

QUALITY HERALD

The Voice of Excellence | QGS Group

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LETTER FROM THE CHIEF EDITOR

Dear Readers,

I am delighted and proud to introduce you to the very first volume of Quality Herald: The voice of excellence. This launch signifies the start of an exciting journey aimed at shedding light on the who's and what's of the industry and providing a platform for sharing innovative ideas, industry trends, and professional experiences.

In the fast-paced business world we live in today, consulting is more essential than ever. Companies are facing unprecedented challenges, from technological disruptions to economic fluctuations and the evolving demands of a global market. Quality Herald: The voice of excellence is committed to offering consultants, business leaders, and aspiring professionals the knowledge and tools necessary to succeed in this dynamic environment.

Our first issue includes a diverse collection of articles and insights from industry experts and thought leaders, featuring -

- **Market trends:** Detailed examinations of current trends and future predictions in various consulting fields, such as strategy, technology, and human capital.
- **Expert Opinions:** Engaging pieces from experienced consultants discussing the pressing issues in the industry today.
- **Coverage:** Practical examples of successful consulting projects, highlighting innovative solutions and best practices.
- **Practical Advice:** Actionable tips and strategies to improve your consulting skills and achieve client success.

The path to this launch has been a collaborative effort, and I extend my sincere thanks to our dedicated team, contributors, and advisory board members. Your expertise, hard work, and enthusiasm have been vital in bringing Quality Herald: The voice of excellence to life.

As we begin this venture, we invite you, our readers, to join us. Your feedback, suggestions, and contributions will be crucial as we aim to make this magazine a valuable resource for the consulting community. Together, we can create a vibrant and dynamic forum that fosters learning, collaboration, and growth.

Thank you for joining us for our inaugural issue. We look forward to your ongoing engagement and support as we delve into the diverse world of consulting.

Warm regards,

Dr. Sumit Shandilya
Executive Director - QGS Group



**Greetings and
Welcome to the First
Issue of Quality
Herald: The voice of
excellence**

REMOTE WORKING AND MAINTAINING PRODUCTIVITY



Mohit Mehendale
Purchase Manager - TESLA, USA

Remote working, whether you like it or not, is here to stay. Even after the pandemic is over, it is highly likely that an increasing number of organizations might choose to keep remote working as an option for their workforce. While the number of hours an average person seems to have increased during these times, this does not necessarily amount to an increase in productivity. Staying focused and maintaining productivity is essential in a time where an average workday can seem to easily get muddled with the remainder of the work week.

Here are some ideas that could help you retain (or even increase) your productivity.

Differentiate Work and Home Areas: Create a dedicated workspace to minimize distractions. Use partitions or furniture to set boundaries and ensure your setup is ergonomic and comfortable

Minimize Distractions: Avoid distractions like TV and social media. Use apps to limit phone usage and work in short, focused bursts with breaks in between.

Make a Schedule: Plan your workday around virtual meetings and specific tasks. Stick to a logical schedule to ensure productivity.

Start Your Day Right: Establish a morning routine that includes getting ready as if you were going to the office. This helps you stay motivated and prepared for virtual meetings.

Focus on Personal Time: Schedule family or personal time after work to maintain balance and reduce guilt over work-time encroachment.

Exercise: Incorporate regular exercise to stay physically and mentally fit. Use fitness trackers, try desk yoga, and take breaks to stretch.

Grow Your Network: Proactively maintain and build your professional network through virtual interactions, social media, and periodic check-ins with colleagues and industry contacts.

Introduction to Social Accountability Standard SA-8000

Management systems, worker engagement, a culture of continuous improvement, and other elements of SA8000 not only lead to better working conditions and worker well-being, they also have benefits for productivity, stakeholder relationships, market access, and more



T. Venkataraman,
Director, QGS
AUTHOR



SA 8000 stands for “Social Accountability 8000”. Created by Social Accountability International (SAI) in 1997, SA 8000 is the first credible social certification standard. SA8000 can be implemented by any organization, of any size, in any industry, and in nearly every country of the world. It aims to promote continuous improvement of work place conditions and ensures the ethical sourcing for production of goods and services. It also sets out the basic standard and procedures regarding labour conditions including Health, Safety, working hours, collective bargaining, remuneration etc.

The goal for this standard is to develop the fundamental systems that provide continuous improvement of works place conditions. The foundational elements of this Standard are based on internationally recognized standards of decent work including the UN Declaration of Human Rights, conventions of the ILO, international human rights norms and national labour laws.

SA8000 applies a management-systems approach to social performance and emphasizes on its continual improvement.

“ The goal for this standard is to develop the fundamental systems that provide continuous improvement of works place conditions

REQUIREMENTS OF SA 8000:2014

Over the past three decades, management systems have been increasingly used in the workplace to improve quality and manage environmental and health and safety implementation (e.g. ISO 9001, ISO 14001, ISO 45001), but the use of a management system approach is not limited to those organizational processes.

Clause Requirements of SA 8000 in brief



SR NO.	ELEMENT	STANDARD REQUIREMENT
1.	Child Labour	No child labour in the company or any business associate, and in supply chain
2.	Forced Labour	No forced or compulsory Labour under any conditions (i.e. bonded, forced, and prison labour)
3.	Health & Safety	<ul style="list-style-type: none"> • Provide a safe & healthy working environment • Take adequate steps to prevent accidents & injury to health • Minimizing causes of hazards inherent in the working environment • A representative responsible for all health & safety activities
4.	Freedom of Association & right to collective bargaining	<ul style="list-style-type: none"> • Freedom to form and join trade unions of their choice and • To bargain collectively
5.	Discrimination	To provide equal treatment to all employees in all the matters like employment, training, promotion & capability regardless of race, caste, national origin, disability, gender, sexual orientation, Union membership etc.
6.	Disciplinary Practices	<ul style="list-style-type: none"> • Not engage in or support Corporal punishment • Mental or physical coercion • Verbal abuse
7.	Working hours	<ul style="list-style-type: none"> • Working hours not exceed 48 hours per week • Overtime is restricted to 12 hours per week maximum
8.	Remuneration	Ensure the subsistence wage earned by the employees for the regular hours are sufficient for them including their dependants to feed, clothe & house them selves
9.	Management System	<ul style="list-style-type: none"> • To declare company Policy for Social Accountability & Labour Conditions • Form a Social Performance Team and introduce a Management System to meet all the requirements of SA 8000

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In order to achieve SA-8000 certification, an organization has to demonstrate that they meet a standard for worker safety and well-being

BENEFITS OF IMPLEMENTING SA8000 STANDARD

SA - 8000 improves standards for workers and for business. Management systems, worker engagement, a culture of continuous improvement, and other elements of SA8000 not only lead to better working conditions and worker well-being, they also have benefits for productivity, stakeholder relationships, market access, and more. Significant improvement in working conditions leading to -

- Improved Employee Morale
- Zero Accidents
- Better Work Ethos
- Greater Consumer & Investor Confidence
- Enhanced Product Quality

BENEFITS FOR EMPLOYERS

Better relationships with workers, customers, and external stakeholders

- More effective management systems that improve workflows throughout the organization, resulting in Improved quality and productivity
- Better hazard and risk detection

BENEFITS FOR WORKERS

In order to achieve SA8000 certification, an organization has to demonstrate that they meet a standard for worker safety and well-being. The benefits to employees include:

- Safe workplaces and healthy working conditions
- A living wage
- Increased awareness of rights and opportunities to organize Long term employment prospects.
- Fundamental freedom of employees
- Opportunities for Advancement within workplace

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BENEFITS FOR BRANDS AND RETAILERS

Brands and retailers that accept SA8000 certification in lieu of first- or second-party social auditing experience benefit from:

- SA8000's comprehensive social compliance program
- Third-party oversight for quality assurance
- Supplier ownership of social compliance program
- More resources for capacity-building and other social programs, as they are no longer needed for company code-of-conduct audits

CERTIFICATION OF SA 8000

The certification of SA8000 is carried out by SA 8000 accredited certification bodies. For this Social Accountability Accreditation Services (SAAS) established by SAI as an independent accreditation department within SAI, and accredits Certification Bodies to perform SA8000 audits and issue certifications.

SAAS has accredited 29 Certification bodies in various countries in the world. Currently there are 5458 certified facilities in 50 countries, covering 64 industries. In India, at present there are 956 organizations certified for SA 8000. India is the second country after Italy to have maximum number of certifications. SAI has a "Social Fingerprint Rating System" which helps companies implement management systems in a credible, pragmatic, and cost-effective way. The Social Fingerprint ratings system helps companies go beyond code violations to evaluate the processes that are essential to high-level social performance. It also helps the companies and certification bodies to evaluate their rating and decide their readiness for certification.

CONCLUSION

The SA 8000 standard published by SAI in 1997 has provided a foundation for the companies to establish a Social Accountability Management System and by implementing the standard, helps them to demonstrate that they are doing their business ethically and in a socially responsible manner.



Industry 5.0: Transforming Manufacturing through Human-Centric Innovation

Forget the Terminator vision of robots taking over factories! Industry 4.0 may have brought automation and efficiency, but Industry 5.0 is all about the power of collaboration. By reallocating physically demanding tasks to machines, human workers are freed to focus on value-added activities, ensuring workplace safety and enhancing job satisfaction. Sustainability takes precedence, with optimized resource usage, energy efficiency, and waste reduction strategies at the forefront. Furthermore, resilience becomes imperative in the face of global disruptions, emphasizing adaptable manufacturing systems capable of withstanding challenges like the COVID-19 pandemic with advanced technologies such as AI, IoT, and robotics that drive efficiency and productivity. Real-time data analysis enhances quality control, while collaborative robotics and predictive maintenance systems prioritize safety. Cost reduction is achieved through AI-driven optimization and additive manufacturing, which also facilitates sustainable practices by generating less waste and enabling on-demand production. So, buckle up for a future where robots are our co-workers, not our overlords. [@european-commission](https://ec.europa.eu/commission/presscorner/detail/en/ip-24-1200)

Presto Achieves ZED GOLD Certification: Leading the Way in Sustainable Manufacturing Excellence

Presto, a leading testing instrument maker in India, has become the first in its field to receive the prestigious ZED GOLD Certification. Gaurav Malhotra, Director of Presto, expressed his delight at receiving the certification, emphasizing the company's dedication to delivering top-notch testing instruments while prioritizing quality and environmental responsibility. ZED focuses on Zero Defect and Zero Effect, ensuring quality while reducing environmental footprint. This recognition solidifies Presto's position as a reliable partner for businesses seeking cutting-edge testing solutions with a strong emphasis on quality assurance and environmental awareness. [www.businessstandards.org](https://businessstandards.org/)

Six Sigma: A Cornerstone of Modern Quality Management

In April 2024, Six Sigma continued to stand as a beacon of quality management, empowering organizations across industries to streamline processes, minimize defects, and drive operational excellence. One notable example of Six Sigma's impact in April 2024 comes from Tech Innovations Inc., a leading software development company. Faced with increasing competition and customer expectations for bug-free software, Tech Innovations adopted Six Sigma principles to enhance its product development processes. By implementing rigorous data analysis and process optimization techniques, the company achieved a significant reduction in software defects, resulting in higher customer satisfaction and market competitiveness.

In the healthcare sector, Hospital Solutions Group embraced Six Sigma methodologies to improve patient care and operational efficiency. By applying Six Sigma tools such as DMAIC (Define, Measure, Analyze, Improve, Control) to critical processes like patient triage and emergency room operations, Hospital Solutions Group achieved notable reductions in wait times and medical errors. As a result, patient outcomes improved, and the hospital gained recognition for its commitment to quality and safety. [www.cio.com](https://cio.com)



Furthermore, in the manufacturing sector, AutoTech Enterprises utilized Six Sigma techniques to optimize its production processes. By identifying and eliminating waste, defects, and variability in its assembly line operations, AutoTech Enterprises achieved remarkable improvements in product quality and operational efficiency. This enabled the company to meet growing customer demand while maintaining high standards of excellence.

In conclusion, Six Sigma continues to be a driving force in modern quality management, enabling organizations like Tech Innovations Inc., Hospital Solutions Group, and AutoTech Enterprises to achieve superior results and sustain competitive advantage.

Emerson Partners with Covestro to Optimize Manufacturing Processes for Sustainability

Emerson, a technology and software company, partnered with Covestro, a manufacturer of advanced polymer materials, to improve the sustainability and efficiency of Covestro's Barcelona manufacturing facility. Covestro is aiming for net-zero emissions by 2035 and implemented Emerson's DeltaV™ software to optimize its polyester production process.

www.emerson.com

This software improved batch process management, reduced water and energy consumption, and increased throughput. The collaboration highlights the importance of technology in achieving sustainability goals in manufacturing.

BRIEF

- ▶ MSME Ministry's ZED Scheme Surpasses 1 Lakh Certifications, Promoting Sustainable Manufacturing
- ▶ The global Industry 5.0 market is experiencing a remarkable surge, poised to reach USD 255.7 billion by 2029 from USD 65.8 billion in 2024, with a robust CAGR of 31.2%.

BALDRIGE AWARD

Despite competition from lean practices, Baldrige offers a rigorous assessment process with valuable feedback, driving improvements in areas like communication, productivity, and customer satisfaction. This adaptability, along with its focus on results over mere compliance, makes Baldrige relevant for businesses of all sizes in today's evolving market. www.nist.gov





MANUFACTURING EXCELLENCE

India's manufacturing landscape is undergoing a remarkable transformation, propelled by a commitment to cutting-edge methodologies and operational excellence across diverse sectors. From precision engineering to advanced material sciences, the nation is garnering global acclaim for its ingenuity and innovation. Initiatives like the Production Linked Incentive (PLI) Scheme are catalyzing production, while strategic investments are bolstering domestic capabilities, particularly in pharmaceuticals and medical devices, positioning India as a leader in global manufacturing. In tandem, the electric vehicle (EV) policy is attracting substantial investments, fostering the establishment of indigenous

manufacturing facilities and propelling India into the forefront of automotive technologies. Notable commitments from industry giants like Jaguar Land Rover underscore India's emergence as a hub for sustainable mobility solutions. Moreover, the resurgence in India's toy industry, driven by regulatory reforms and enhanced manufacturing efficiencies, [m.economictimes.com](https://www.economictimes.com)

highlights the nation's prowess in seizing opportunities for manufacturing excellence. This, coupled with the localization of iPhone manufacturing and the emergence of indigenous semiconductor ecosystems, further solidifies India's position as a premier destination for investment and collaboration in the manufacturing domain.

Companies like QGS Group play a pivotal role in this journey towards manufacturing excellence, offering tailored consultancy services to optimize operational efficiency and implement innovative technologies. With manufacturing exports reaching a record US\$ 447.46 billion in FY23, India's manufacturing sector is poised for further growth, driven by a commitment to sustainability and smart manufacturing practices. As projections indicate a potential value of US\$ 1 trillion by 2025, India stands ready to lead the charge in indigenisation and support global supply chains through innovation, localization, and sustainability initiatives.

Integrating Climate Change into ISO Standards

Climate change integration into ISO standards is pivotal for driving sustainability in a rapidly evolving world. With ISO's global influence, recent developments in 2024 have underscored the organization's commitment to addressing climate change comprehensively.

In April 2024, ISO released significant updates, including the IWA 42:2022(E) Net Zero Guidelines and the IAF/ISO Joint Communique, emphasizing the integration of climate considerations into management systems standards. The Net Zero Guidelines provide organizations with a systematic framework for transitioning to net-zero emissions. By setting science-based targets, defining emission scopes comprehensively, and prioritizing emissions reduction efforts, organizations can align their operations with global climate objectives. Moreover, the IAF/ISO Joint Communique highlights the importance of embedding climate considerations into ISO management systems standards like ISO 9001, ISO 14001, and ISO 45001. These standards have been amended to address climate change adaptation and mitigation efforts, ensuring organizational resilience and sustainability.

For example, the latest amendment to ISO 9001:2015/. And 1:2024 introduces updates relevant to climate change adaptation and mitigation. These amendments reflect ISO's proactive approach to integrating climate considerations into quality management systems, demonstrating the organization's commitment www.qualitymag.com

to driving sustainability across industries. As climate change continues to pose unprecedented challenges, the integration of climate considerations into ISO standards is critical for fostering a sustainable future. Through these efforts, ISO aims to empower organizations worldwide to mitigate climate risks, reduce emissions, and contribute to global climate objectives

INDIAN MANUFACTURING MARKET UPDATES

India's manufacturing and goods exports are rapidly advancing, particularly in sectors like automobiles, pharmaceuticals, and electronics manufacturing.

Regular announcements, investments, and breakthroughs highlight India's growing prowess in high-tech and high-precision manufacturing, gaining global confidence in its capabilities.

The manufacturing sector is projected to increase from 15% to 20% of the economy by 2030, indicating significant growth potential.

Inauguration of 27 new Greenfield Bulk Drug Park projects and 13 Greenfield Manufacturing Plants for Medical Devices under the PLI Scheme. Rapid growth in India's medical device market, expected to exceed \$30 billion by 2050. [@manufacturingtodayindia](https://www.manufacturingtodayindia.com)

Electric Vehicles (EVs)
Implementation of a new EV policy attracting investments, including Jaguar Land Rover's \$1 billion plant. Macquarie group launches \$1.5 billion fund for India EV financing, focusing on commercial vehicle electrification.

India plays a crucial role in Apple's iPhone supply chain, accounting for 14% of production, expected to rise to 25%. Tata group's acquisition of Winston's India operations and potential acquisition discussions hint at increasing control over Indian iPhone manufacturing. Reports suggest Micron plant in Gujarat supplying chips for iPhones, marking a milestone in India's semiconductor mission.

Manufacturing growth crucial for India's economic development, employment generation, and macroeconomic stability. Improvement in manufacturing sector augurs well for India's economy in the coming years.

ISO 20121

Event sustainability management systems



ISO 20121 serves as a guiding beacon for sustainable event management, ensuring that organizations seamlessly integrate sustainability into every aspect of their event planning and execution. This standard focuses on social, economic, and environmental impacts, making it essential for events aiming to leave a positive legacy. Applicable to events of any scale, ISO 20121 urges organizations to responsibly manage their social, economic, and environmental impacts.

In today's event management landscape, prioritizing sustainability is crucial. ISO 20121 emerges as a critical tool, directing organizations towards ethical, eco-friendly, and socially conscious practices. With a renewed emphasis on human and children's rights, as well as event legacies, this standard underscores sustainability's transformative potential within the industry.





Benefits

Reduces the environmental impact of events

Fosters a holistic approach to sustainability, considering economic, environmental, and social impacts

Improves stakeholder engagement and satisfaction

Strengthens organizational reputation and brand value

Offers versatile pathways for conformity assessment, catering to organizations of all sizes



CONTACT

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The ISO standards that have been updated to incorporate climate change considerations include a diverse range of sectors. Some of the standards that have undergone transformation to address climate change include:

- ISO 14298:2021 Graphic technology - Management of security printing processes
- ISO 16000-40:2019 Indoor air — Part 40: Indoor air quality management system
- ISO 22163:2023 Railway applications — Railway quality management system — ISO 9001:2015 and specific requirements for application in the railway sector
- ISO 22301:2019 Security and resilience — Business continuity management systems — Requirements
- ISO 28000:2022 Security and resilience — Security management systems — Requirements
- ISO 29001:2020 Petroleum, petrochemical and natural gas industries — Sector-specific quality management systems — Requirements for product and service supply organizations
- ISO 30301:2019 Information and documentation — Management systems for records — Requirements
- ISO 34101-1:2019 Sustainable and traceable cocoa Part 1: Requirements for cocoa sustainability management systems
- ISO 35001:2019 Biorisk management for laboratories and other related organisations
- ISO 37301:2021 Compliance management systems - Requirements with guidance for use
- ISO 46001:2019 Water management systems



These standards have been updated to ensure that climate change is considered within the management systems, reflecting the universal relevance and urgency of addressing climate change across various industries and sectors.



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OUT OF IT."
-Peter Drucker**



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Effective Change Management:

A Tool for Organizational Growth



Surendra P. Tiwari,
Director - QGS

Key Benefits of Effective Change Management

Enhanced Performance

Minimizes disruptions and improves productivity through clear communication and alignment of goals.

Increased Engagement

Reduces anxiety and fosters trust, leading to more productive and innovative employees.

Greater Adaptability

Develops a resilient workforce capable of handling uncertainty and new opportunities.

Improved Customer Satisfaction

Ensures smooth transitions, enhancing efficiency and customer experience, boosting loyalty.

Strategic Alignment

Aligns change initiatives with organizational goals, involving key stakeholders for strategic success.

In today's dynamic business environment, organizations must adapt continuously to remain competitive. Change management, which involves guiding individuals, teams, and organizations through transformations, is essential for successful adaptation. When executed effectively, change management can yield numerous positive outcomes that drive organizational success and foster a resilient, agile workforce. This article explores the benefits of effective change management, key principles, and influential models that guide successful change initiatives.

Principles of Change Management

Clear Vision and Objectives

Define the change's aims and alignment with strategic goals to focus efforts and gain organizational support.

Effective Communication

Maintain open, honest, and transparent communication to minimize resistance and build trust.

Employee Involvement

Engage employees in planning and decision-making to foster a sense of ownership and reduce resistance.

Strong Leadership

Leaders must visibly support and guide the change, articulating the vision and benefits clearly.

Training and Support

Provide necessary training and resources to help employees adapt to new processes or technologies.

Models of Change Management

Several models provide frameworks for implementing change effectively. Here are three widely recognized change management models:

Lewin's Change Management Model

Developed by Kurt Lewin, this model is one of the earliest and most influential frameworks. It consists of three stages:

- **Unfreeze** - Prepare the organization to accept that change is necessary. This involves breaking down the existing status quo before building up a new way of operating. Communication is crucial in this stage to highlight the need for change.
- **Change (Transition)** - After unfreezing, the organization moves into the change or transition stage. This is where new processes or behaviors are implemented. Support and guidance are essential to help employees navigate through this phase.
- **Refreeze** - Once changes are implemented, the organization needs to solidify these new processes to ensure they are maintained. This stage involves reinforcing the changes through policies, procedures, and cultural adjustments.

Kotter's 8-Step Change Model

John Kotter's model emphasizes a sequential approach to change, consisting of eight steps:

- **Create a Sense of Urgency** : Highlight the importance and urgency of the change to motivate stakeholders.
- **Form a Powerful Coalition** : Assemble a group with enough power to lead the change effort and work as a team.
- **Create a Vision for Change** : Develop a clear vision to help direct the change effort and strategies to achieve that vision.
- **Communicate the Vision** : Communicate the vision and strategies effectively to garner buy-in from all stakeholders.
- **Remove Obstacles** : Identify and remove barriers that impede the change process.
- **Create Short-Term Wins** : Plan for and create short-term wins to build momentum and demonstrate the benefits of the change.
- **Consolidate Gains and Produce More Change** : Use the credibility from early wins to drive further change and embed new approaches into the organization.
- **Anchor the Changes in Corporate Culture** : Ensure that changes are integrated into the organizational culture and practices.

ADKAR MODEL

- **Awareness** : Create awareness of the need for change.
- **Desire** : Foster a desire to support and participate in the change.
- **Knowledge** : Provide knowledge about how to change.
- **Ability** : Develop the ability to implement new skills and behaviors.
- **Reinforcement** : Reinforce the change to ensure it is sustained over time.

Green hydrogen: an alternative that reduces emissions and cares for our planet



Mr. Ramesh C. Grover,
Director - QGS



Decarbonising the planet is one of the goals that countries around the world have set for 2050. To achieve this, decarbonising the production of an element like hydrogen, giving rise to green hydrogen, is one of the keys as this is currently responsible for more than 2 % of total global CO₂ emissions.

The war in Ukraine has caused a global energy crisis due to the lack of fossil fuels. This has led to an unprecedented rise in the price of natural gas and coal, causing Europe to import much more liquefied natural gas than usual, with the attendant problem of worsening climate change.

However, decarbonising the planet suggests a different world in 2050: one that is more accessible, efficient and sustainable, and driven by clean energies such as green hydrogen.

Green hydrogen is efficient and 100 % sustainable, with some experts predicting that it will be the fuel of the future.

What is green hydrogen and how is it obtained?

The technology is based on the generation of hydrogen — a universal, light and highly reactive fuel — through a chemical process known as electrolysis. This method uses an electrical current to separate the hydrogen from the oxygen in water. If this electricity is obtained from renewable sources, we will, therefore, produce energy without emitting carbon dioxide into the atmosphere. Also called renewable hydrogen, green hydrogen is obtained by electrolysis of water. The most crucial thing is that this process is powered entirely by renewable energy, so it generates no polluting emissions into the atmosphere and is the cleanest and most sustainable hydrogen.

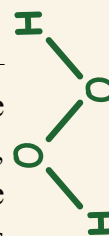
The carbon intensity ultimately depends on the carbon neutrality of the source of electricity (i.e., the more renewable energy there is in the electricity fuel mix, the "greener" the hydrogen produced)

Producing green hydrogen by electrolysis from renewable sources involves breaking down water molecules (H₂O) into oxygen (O₂) and hydrogen (H₂).

Hydrogen Oxygen Cathodic reaction $4\text{H}^+ + 4\text{e}^- \rightarrow 2\text{H}_2$

Anodic reaction $2\text{H}_2\text{O} \rightarrow \text{O}_2 + 4\text{H}^+ + 4\text{e}^-$ Membrane

As the International Energy Agency (IEA) points out, this method of obtaining green hydrogen would save the 830 million tonnes of CO₂ that are emitted annually when this gas is produced using fossil fuels. Likewise, replacing all grey hydrogen in the world would require 3,000 TWh/year from new renewables — equivalent to current demand of Europe. However, there are some questions about the viability of green hydrogen because of its high production cost; reasonable doubts that will disappear as the decarbonisation of the earth progresses and, consequently, the generation of renewable energy becomes cheaper.





GREEN HYDROGEN

An alternative that reduces emissions and cares for our planet

ADVANTAGES OF GREEN HYDROGEN -

- **100 % sustainable:** Green hydrogen does not emit polluting gases either during combustion or during production.
- **Storable:** Hydrogen can be stored and transported, offering a way to balance grid demands, which allows it to be used subsequently for other purposes and at times other than immediately after its production.
- **Versatile:** Green hydrogen can be transformed into electricity or synthetic gas and used for commercial, industrial or mobility purposes.
- **Transportation:** Hydrogen fuel cells are an alternate to batteries for the Electric vehicles EVs
- **International energy trade:** Stored Hydrogen can be traded globally since gas cylinders can be exported to energy deficient countries

DISADVANTAGES -

- **High cost:** Energy from renewable sources, which are key to generating green hydrogen through electrolysis, is more expensive to generate, which in turn makes hydrogen more expensive to obtain.
- **High energy consumption:** The production of hydrogen in general and green hydrogen in particular requires more energy than other fuels.
- **Safety issues:** Hydrogen is a highly volatile and flammable element and extensive safety measures are therefore required to prevent leakage and explosions

IMPACT OF GREEN HYDROGEN

Hydrogen as a fuel is a reality in countries like the United States, Russia, China, France and Germany. Others like Japan are going even further and aspire to become a hydrogen economy. Below we explain what the impact will be in the future:

- **Electricity and drinking water generator -**

These two elements are obtained by reacting hydrogen and oxygen together in a fuel cell. This process has proved very useful on space missions, for example, by providing crews with water and electricity in a sustainable manner.

- **Energy storage -**

Compressed hydrogen tanks are capable of storing energy for long periods of time and are also easier to handle than lithium-ion batteries because they are lighter

- **Transport and mobility -**

Hydrogen's great versatility allows it to be used in those consumption niches that are very difficult to decarbonise, such as heavy transport, aviation and maritime transport. There are already several projects under way in this area, such as Hycarus and Cryoplane, which are promoted by the European Union (EU) and aim to introduce it in passenger aircraft.

In its commitment to driving the energy transition, Iberdrola is leading the development of green hydrogen with more than 60 projects in eight countries (Spain, United Kingdom, Brazil, United States, among others) to respond to the needs of decarbonisation.





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Stories from the World

GE Wind Revs Up with Lean Six Sigma

GE Wind, a powerhouse in the wind turbine industry, found itself facing a stiff headwind. Their turbines were top-notch, but their manufacturing process was sluggish and inefficient. Waste piled up, defects slowed things down, and production times stretched on forever. This wasn't just hurting their bottom line; it was tarnishing their reputation for quality. Looking for a way to weather the storm, GE Wind turned to Lean Six Sigma, a powerful approach that combined streamlining practices (Lean) with data-driven quality control (Six Sigma). It was like bringing in a team of efficiency experts to fine-tune a wind turbine itself.

Lean principles, like the 5S method (think organization on steroids), helped GE Wind clear away the clutter. Workstations got a makeover, unnecessary steps were eliminated, and wasted materials became a thing of the past. It was like cleaning up a messy workshop to make room for smooth production flow. Six Sigma stepped in as the quality control champion. Imagine catching tiny cracks in a turbine blade before it became a major issue.

Lean techniques, like value stream mapping, acted as a roadmap, revealing bottlenecks and non-essential activities in the production process. Think of it like identifying areas where the wind wasn't strong enough and strategically placing turbines for optimal power generation. Streamlining the process and using Kanban inventory management (think just-in-time parts) helped optimize production time and resource allocation. Picture a well-oiled machine, with each step contributing to a smoothly running production line.

The results were like a refreshing breeze. Waste and rework plummeted, saving GE Wind a ton of money. Defect rates became a distant memory, leading to more reliable and trustworthy wind turbines. Happy customers were a natural consequence.

By analyzing data like a pro, they identified the root causes of defects. Standardized procedures and statistical process control were put in place, dramatically reducing the number of faulty components. Production times took a nosedive, allowing GE Wind to meet the growing demand for clean energy while using resources more efficiently. Imagine a wind farm operating at peak performance, generating clean power for everyone.

GE Wind's story is a shining example of how continuous improvement and data-driven decisions can lead to success. By embracing Lean Six Sigma, they transformed their wind turbine production into a model of efficiency and quality, ensuring a bright future for the company and clean energy generation.



Stories from the World

"We always want to create something new out of nothing, and without research, and without long hard hours of effort. But there is no such things as a quantum leap. There is only dogged persistence—and in the end you make it look like a quantum leap."



FedEx Fine-Tunes Deliveries with Lean Six Sigma

FedEx, a giant in the delivery world, is always looking for ways to improve. Even though they were known for their speed, they wanted to ensure every package arrived precisely where it needed to be, on time. However, missed deliveries, delays due to misrouted packages, and inaccurate handling were causing headaches for both FedEx and their customers.

To tackle these issues, FedEx turned to Lean Six Sigma, a strategy that combines streamlining practices (Lean) with data-driven quality control (Six Sigma). It was like bringing in a team of efficiency experts to analyze and improve the entire delivery process.

Cutting Out the Waste

One area of focus was waste reduction. Warehouses were reorganized using the 5S method, which promotes a clean and organized workspace. Paperwork was minimized through digital solutions, and unnecessary package handling was streamlined. Imagine a warehouse transformed – shelves neatly organized, processes flowing smoothly, and less paper floating around.

Improving Delivery Accuracy

Next, Six Sigma came in to play.

By analyzing delivery data, they identified the root causes of errors, such as unclear addresses or inefficient sorting processes. Standardizing procedures, implementing barcode scanning technology, and improving address verification processes were like giving delivery personnel better tools and clearer instructions. Deliveries became more accurate, with fewer wrong turns and missed packages.

Optimizing Delivery Routes
Lean techniques, like value stream mapping, helped identify bottlenecks in the sorting and delivery workflow. Imagine a tangled delivery route straightened out. Streamlining processes with automation, optimizing delivery routes based on traffic patterns, and leveraging real-time tracking systems all contributed to a smoother journey for packages.

Deliveries became faster, with less time wasted on backtracking or delays. The Results: A Win-Win

The results were impressive. Reduced waste from missed deliveries and optimized workflows led to significant cost savings for FedEx. Improved quality, with fewer errors and faster deliveries, meant happier customers. And finally, enhanced efficiency allowed them to handle more packages while maintaining service quality, boosting their operational capacity and profitability.

A Model for Success

FedEx's story shows how Lean Six Sigma can benefit the logistics industry. By focusing on waste reduction, quality improvement, and efficiency, FedEx transformed their delivery operations into a model for success. This ensures that every package gets to its destination quickly and accurately, keeping both FedEx and their customers happy.

“ *The reality is that being unprepared is a choice. The benefits come when we see AI as a tool, not a terror, and bring it into our sales motions.* ”

Walmart

Combats Supply Chain Issues with AI and Robotics



In the world of retail, efficiency is key. Walmart, a retail giant, has been using artificial intelligence (AI) to improve its supply chain for some time now. They have recently launched a new AI-powered logistics product called Route Optimization.

Route Optimization is a problem that businesses of all sizes face. It is the challenge of finding the most efficient way to deliver goods from one location to another. This can be a complex task, as it requires taking into account factors such as traffic, distance, and the size and weight of the goods being delivered.

Traditionally, route optimization has been done by hand, using a process of trial and error. This can be time-consuming and inefficient. Walmart's Route Optimization product uses AI to automate this process. The product can help businesses to:

- Optimize delivery routes: Route Optimization can take into account a variety of factors to find the most efficient route for a delivery truck. This can help businesses to save time and money on fuel. Pack trailers more efficiently: Route Optimization can also help businesses to pack trailers more efficiently. This can help to reduce the number of trucks that are needed to make deliveries.
- Minimize miles driven: By optimizing delivery routes and packing trailers more efficiently, Route Optimization can help businesses to minimize the number of miles that their trucks driven. This can help businesses to reduce their emissions and improve their environmental footprint.

Walmart's Route Optimization product is a new offering that has the potential to revolutionize the way that businesses deliver goods. By using AI to automate the route optimization process, businesses can save time and money, and improve their environmental footprint.



Adidas' Streamlined Production for Faster Delivery

In 2022, adidas faced a growing demand for customized sportswear, challenging their traditional production model with long lead times and bulk manufacturing. To address this, adidas launched the "Speedfactory" initiative, strategically placing facilities closer to major markets like Europe and North America. These factories utilized digital design and automation, allowing customers to design shoes online, with data seamlessly transferred to automated machines, reducing human error and speeding up production. By leveraging data analytics, adidas predicted demand, maintained lean inventories, and

implemented just-in-time inventory practices.

The results were transformative: customers received customized shoes in weeks instead of months, boosting satisfaction and brand loyalty. Production costs were reduced through minimized waste and streamlined processes, with savings reinvested in innovation. The Speedfactory model enabled rapid experimentation with new designs and materials, reinforcing adidas' reputation for cutting-edge products. This initiative exemplifies how operational efficiency can drive innovation and customer satisfaction, setting a blueprint for the future of customized production.



EMBRACING SUSTAINABLE WORLD

“ GREEN INDUSTRY

In an era of increasing
environmental consciousness



WHY SUSTAINABILITY? A SHIFT IN GEARS

For decades, the narrative was often about maximizing profits, even if it meant compromising the environment. However, several factors have propelled sustainability to the forefront of business strategy such as the increasing frequency and intensity of extreme weather events highlight the critical need for environmental action are demanding accountability from companies. Sustainable practices ensure responsible use of raw materials and minimize waste, safeguarding resources for future generations.

Patagonia, a leader in outdoor apparel, and how they utilize recycled materials and encourage customers to repair worn clothing, promoting a circular approach in the fashion industry.

Renewable Energy Revolution: Powering a Sustainable Future The transition from fossil fuels to renewable energy sources like solar, wind, and geothermal is gaining significant momentum. This shift helps companies reduce their carbon footprint, combat climate change, and contribute to a cleaner and more secure energy future.

Let's shine a light on Ørsted, a Danish energy company making waves with their investments in offshore wind farms. Exploring how Ørsted is leading the charge in providing clean and sustainable energy solutions.

- **Sustainable Supply Chains:** Building Transparency Companies are prioritizing transparency and ethical sourcing throughout their supply chains. This ensures responsible labor practices, minimizes environmental impact at all stages of production, and builds trust with consumers who value ethical sourcing.
- **Plant-Based Revolution:** Redefining Food Consumers are increasingly opting for plant-based alternatives to animal products. Companies are developing innovative plant-based meat and dairy products, catering to this growing demand and promoting a more sustainable food system. This trend not only reduces environmental impact but also addresses concerns about animal welfare.

The road towards a truly sustainable future is ongoing. Companies that embrace these trends demonstrate their commitment to environmental responsibility and position themselves for long-term success. In future editions of Sustainability World, we'll delve deeper into specific industry transformations and showcase companies leading the green charge. Stay tuned for more inspiring stories of businesses making a positive impact!

KAIZEN WORLD

To an average Japanese, Kaizen in general is a word used to express improvement.

There's no reference to the improvement being continuous or in small steps or being part of a philosophy or mindset, which is usually the reason why this word pops into highlight.

From the business standpoint, its popularised and often called the Toyota's Kaizen mindset before Toyota finally labeled that as the Toyota Way, in 1986 with his book "Kaizen: The Key to Japan's competitive success", Toyota was one of initial users that implemented Kaizen in the industrial sector for lean manufacturing. Now, it's used mostly in all industries under the name lean/agile management. However, the Toyota way as it goes, refers to a specific type of Kaizen, rather than the whole working that makes up the Kaizen.

Canon, Sony and Samsung are just a few of the other notable organizations that have adopted the methodology.

The development of newer concepts like Six Sigma and Agile have introduced more modern change-making options for organizations. These typically put greater focus on aspects such as data and technology, offering faster and more aggressive routes to business change. When it comes to Kaizen in 2024, a pertinent question to ask is how relevant this decades-old methodology is today.

Employee engagement and empowerment

Kaizen promotes employee engagement and encourages all staff to contribute to improvements, something modern workplaces benefit from. "This improves employee morale, provides a sense of ownership and promotes collaboration

between people in a number of different areas of the organization

Waste reduction for sustainability, efficiency and profit - Just-in-Time Inventory

Kaizen encourages more efficient use of resources, reducing waste and promoting eco-friendly practices. Modern organizations are under increasing pressure to reach sustainability and carbon footprint reduction goals to not only meet customer expectations and regulatory requirements but to also drive revenue and profit opportunities. With a growing emphasis on sustainability, Kaizen's principles can help modern businesses achieve sustainability and carbon footprint aims.

Digital transformation and new technology

With its focus on driving innovation, collaboration and customer experience, Kaizen can help set the stage for digital transformation success.

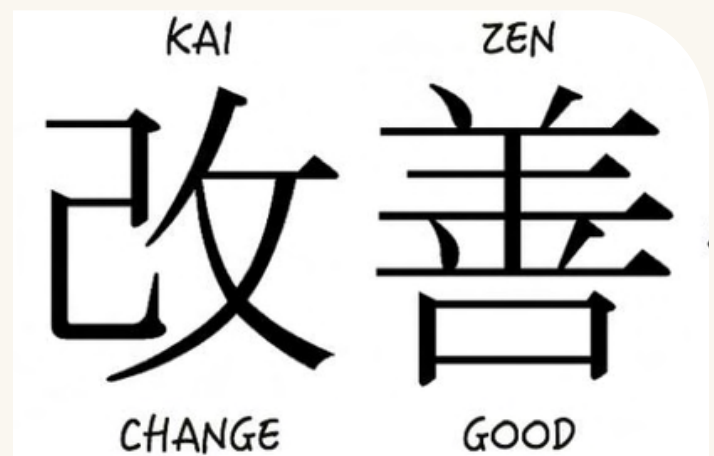
"The integration of digital tools is crucial in today's business processes. Financial services firms, for instance, might use Kaizen for incremental enhancements to their online banking platforms, ensuring each update adds real value and keeps pace with FinTech innovations

Customer focus and satisfaction

Kaizen encourages the continuous measuring and monitoring of processes for improvement. When this is done effectively, the end service or product is usually of a higher standard, which ultimately increases customer satisfaction and customer retention

Balancing Kaizen with other methodologies

Lean, Six Sigma, Agile, Total Quality Management (TQM) and Theory of Constraints (TOC)





CLIMATE CHANGE AND SUSTAINABILITY

Evolve, Adapt, Thrive: Sustainable Business Success with CCSL

Sustainable Edge. CCSL Empowers.

Today's market rewards responsibility. We transform businesses to seamlessly blend profit, purpose, and planet.

Evolve, Adapt, Prosper.

ESG & CSR Consulting:

Diagnostic audits, policy development, stakeholder engagement, social impact assessment

Circular Economy:

Supply chain management, circular business model design.

Environmental Management:

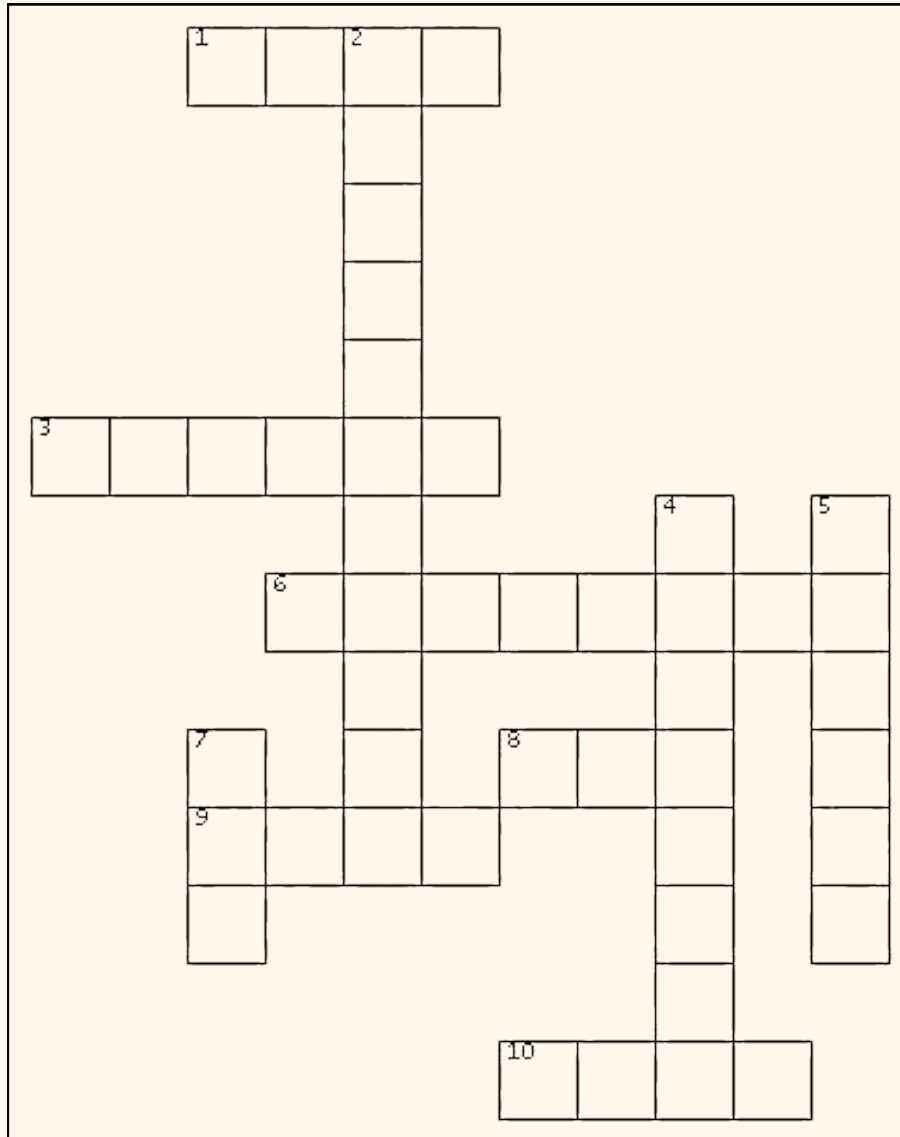
Energy efficiency, waste & water management, carbon footprint analysis, decarbonization strategies, climate change risk analysis.

Capacity Building:

Training & workshops on business sustainability.

- Climate Change-Decarbonisation: Transition To Carbon Neutral To Net Zero emissions
- Carbon Offsetting
- Business Sustainability & ESG Energy Efficiency And Green Transition
- Waste Management
- Water Management
- CSR Compliance
- Green Building Consulting
- BRSR (Business Responsibility And Sustainability Reporting)

"Quality and Management Systems Crossword"



ACROSS

1. International standard for food safety management (4 letters)
3. Japanese methodology for problem-solving, synonymous with continuous improvement (6 letters)
6. A model used for achieving business excellence (8 letters)
8. The acronym for Quality Management System (3 letters)
9. Technique used in Lean for reducing setup times (4 letters)
10. Methodology for continuously improving processes by removing waste (5 letters)

DOWN

2. An approach to maintaining equipment reliability and performance (11 letters)
4. Process of minimizing variability in manufacturing and business processes (7 letters)
5. Training level for beginners in Lean Six Sigma (5 letters)
7. ISO standard related to environmental management (7 letters)

Want to get featured?

Send in your answers at info@qgspl.com

And the first 15 correct responses shall feature in the next issue

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CLIENT TESTIMONIALS



**MR. RAMNAYAN
SINGH**

I worked at a Carbon Black company within the Aditya Birla Group in Egypt. We engaged Quality Growth Services to implement our Quality Management System, including ISO 9000, ISO 14000, ISO 18000, SA 8000, ISO 27001, ISO 50000, and Six Sigma since 1995. We extend our gratitude to their exceptional staff and experienced training professionals for their invaluable assistance and guidance throughout the certification and implementation processes. Their training methods left a lasting impression on us, contributing significantly to our successful adoption of these management systems.



**DR. RAKESH
KULSHRESHTHA**

Over the past fifteen years, I've collaborated with QGSPL. In 2005-06, during my tenure at Bhilai Steel Plant, we implemented Six Sigma under the guidance of Pravin Ji and Surendra Tiwari Ji. Their training of 100 Black Belts and 300 Green Belts was exceptional, fostering significant financial savings for the plant. Their expertise also extended to Bokaro Steel Plant, with successful projects in Essar Steel, Tata Steel, and Esfahan Steel, Iran. I wish them continued success in enhancing Indian industry competitiveness.



MS. ANU ANAND

My learning experience with QGSPL was exceptional. The training sessions were meticulously planned, with a concise yet comprehensive approach, and led by excellent trainers. I am deeply grateful for the guidance provided throughout the program. QGSPL is managed by professionals with profound expertise across various industries worldwide, enabling them to enhance quality to international standards. Their services are truly world-class, offering exceptional value for money and revitalizing businesses in every aspect.



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with the aim of promoting Quality Culture in
the country**

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of 4.7/5 per
participant.

1000+

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programmes and
specialized training
programmes



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GLIMPSES FROM VARIOUS QGS PROGRAMMES

1 Unlocking Precision:

Inside the World of GD&T with Donaldson Filters India at Holiday INN!



2

Driving Quality Forward:

Mastering IATF 16949
Auditing at Livguard
Energy Technologies

3 Unlocking Secrets:

GD&T with Hollister
Medical India Pvt. Ltd. in
an Exclusive Workshop



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Upcoming Trainings

JUNE 03-07, 2024

ISO 14001 Lead Auditor

JUNE 17-21, 2024

ISO 45001 Lead Auditor

**STARTING FROM
JUNE 28TH**

Lean Six Sigma Black Belt

JULY 08-12, 2024

ISO 9001 Lead Auditor

JULY 16-20, 2024

Lean Six Sigma Green Belt

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