing and participating in all facets of the country and the city in which we operated. True to German culture, the watchword was skill development, and one of the first departments to be set up was the MICO Vocational Center (MVC), which trained apprentices in manufacturing processes. This was set up even before the Apprentice Act 1961 came into force! The MVC (now BVC) made us proud by winning the President Gold Medal for the Best Training Establishment Nationally for over 60 years continuously! Our sports facilities were part of the city’s infrastructure, be it cricket, hockey, or any other outdoor or even indoor games. We encouraged our employees to take part in tournaments and competitions with the view of excelling.

Bosch is a Multinational Company (MNC) with a local heart. Frugal engineering was encouraged and being ahead of the curve in product engineering helped customers be part of the global advancements in technology. The integration of the Product Teams from India with Bosch Global Teams led to the breaking down of barriers, giving rise to intense participation in worldwide programs, and developing international managers. Board members of Bosch in Germany kept a keen eye on spotting and nurturing talent from Bosch India as a part of the Global HR Mission. The company brought out the spirit of Business Excellence when it won the CII Exim Bank Award. The participation and winning of the award were to involve the grassroots colleagues in nurturing the spirit of Business Excellence in all aspects.

Finally, the spirit that a commitment to a customer is more than a thousand words written on the same always guides us. To this effect, every employee understood they had to be careful and conservative in committing but achieve far higher!



My memorable association with Bosch India

B. Muthuraman, Former Board Member and Independent Director, Bosch Ltd.

My first interaction with Bosch India, then known as MICO, was way back in 1978. I was an Applications Engineer at Tata Steel, entrusted with the job of assisting customers with the right choice of steel for different applications. In one of the rounds, while visiting potential customers, I knocked on the doors of Bosch. I was on my motorcycle, an unknown entity, trying to market new steel, but Bosch's friendly doors opened for me.

The first person I met at Bosch was Mr. Vinod Krishna, the portly Purchase Manager, who was always clad in white. He was friendly but tough. I told him that Tata Steel would like to try out new steel in place of the steel that Bosch was using to make spark plugs, which was being imported. Mr. Krishna looked unconvincing but still gave a small trial order. The order was successfully fulfilled, and over time, Bosch started procuring 100% from Tata Steel for this application. This was a great victory for me, the young, aspiring applications engineer. I don't know what clicked between me and Mr. Krishna on that day. I felt it had much to do with Bosch's openness, transparency, and willingness to listen. I will always remember him.

Some years later, during the 80s and 90s, after Tata Steel gained the capability to produce anti-friction bearings, we started supplying bearings to Bosch, and that developed into a closer, healthy supplier-customer relationship. I remember meeting

Mr. S.K. Sharma, Chief of Materials. I developed a huge respect for his knowledge, his approach to suppliers, his openness and transparency, and his fairness and negotiating skills. He was a fine example of his profession and truly represented the Bosch culture.

In 2007, I got a call from Mr. Albert Hieronimus, the Chairman of the Bosch India Board, asking me to have lunch with him in Mumbai. We met and, on his invitation, I joined the board of Bosch India – and spent six memorable years on it. I got deeper insights into Bosch, its philosophy, and how it functions: deep technical knowledge, genuine commitment to stakeholders, openness, transparency, high level of ethical governance, a culture of innovation, an intense commitment to India, and conducting business in a socially and environmentally responsible manner. It has been my pleasure and privilege to have known Bosch India over the last four decades and to be associated with it. I wish Bosch India and its team continued success in satisfying all its stakeholders.



Once a ‘Boschler’, always a ‘Boschler’.

VK Viswanathan, Former Joint Managing Director and Former Chairman of the Board of Bosch Ltd.

I joined Bosch in 1998, after having worked for almost 20 years at Hindustan Unilever. I would often joke with my friends that I had shifted from a toothpaste and detergent company to a company that manufactures fuel injection pumps and spark plugs.

On a rainy evening in September, I landed in Stuttgart for a two-year training wondering whether I would be able to fit in and make a career there? I was lucky to have been paired with Mr. Franz Fehrenbach as my mentor. He took me under his wing and guided me with great care and empathy. On realizing that I didn't understand German, he translated every word for me in English, even at the cost of double his time and efforts. He did this consistently for 24 months! His humane approach to unlocking my potential in an open and transparent way left the greatest impression on my mind. Another person who I looked up to during my 20-year-long career with Bosch was Mr. Bernd Bohr, who insisted on customer centricity as well as customer obsession and doing business in the right way.

I returned to Bengaluru in 2008 to take up the role of Joint Managing Director at Bosch Limited (then MICO) and was given the responsibility for all commercial functions. During this time, I witnessed another historic milestone when the name changed from MICO to Bosch. Later, I also served as Chairman of the Board of Bosch Limited.

What struck me almost from the beginning was Bosch's fetish for quality—it's not a flamboyant company but a very understated one that does things beyond one's imagination. There was also a high level of loyalty to the brand among the employees—several of them joined Bosch just out of college, built their entire careers there, and eventually retired from there as well. I believe Bosch values transcend legal entities and countries, as I have had a similar experience during my stints at Bosch US and Germany.

I am proud to have been a ‘Boschler’ and in this centennial year, I would like to congratulate all those who've been part of the organization's journey.



A legacy brand rooted deeply towards trust, sustainability, and fairness

Renu S. Karnad, Former Board member and Independent Director, Bosch Ltd.

My association with Bosch began in 2013 when I joined the Board of Bosch India as an Independent Director. In 2011, Bosch's 125th-anniversary celebrations happened in Stuttgart. It was an experience that will stay with me for a long time. The passion, commitment, and reverence for the brand displayed by employees, partners, and other stakeholders was overwhelming.

The spirit of inclusiveness inculcated amongst the staff is amazing. A case in point is Primavera—an initiative where the employees come together and devote time and energy towards some social initiatives. This is a wonderful illustration of the core values of an organization, and I think such initiatives should be emulated by every company. They not only help in team building but also serve as an effective means through which the corporate world can give back to society.

Bosch's mobility solutions always play a huge role in solving India's transportation challenges and helping India emerge as a major global automobile hub. It is perhaps one of the biggest contributions of the company to the country's growth and development over the last century. For a country the size of India, innovative and cutting-edge solutions in the field of mobility, be it hardware or software, that make mobility efficient both in terms of performance and cost, are a boon. They are also imperative to the exponential growth that the nation has seen in the last three decades.

Bosch, like many other legacy brands, is steeped deeply in values such as trust, sustainability, fairness, and other values that have stood the test of time. The brand Bosch has now completed 100 years in India, which is a testimony to the power of its values and commitment.



Bosch: Deep rooted in building a better society and India

Bhaskar Bhat, Former Managing Director, Titan Industries and Lead Independent Director of Bosch Ltd.

On a Monday afternoon, way back in December 2012, I got a call from Mr. VK Viswanathan, the then Managing Director of Bosch Ltd. He wanted to come and meet me at the Titan office. This meeting was followed by another with Mr. Albert Hieronimus, the ex-Chairman of Bosch Ltd and it was a rare professional experience even if it came so late in one's career. It filled me with pride that the Chairman of a multi-national company was inviting me to join the Board.

On joining the Bosch board, my eyes opened to a globally excellent enterprise that had engineering and technology at its core with a strong business sense. The second, and more interesting to me, was the near-perfect match with the values of the Tata Group, to which I belonged as the Managing Director of Titan. From my first meeting till now, I have found the leadership at Bosch Germany and the management at Bosch India to be the most receptive and keen to learn from the individual experiences of their independent directors. We were a motley crew of four, including Mrs. Renu S. Karnad from HDFC, Mr. Prasad Chandran from Badische Anilin-und Sodafabrik (BASF), and Mr. Bernhard Steinruecke from the Indo-German Chamber of Commerce. All of them were exceptional professionals and affable colleagues on the Board.

Some features of the culture at Bosch are unique, like the single-minded focus on continuous skill-building in people to make them better professionals, total process orientation even when untoward incidents occur, and a widely distributed sense of social responsibility. One incident that I recall fondly was the interaction with young underprivileged girls whom the Jaipur Unit had engaged with over several years. The confidence with which they spoke and the personal ambitions they articulated made me feel proud that a multinational company had so well understood the Indian child.

I have cherished every moment of my interaction with the likes of Vishy, Peter Tyroller, Bernhard Straub, Stefan Hartung, Markus Bamberger, and wonderful people such as Suresh, Srini, Sandeep, Guru, and the gem of all in the Bosch crown, Soumitra Bhattacharya. I consider it my good fortune that I am associated with this great company and group in the 100th year of its presence in India.



A trusted partner in helping the government battle the pandemic

**Amitabh Kant, Chief Executive Officer,
NITI Aayog**

My heartiest congratulations to Bosch India on the centenary of their operations in India. I have had the pleasure of working with the company on numerous initiatives, and I commend them for their commitment to innovation, technology, and the Indian growth story.

Bosch was a trusted partner during the Global Mobility Summit in 2018 and participated in deliberations towards charting a revolution in India's mobility space. Their exhibition showcased cutting-edge technologies in mobility. I have also had the pleasure of interacting with Dr. Volkmar Denner, former Chairman of Bosch Global Management in 2019, where we deliberated on opportunities in the Indian economy.

Apart from positively impacting the Indian economy, Bosch India has emerged as a trusted partner in helping the government battle the pandemic. I had the pleasure of inaugurating the Bosch Make in India mask line in Bengaluru in June 2020.

Early that year, Bosch India pledged Rs. 50 crores to fight the pandemic and invested in ventilator repairs, Covid care centers and worked towards upgrading primary healthcare centres across its facilities.

In the second wave of the pandemic, Bosch India came forward to help, extending medical aid worth nearly a million Euros. I received the consignment on India's behalf. The shipment included 92 ventilators and 438 oxygen concentrators, 10 oxygen cylinders, and other medical supplies such as face masks and glass cannula from major manufacturers. This shows that Bosch is a socially responsible company, and I deeply appreciate the efforts made by Bosch India and Robert Bosch GmbH in helping India battle the pandemic.



SPARK.NXT - PAVING THE WAY FOR THE FUTURE



Bosch India in a multipolar world

The economic-industrial and geopolitical order is changing. The mighty American dominance in trade and commerce is challenged heavily. Covid-19, US-China trade relationships, Russia-Ukraine conflicts have hastened the need to look at a world that is a lot more multipolar than what we are used to currently. The world is witnessing the rise of multiple players including China and India. Asia has taken over as the growth engine from the west.

For Bosch in India, this presents a new set of opportunities. A new phase of government-led, enterprise-driven model is emerging in India with the government supporting the industry leapfrog and gain competitive edge via emerging technologies, phased manufacturing programs, clean and green energy initiatives and self-reliance. Significant allocation of budgets for production-linked incentives is likely to bring in large manufacturing activity in advanced technologies.

Bosch India has continuously focused on bringing high localization content in all products for the Indian market and will enhance this focus riding on the new incentives from the government. Establishing a resilient supply chain and making smart use of Free Trade Agreements (FTAs) will also be key to the success of manufacturing in India as we move forward. E-commerce has started playing a significant role in the new Digital India and Bosch is transforming its business to go digital in a big way.

Soumitra Bhattacharya, Managing Director, Bosch Limited and President, Bosch Group in India says, “The post-World War II order is changing rapidly. The interests and preferences of Indian customers are changing rapidly. As we move from a phase of globalization driven by a liberal order to one that is shaped by a more multipolar world, it is important for Bosch in India to focus on shaping the change with local agility while maintaining global connectivity.”



▲ A multipolar world presents a new set of opportunities for Bosch in India

Building connected, safe, and sustainable mobility solutions

In today's world, on one side, we are spoilt with the choices on ways to travel and, on the other side, with the threats of black swan events like Covid-19, the frailty and vulnerability of the mobility ecosystem has been exposed. Bosch India believes, under these trying circumstances, it is important for the organization to re-look at the mobility landscape and shift towards using a scenario-based thinking to create possibilities.

To do this, there is one key evolving question that the Project House Mobility Solutions (PJ-MS) team always looks to answer



▲ PJ-MS is creating a future of connected mobility

and the one that drives us: How will mobility evolve both for goods and people in the coming decade?

In the business context, new age technology, consumer preferences, and evolving regulatory landscape have brought a paradigm shift in how businesses work in this era. Emergent behavior is response of a system that does not depend on its individual parts, but on their relationships to one another. The emerging design of business is a platform. The platforms enable participants to interact, co-create, and exchange value with each other. They are the key enablers of value creation on platforms and a new source of competitive advantage at the same time.

PJ-MS moves from solving a specific use case to an enabling platform where solutions can be discovered and co-created. With its vision of mobility without side effects, we aim to empower and enable the businesses to come together and enable them to contribute to building connected, safe, and sustainable solutions.

Furthermore, the Mobility Store is the team's framework of platforms and solutions in the digital mobility space comprising of a sighting platform concept, a marketplace, a Cloud Platform, Park Zeus, a cloud-based parking management solution and L.oS, a logistics platform that aims to bring data, services, business processes and partners and consumers onto single level playing field making all operations visible, intelligent and sustainable.

And this is just the beginning of the impact, they would like to create in the connected mobility ecosystem.

Making ‘smart work’ a reality at Bosch

The Covid-19 pandemic had a significant impact on multiple aspects of how we work. International Institute for Management Development’s (IMD) Global Centre for Digital Business Transformation supports the idea that it accelerated enterprise digital transformation significantly. Most countries implemented strict lockdowns forcing companies to look at alternate forms of getting the business going.

Large number of Bosch associates worked productively from home or other remote locations during this time. While today many have returned to offices, some continue to work remotely or from home. Suresh B R, Country Head, HR, Bosch Limited, says, “I am proud of the flexibility and adaptability of ‘Boschlers’ in India who turned around in record time to ensure business continuity in such a short period of time! There was a cultural shift, where a common purpose of ensuring business continuity while taking care of employee and their families’ health and well-being, made the seemingly impossible possible. This also paved the way for old paradigms of work from home to be completely broken and made the change to ‘Work from Anywhere’ a reality.”

Bosch is globally adopting a hybrid working model called ‘Smart Work’, which is a digital transformation lever for the organization. It is actively shaping innovative ways of working and leadership culture and supports employees with flexible working options.

In India, effective May 2022 Bosch has made ‘Smart Work’ a reality too by adopting new forms of working and turning the workplace into a more collaborative space. There is no “one size fits all” when it comes to new ways of return-to-work. As the competitive situation for industries gets more difficult in the coming decade, adopting the right work culture and achieving high levels of productivity will be extremely critical in the Smart Work model. What is clear is that in the next decade new ways of working will mature further and enable the organisation to stay ahead of the curve.



▲ Bosch is globally adopting a hybrid working model called ‘Smart Work’

Leading the digital fluency drive

Digital transformation is not just a necessity, but a need for the survival of the company in the future. To thrive in the internet world and to actively shape the value chain disruption that is unfolding, there is no escape from digital transformation. That is the reason why most new unicorns today are digital native companies. What sets these companies apart from the rest is that they can close the gap between what digital customers already expect and what today's analogue businesses can deliver.



▲ Bosch India has embarked on a companywide digital fluency drive

Most legacy companies are working overtime to catch up and are embarking on major digital transformation efforts. This is as much a mindset and culture issue as it is an issue of establishing digitally enabled processes and business models. The automotive value chain is getting disrupted heavily and new and innovative business models enabled by rapid digitization are getting established with every passing year. Direct to customer sales, delivery, and service are already catching up very fast.

While business model changes driven by digitization are essential, business process digitization is equally critical to remain an operationally efficient, transparent, and agile business.

All this rides on the fact that we have digitally savvy associates who can think of solving problems using the new age digital methods.

Bosch India recognised the importance of this and embarked on a major digital fluency drive across the company for all associates. Rapid advances in digital processes are now underway to prepare the company to handle businesses which are digitizing rapidly. Bosch Ltd has business divisions like Automotive Aftermarket and Power tools (AA & PT) who are embracing e-commerce in their businesses.

Ramesh G R, Head of Information Technology, and Digital Transformation at Bosch Ltd, says, "The boundaries between functions, locations and legal entities are getting blurred due to increasing interdependencies and the need for consumer-centric approaches to designing digital services, as opposed to organization-centric approaches. The need to provide end-to-end services, adopting the methods of digital transformation, agile development methods, disruptive business models, and above all, the as-yet unfathomable opportunities offered by the emerging technologies like AI, ML, and IoT are strong forces pushing the limits towards the evolution of digital ecosystems."

Shaping the mobility of the future

Cities are the future – a future that is fast becoming the present. Already, more than 50% of us live in towns and big cities, and almost 65% of mobility is urban. In the next few decades, we will have to evolve our transport and logistics infra to respond to the pressures of India's urban growth.

At Bosch, we believe the mobility transformation is propelled by four major disruptive trends: Personalisation, Automated Driving, Connected Vehicle Technologies, and Electrified powertrains. For an industry used to relatively slow and deliberate technology induction, each of these trends can significantly disrupt the automotive world. In synergy, they will drive an unparalleled transformation, creating a future defined by highly interconnected multi-modal transportation systems where consumers seamlessly transit between private, public, and shared transportation modes. The movement of goods will be radically more efficient and cheaper.

Critical to realising this future will be data-enabled digitally managed mobility services and solutions, an area of Bosch expertise the world over. In India, engagements have started with several OEMs and Progressive Mobility Providers to work collaboratively to shape the new ecosystem.

To drive the platformization of mobility, Project House Mobility Solutions is spearheading the development of digital mobility solutions. Bosch Mobility's Transform to Grow platform is enabling the organization to constantly evaluate against new disruptions and tailor-make products and solutions.

"The mobility of the future has to be emission-free, accident-free, and exciting. We are working on several domains to enable the mobility eco-system achieve these objectives. The decisions made today will shape humanity's future. Being agile, developing innovative products fit for the market, and forming collaborative partnerships will be key to success," says Sandeep N, Executive Director & Executive Vice President, Sales – Bosch Limited.



▲ Bosch is developing digital mobility solutions

Preparing an inclusive workforce for the ‘Future of work’

Innovation is a relentless cycle. The next decade will spur advances in Artificial Intelligence, with more work getting automated. Conceptual or creative work will be hard to replicate and will be highly valued in the new economy. Factory automation will drive output and reduce defects. Industry 4.0 will gain higher acceptance and digitization of the entire value chain will drive innovation and cut costs and manpower. Work from anywhere, gig working, consulting, freelancing will get more established. As the value of conceptual work increases, flexible compensation models will become the norm.



▲ Bosch in India is building a future-ready talent and leadership pipeline

It is thus important to create an inclusive workforce with talent that is non-traditional. While it is critical to be an attractive company for talent, it is equally important to reskill and retrain associates for the challenges of the future.

Today's rapid changes in technology and business models require more than an engineering degree to stay employable. Continuous learning is now a necessity. Bosch in India is experimenting with a lot of new age, transformational learning methodologies to make learning fun and self-driven.

Sanjay Hande, Program Manager-Talent Strategy, Bosch Limited, says, "The only certainty is uncertainty – and we must be ready to face whatever challenges come our way. To be future ready, people obsession is an imperative and having a robust talent management strategy is the need of the hour. Understanding this need, we launched Project Phoenix, a business-driven talent strategy program that focuses on meeting the needs for both future of business and the talent of the future. The project is working on three outcomes – building a future ready talent and leadership pipeline, creating delightful talent experiences, and building HR capability to achieve business and talent outcomes."

At Bosch India, creating equality for everyone, providing both security and flexibility for its associates and create employment opportunities that are challenging, and satisfying are top priorities. The company is rewriting the operating system for a bright future.

An electric future is imminent

The next decade will greatly transform the mobility ecosystem. Personalized, Automated, Connected, and Electrified technologies will revolutionize how we transport people and goods.

The EV revolution has already begun. There are over 20 million EVs on the road (as of April 2022), and more are coming, for personal mobility, fleet use or goods transport. Towards carbon neutrality goals, countries are reinforcing their sustainability commitments with stringent regulations and incentives that promote electric over internal combustion engine (ICE) cars.

Battery costs are falling fast and are likely to reach less than 70\$/kWh pack by 2025. Most OEMs and battery cell producers have announced new Giga factories to enhance capacity significantly.

The catalysts of global EV demand are starting to take off in India. The Government of India has rolled out major incentive programs, largely catering to advanced automotive technologies and offers significant incentives towards battery cell manufacturing.

Bosch India started the Project House Electrification to create India-specific EV solutions, four years ago. “We are focused on building an excellent team of EV engineers who are gaining significant competence. While custom solutions are being developed for the Indian market - like 48V batteries and solutions for LCV segments - we will also fully leverage the Bosch global portfolio to offer competitive solutions to our OEMs,” says Guruprasad Mudlapur, Head of Project House Electrification and Joint Managing Director, Bosch Ltd.

An electric future is imminent. Towards commanding a major share of the EV aggregate business, Bosch India must ride the electric wave with agility and success.



▲ Bosch India is creating India-specific EV solutions

Leveraging ESG for long-term environmental and financial sustainability

Today, India Inc. has become increasingly responsive to sustainability issues. With the regulatory thrust on transparency through reporting frameworks such as Business Responsibility and Sustainability Reporting (BRSR), Environmental, Social, and Governance (ESG) compliance is expected to improve considerably in the coming years.

The practice of ESG investing began in the 1960s as socially responsible investing. Today, investors look to incorporate ESG factors into the investment process alongside traditional financial analysis.



▲ Bosch India achieves carbon neutrality

India's auto sector is scrutinized for being one of the main sources of air pollution. The sector's leapfrog from BSIV to BSVI (while skipping BSV) on 1 April 2020 was a significant milestone, which demonstrates the industries' commitment to using cleaner fuels and efficient technologies. As India moves closer to a low-carbon automotive future, Electric Vehicles (EVs) are increasingly seen as an attractive (and eventually low-cost) way to reach this goal.

ESG has been a part of "Bosch Values" namely "Responsibility and sustainability", "Fairness" and "Diversity". Back in 2020, Bosch Group worldwide (including Bosch India) became carbon neutral in terms of the energy we generate ourselves and the energy we source for manufacturing, development, and administration (Scope 1 and 2 of the Greenhouse Gas (GHG) Protocol).

Sustainability is defined as a central task within the Bosch Group and hence at Bosch Limited, the Board of Directors have the responsibility of overseeing ESG, and the Managing Director is responsible for implementation.

As a clear commitment to ESG Bosch has published the "Target Vision" while using materiality assessment for understanding the ESG risks. Information is provided on facilities such as industrial relations, great place to work, workplace diversity, learning and development for all employees and the work they are doing for the society as part of CSR.

Bosch is leveraging ESG as a framework to build long-term financial sustainability and deliver long-term value through effective engagement with all stakeholders.

From the Joint Managing Director's Desk

For over 100 years, the Bosch name in India has stood for innovation that has transformed people's lives for the better. Our efforts have been equally guided by a unifying sense of responsibility to the community, and we have been privileged to acquire social capital that goes beyond products, services, and profits.

"100 Years, 100 Stories: A Century of Transformative Legacy" has illuminated the many people who have upheld our values in ways small and large, and enriched Bosch's presence in India. It brings together a compendium of experiences, achievements, and stories that define Bosch's journey in India through the eyes of the those who have been a part of this historic journey and made it possible. Through their efforts and the tangible impact, today Bosch can leverage the hard-earned, customer, employee, government, and societal trust to look to a brighter horizon.

While many of our future endeavours have been outlined herein, never in our history has the future been so opportunistic with new ideas, technologies, and possibilities. And in keeping with our legacy, we will navigate the next 100 years the way we always have – through our deep commitment to fairness and excellence in how we deal with people and organizations.

Faithful to Robert Bosch's vision, our customers and our associates will continue to remain at the heart of everything we do.

Guruprasad Mudlapur

Joint Managing Director, Bosch Limited





BOSCH LEADERSHIP OVER THE YEARS



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