

Morgan Advanced Materials

2021

Half Year Report

**SUSTAINABILITY
AND
RESPONSIBILITY**

Contents

June 2021

Foreword	1
Sustainability Strategy	2
Environment	
Restoring our Planet - Supporting the UN Sustainability Goals	3
Climate: Reducing our Impact	4
Water: Sustaining our Future	5
Waste and Recycle: Reducing Waste Through Continuous Improvement Efforts	6
Environmental Best Practices	7
Sea Level Rise - The Impact of Climate On Our Business	8
Health and Safety	
Engaging our Teams in Safety	9
Maintaining our Focus on Health and Safety	10
Committing to thinkSAFE	11
Using Advanced Technology to Improve Safety	12
Diversity and Inclusion	
Improving on Diversity	13
On the Journey to Inclusivity	14
People Development	15
Wellness and Our Communities	
Helping People and Changing Lives	16
Breaking the Stigma	17
Morgan Code and Policies	
Treating Our People Fairly; and Protecting Our Business	18
thinkSECURE	
Improving our Network and Enhancing Security	19
Products	
Product Stewardship	20
We Deliver Products the World Needs	21
We Improve Efficiency and Reduce Energy	22
We Make Transportation Safer and Cleaner	23
We Improve the Quality of Life	24
We Engineer Unique Solutions	25
Committing To Our Future	
Where Are We Now?	26
ESG Policies	27

Foreword

WELCOME



Pete Raby CEO

June 2021

In March 2021, we set stretching targets to improve our performance and become a more sustainable business. This report details what we have achieved so far, it details our next steps and describes the initiatives that will support our sustainable business growth.

Our purpose is to use advanced materials to make the world more sustainable and improve the quality of life. We deliver on our purpose through the products we make and the way that we make them.

Following a detailed materiality assessment, we have set ambitious targets for our environmental, social and governance (ESG) performance.

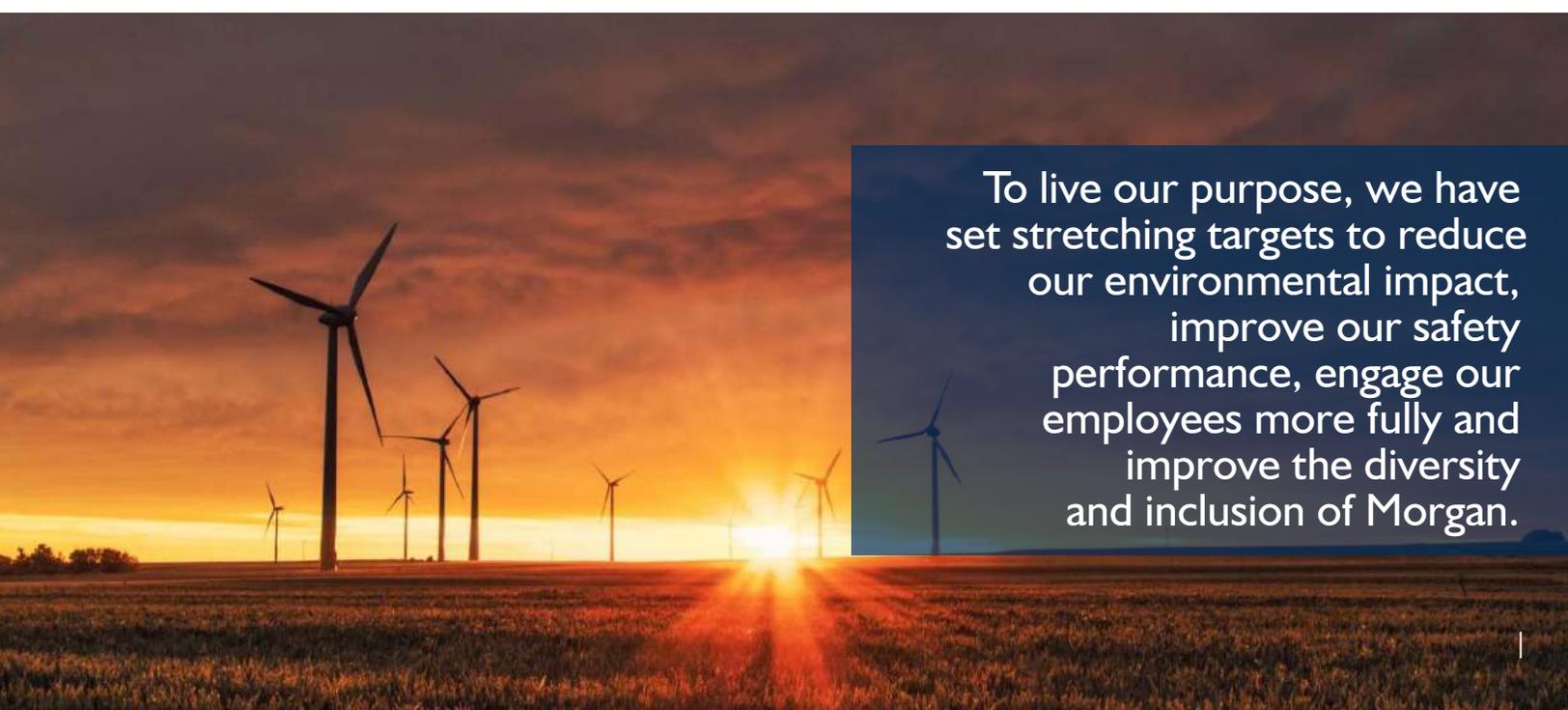
As part of this, I am delighted that we have set out our aspiration to reach net zero by 2050 in line with the Paris Climate Agreement, and set a target of reducing our scope 1 and 2 CO₂e emissions by 50% by 2030, from our 2015 (baseline). We take these commitments seriously and have plans in place to deliver against them in the coming years, making a step change in our performance.

We are making investments in our manufacturing processes and technology to reduce the environmental impact of our business. We are also investing in new materials

and process technologies that improve the performance of our products, to deliver greater environmental and safety benefits to our customers.

We are monitoring emerging ESG risks against the changing business landscape, along with stakeholder feedback, and continue to work to position our business for sustainable growth.

This report highlights the priority areas we will be focusing on over the coming years.

A photograph of a wind farm at sunset. The sun is low on the horizon, creating a warm orange and yellow glow. Several wind turbines are silhouetted against the sky. The foreground is a field of tall grass.

To live our purpose, we have set stretching targets to reduce our environmental impact, improve our safety performance, engage our employees more fully and improve the diversity and inclusion of Morgan.

Sustainability strategy

OUR PATH TO 2030

June 2021

Our work place policies and practices as defined in our Code underpin our efforts to reach our 2030 strategy.

Sustainability and environmental stewardship are integrated into our daily operations and across our corporate functions. We have invested in manufacturing technology to reduce our carbon emissions and we continue to help our customers with design and material selection to enable them to reduce their own carbon emissions.

We also use our engineering tools and the design capabilities of our application engineering teams to provide our

customers with innovative product options that bring positive benefits. A detailed example is explained further on page 25 of this report.

Our technical differentiation allows our customers to choose the best solution, for varying operating conditions, with the best return over the expected life of the equipment.

ESG PRIORITIES

	Our aspiration	Our 2030 goals ²
<p>PROTECT THE ENVIRONMENT</p>	<ul style="list-style-type: none"> → A CO₂ net zero business by 2050¹ → Use water sustainably across our business <p>¹ Excludes indirect emissions generated by our supply chain, distribution network and employee travel.</p>	<ul style="list-style-type: none"> → 50% reduction in Scope 1 and Scope 2 CO₂ emissions² → 30% reduction in water use in high and extremely high stress areas → 30% reduction in total waste usage <p>² Reduction targets shown are compared to a 2015 baseline.</p>
<p>PROVIDE A SAFE, FAIR AND INCLUSIVE WORKPLACE</p>	<ul style="list-style-type: none"> → Zero harm to our employees → A workforce reflective of the communities in which we operate → A welcoming and inclusive environment where employees can grow and thrive 	<ul style="list-style-type: none"> → 0.10 lost time accident rate → 40% of our leadership population will be female → Top quartile engagement score

Restoring our planet

SUPPORTING THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

June 2021

Since the adoption of the UN Goals and our ESG objectives, our teams have focused on raising awareness of our sustainability priorities across all our global sites.

The UN Goals aim to overcome global challenges and present the opportunity to put the world on a more sustainable path. At Morgan, we have identified nine of the UN SDGs that directly relate to Morgan's purpose and ambitions for creating a more sustainable world. As a company we're fostering a culture of sustainability. In support of SDG Goals 6, 11 and 12, our teams across the globe participated in activities to support Earth Day in April 2021. Activities included:

- tree planting
- recycling
- educational learning sessions

Earth Day provided the opportunity for COVID-19 compliant in-person events, bringing more awareness and actions to make a big positive difference. The focus was on environmental awareness as it highlights the good that sustainable environment focused actions bring to our sites and to the communities and society in which we operate.



"Our teams across the world have rolled their sleeves up for Earth Day; planting trees, cleaning up community spaces and making lots of small changes to help make the world more sustainable. A big thank you to all our people for their enthusiastic support and their commitment to sustainability."

Pete Raby | CEO



Environment - Climate

Our sites take our purpose seriously. In Suzhou, China, the site is using the natural resources available, installing an impressive rooftop solar array.

Our global teams are taking steps towards our environmental aspiration to reduce our CO₂e emissions to net zero by 2050.

June 2021

REDUCING OUR IMPACT



We are committed to a sustainable future. Our aim is to ensure that our products and manufacturing processes are designed, built and managed in a way that enhances their value to society and our environment.

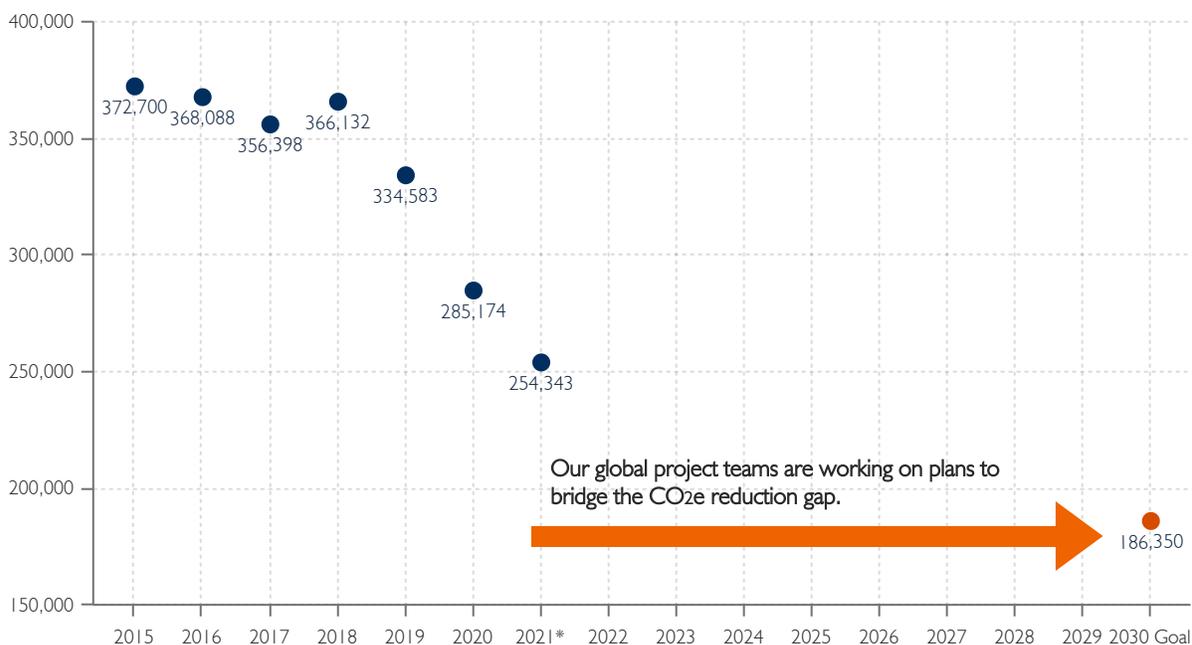
For CO₂e we are off to a good start against our 2030 target. Despite our energy intensities increasing, our year-to-date annualised CO₂e has reduced by 11% as compared to 2020 and improved by 24% over 2019.

We established a target of 50% reduction of Scope 1 and 2 CO₂e emissions by 2030 and we are currently at a 32% reduction, on an annualised basis, against this goal.

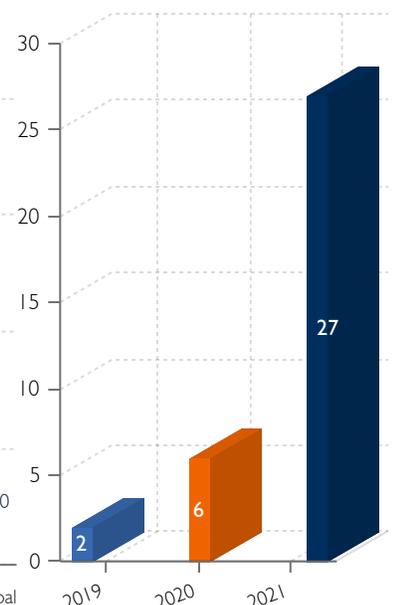
We are progressing well with our green energy procurement, with a move towards carbon free and renewable or green energy sources.

Since January 2021 an additional 21% of our electricity is green energy, which means year to date 27% of our electricity comes from green sources.

GHG Emissions tCO₂e



Carbon Free/Renewable Energy % of Electricity



- Note: 2021 data is reported through June and annualised

June 2021



SUSTAINING OUR FUTURE

We are committed to a sustainable future. Our aim is to ensure that our products and manufacturing processes are designed, built and managed in a way that enhances their value to society and our environment.

Water scarcity is an increasing challenge in many parts of the world. As the world tackles climate change, our bio-energy demands will exacerbate the pressure on global water demand, meaning many will face scarcity in water availability due to both physical shortages and scarcity in access. We are heavy users of water due to the nature of our manufacturing processes, and we recognise that in some

instances our water demands are in areas of increasing water stress. By improving our water usage we will positively impact the local communities in which we operate, and therefore society more generally.

By 2030, we will reduce our total withdrawal of water by 30%, with the same goal in areas of high and extremely high stress.

Approximately 25% of our manufacturing operations are in these water stress areas. We are 21% higher in our water withdrawal than 2020, however 6% below 2019 levels and 7.5% below our 2015 baseline. For total water withdrawal, year-to-date, we are 20% higher than 2020 levels, however we are 13% below 2019 levels and currently 27% below our 2015 baseline. Overall, our water withdrawal increase over 2020 is primarily due to an increase in production levels, with

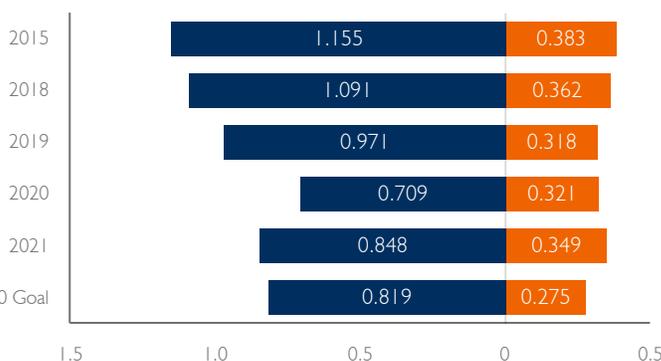
all of our manufacturing facilities in full operation following some COVID-19 site shutdowns.

We are implementing various water sustainability projects globally. For example in Sao Paulo, the team have installed a system to collect rainwater for irrigation use which reduces the facility's dependence on the stretched city water supply.



Water Withdrawal and Consumption

Half Year Actuals - millions m3



2030 Target Progress



Water Withdrawal In Stressed Areas

Half Year Actuals - thousands m3



2030 Target Progress





Environment - Waste and recycle

We are proud of the dedication of our Augusta, USA team. Their efforts have led to an impressive reduction in waste to landfill. Results through half-year; Cardboard and Paper 74,956lbs, Single-use Plastic 35,274lbs, Metal 220,460lbs.

REDUCING WASTE THROUGH CONTINUOUS IMPROVEMENT EFFORTS



Through continuous improvement efforts we are reducing all hazardous and non-hazardous waste streams.

Our facilities have implemented various projects in 2021 to reduce the generation of waste. Continuous improvements aligned with 5S methodology (sort, set in order, shine, standardise and sustain) have also been implemented globally. For example, our Martinsicuro site eliminated the use of lead in their products, therefore

eliminating a hazardous waste stream. Year to date several process improvements to reduce waste generation have been implemented. Minimising overweight products and fine tuning equipment to ensure proper thickness and recycling of air pollution control dust collector wastes are just some of the many improvements implemented this year. In addition, we have stepped up our focus on recycling rates for all other materials, such as: wood, cartons, pallets, plastic, jumbo bags, etc.

Our waste intensity is 2.5% higher than 2020, although better than 2019 by 13%. Recycling has improved slightly over 2020 by 2%, however lower than 2019 levels by 4%.

Our recycling efforts were in some part dampened by the COVID-19 pandemic. Resulting in restricted recycling opportunities (for example, some recycling operators ceased operations along with additional recycling restrictions in China) across the globe.

Waste Intensity
MT/m GBP revenue



Recycle Management
% of Waste Recycled



Environmental best practice

SUPPORTING BEST PRACTICES

June 2021

We take what we've learnt across all areas of sustainability and apply this best practice across our global sites. This complements our continual improvement mindset and helps us tackle local and community needs.

Our 2021 Climate Change and Water Security reports for CDP are due in July, and we are actively gathering our data to meet the deadline. Once submitted we anticipate the updated scoring from CDP by December 2021. We also anticipate publishing our climate report aligning with the TCFD framework later this year.

Our long-term project plans for CO₂e reductions against our 2030 targets are in development and we expect to have these plans completed by Q4, 2021. After our plans are complete, we anticipate sending our letter of commitment to the Science Based Target Initiative (SBTi) by the end of this year.

Our Yixing, China operation was recently awarded the 'High-Quality Development - Green Safety Production Award' by the local government.

The project included the installation of a regenerative thermal oxidiser, that not only saved energy through waste heat recovery (by approximately 12%), but also reduces volatile organics compound (VOC) emissions to the environment.



Sea level rise

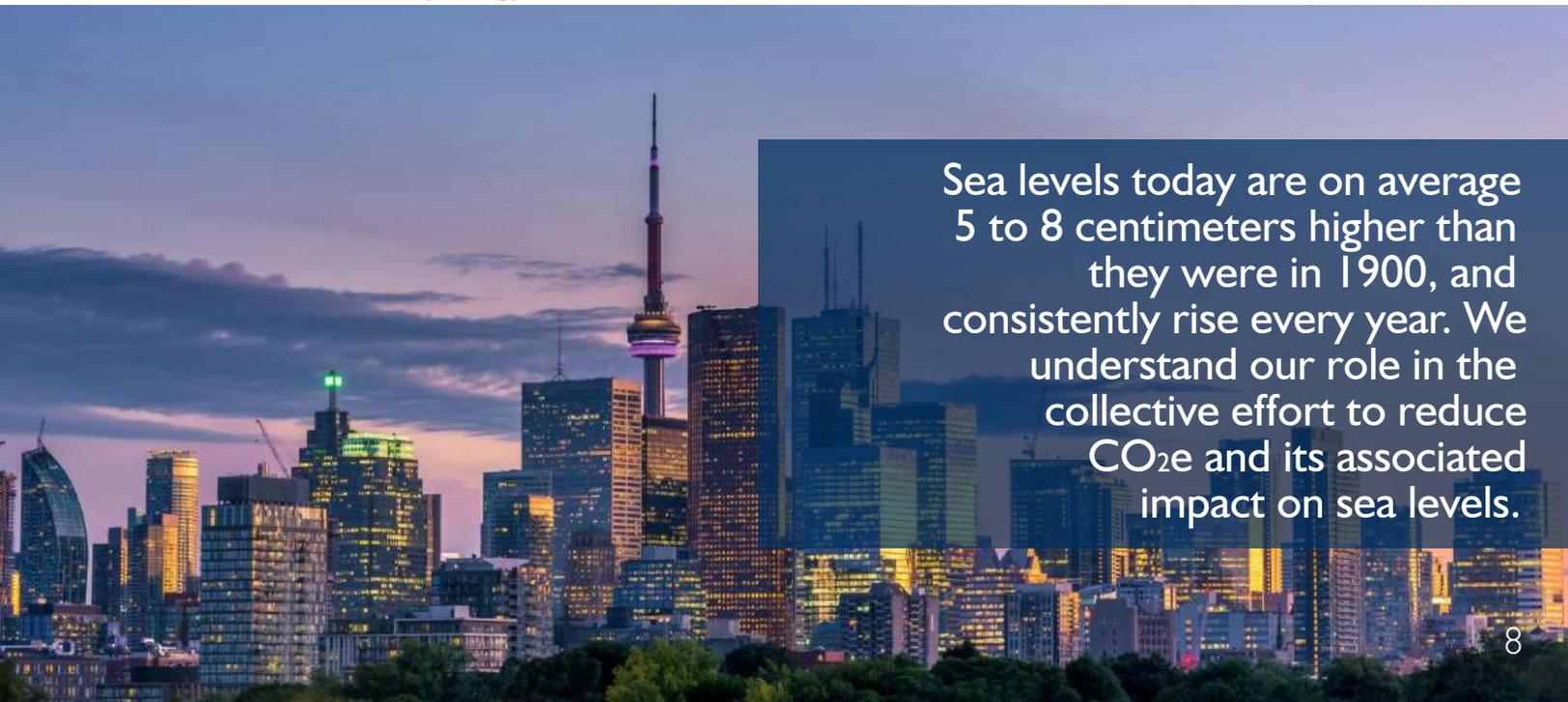
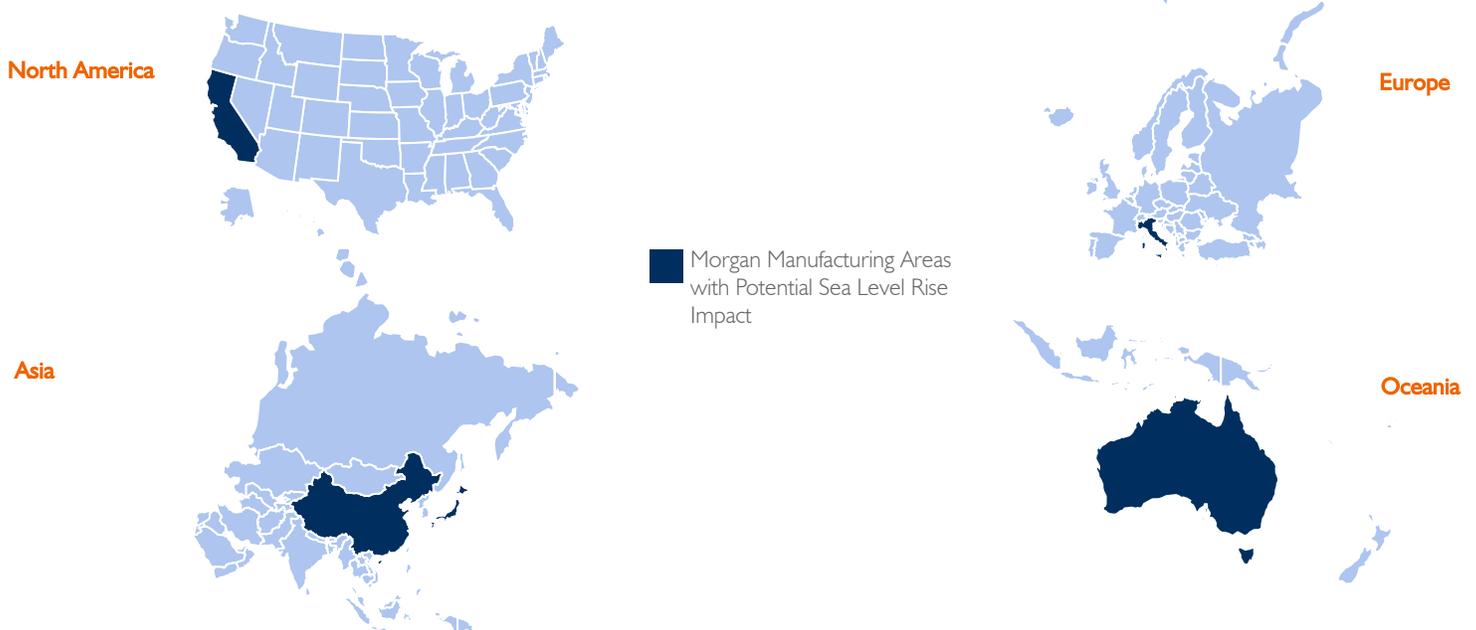
THE IMPACT OF CLIMATE ON OUR BUSINESS

June 2021

Scientists have identified that one of the most important impacts of climate change will be rising sea levels. Using modeling we have evaluated the impact of a 1.5°C to a 4°C rise in global temperatures.

Through modeling, we have identified ten of our manufacturing locations that would be negatively impacted due to rising sea levels. We are developing contingency plans with our local sites to enable manufacturing

to shift to alternate sites should the need arise.



Sea levels today are on average 5 to 8 centimeters higher than they were in 1900, and consistently rise every year. We understand our role in the collective effort to reduce CO₂e and its associated impact on sea levels.

Health and safety

ENGAGING OUR TEAMS IN SAFETY



June 2021

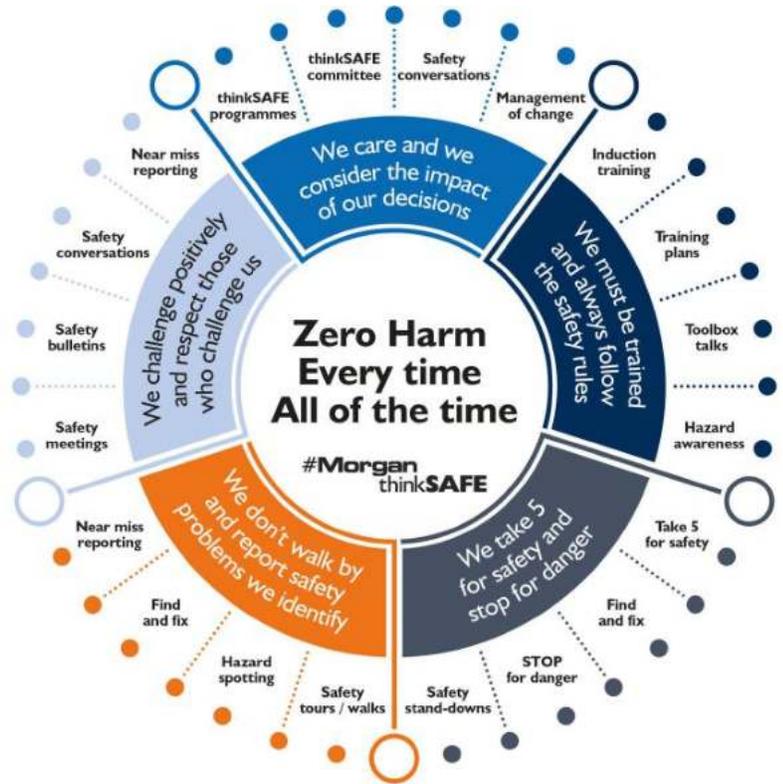
We are making progress in training our thinkSAFE ambassadors to deliver crucial behavioural safety training.

Our health and safety improvements and focused initiatives are driven by our branded thinkSAFE programme. We continue to evolve this programme and in 2021 we have developed refreshed ambassador training. Custom built in collaboration with a third party training consultant, it is structured around our thinkSAFE commitments. The training is intended to bring to life the importance of safety, and allows our teams to develop additional behavioural safety skills.

We aspire to create a community of ambassadors who will work across the organisation to: support the development of the safety culture, champion the thinkSAFE programme and share best practice and positive stories, both in work and in the community.

The training programme is intended to increase the engagement of our people. Ambassadors will bring our thinkSAFE commitments to life and review and reflect on our thinkSAFE strategy.

Our five thinkSAFE commitment modules are facilitated by our new ambassadors across each global site. The training is being delivered both virtually and in a COVID-19 compliant face to face manner, and will run through to mid-2022.



In February, we launched a new hazard identification reporting system; "DON'T WALK BY!" to add improved visibility in monitoring trends, ease reporting and improve visibility of needed corrective actions.



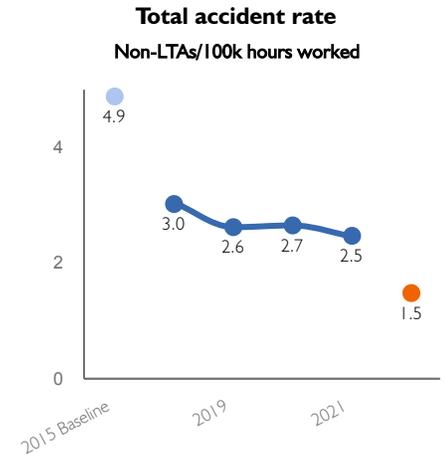
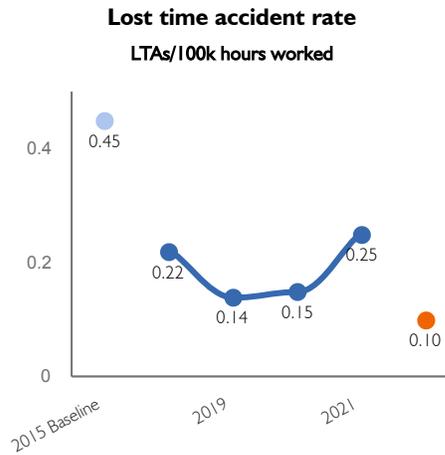
The actions of our people support our journey to zero harm. Eric from our MMS, Suzhou site, recently won a hazard observation reporting award, due to his active role in improving EHS visibility across his site. We appreciate, Eric and all Morgan employees who help to keep us safe and who 'Don't Walk By' unsafe behaviours or conditions.

Health and safety

MAINTAINING OUR FOCUS ON HEALTH AND SAFETY

June 2021

We have seen our lost time accident frequency increase to 0.25 through 2021, up from 0.18 in 2020. There is no single driver of this change. The COVID-19 pandemic is a source of concern which we are addressing both through our safety programme and by supporting our managers to have better conversations with their people about better mental health and wellbeing.



We continue to focus on investments that support a safe workplace for our employees, and we have taken immediate measures with our operations, health and safety teams and our employees, with a call to action. We are implementing a new behavioural based training programme and a new hazard awareness campaign.

We have also developed our five-year health and safety plan to define the next steps we need to take to reach our 2030 targets. This includes our behavioural safety training and a series of projects to

improve our process safety.

In addition, we are reinforcing the accountability for our leadership teams through training of our leaders. We are confident the measures we have put in place will further improve our safety culture and performance over the medium term.

#Morgan thinkSAFE

Every time. All of the time.



“A high-quality hazard reporting programme is an essential part of a good safety programme for a number of reasons. First, it begins to establish a behavioural change in each and every one of us. It gets us to look at our workplace with a different set of eyes. Second, by identifying the potential hazard and then ultimately eliminating it, we make the workplace that much safer for everyone. Third, the act of identifying and correcting hazards is visual and apparent to our co-workers.”

Joe Landa | President, Seals & Bearings Division

Health and safety

COMMITTING TO thinkSAFE

June 2021

At Morgan, our goal is zero harm. Our thinkSAFE commitments are aligned with the behaviours expected from each member of the Morgan family at every level, and in every activity.

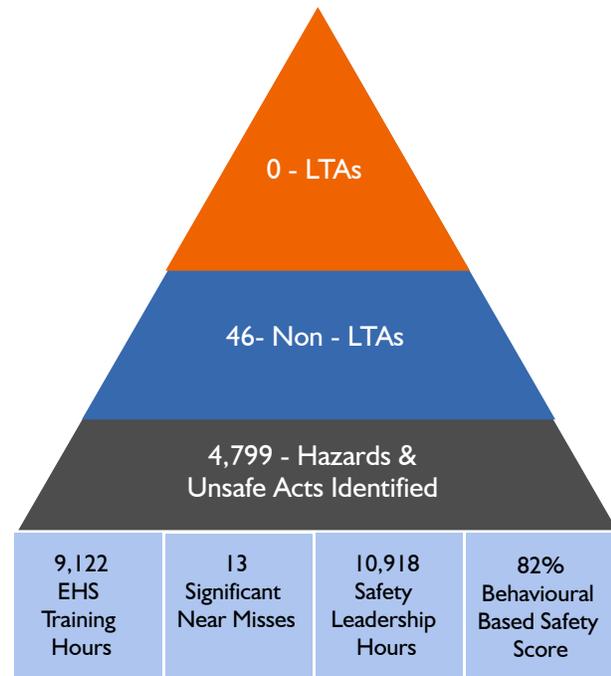
This year's World Day for Safety and Health at Work's theme was 'anticipate, prepare and respond to crises'; a focus more important than ever.

Our teams across the globe celebrated this important day with a refreshed focus on safety. Activities including specific safety meetings, a re-commitment to thinkSAFE, hazard identification activities and education on safety awareness.

Our Gujarat team for example,

marked World Safety and Health Day, by reviewing their own COVID-19 safety protocols and completing safety stand downs to learn from others.

Each and every team is taking crucial steps towards our long-term goal of zero harm.



Pictured here are the Gujarat team recognising World Safety and Health Day at Work 2021.

Our Gujarat team celebrated over 2.5 million hours worked without a lost time accident in 2021. The figure above depicts their Safety Pyramid results. This safety milestone was achieved through their focus on leading safety indicators.



Safety is our most important priority and it's great to see the support for World Safety and Health Day. Thank you to all our people for their support to the changes we made to keep everyone safe from COVID-19. This will be with us for some time and we must remain diligent, follow the protocols and look out for each other.

Pete Raby | CEO

Health and safety

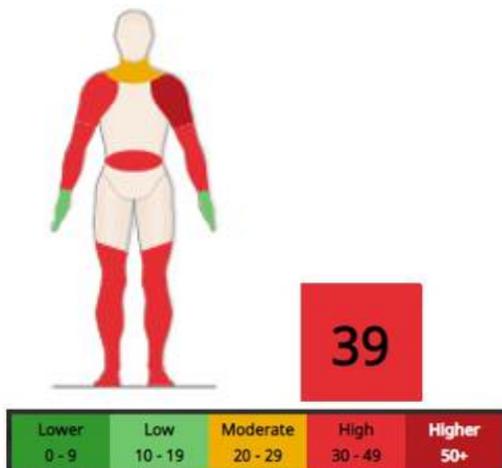
USING ADVANCED TECHNOLOGY TO IMPROVE SAFETY

June 2021

Keeping up to date with the latest technology enables us to improve our processes.

To lower our risk of musculoskeletal disorders many of our operations have implemented advanced ergonomic tools. These tools use artificial intelligence technology to accurately measure forceful exertions, awkward body positions, high frequency tasks and vibrations.

These tools enable us to determine the level of ergonomic risk associated with any job or task and assists us with data driven metrics to support the prioritisation of jobs and tasks.



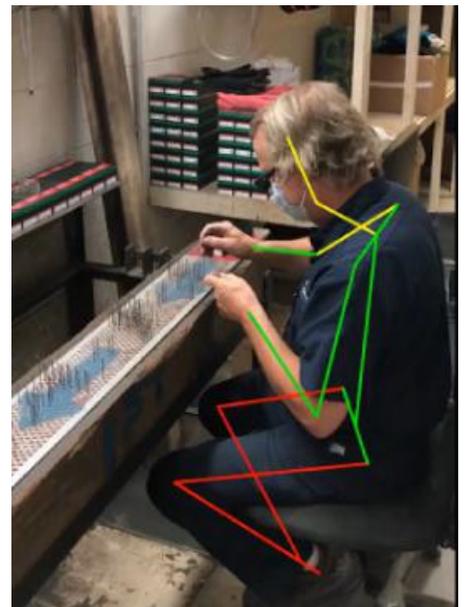
The COVID-19 distance warning system and contact tracing technology used at our Kempton, Germany site, helps bring an increased awareness to the team on COVID-19 protocols.

Our employees were surveyed and over 90% of the team found the technology helpful in raising their own awareness. In addition, it improves the levels of employee engagement.

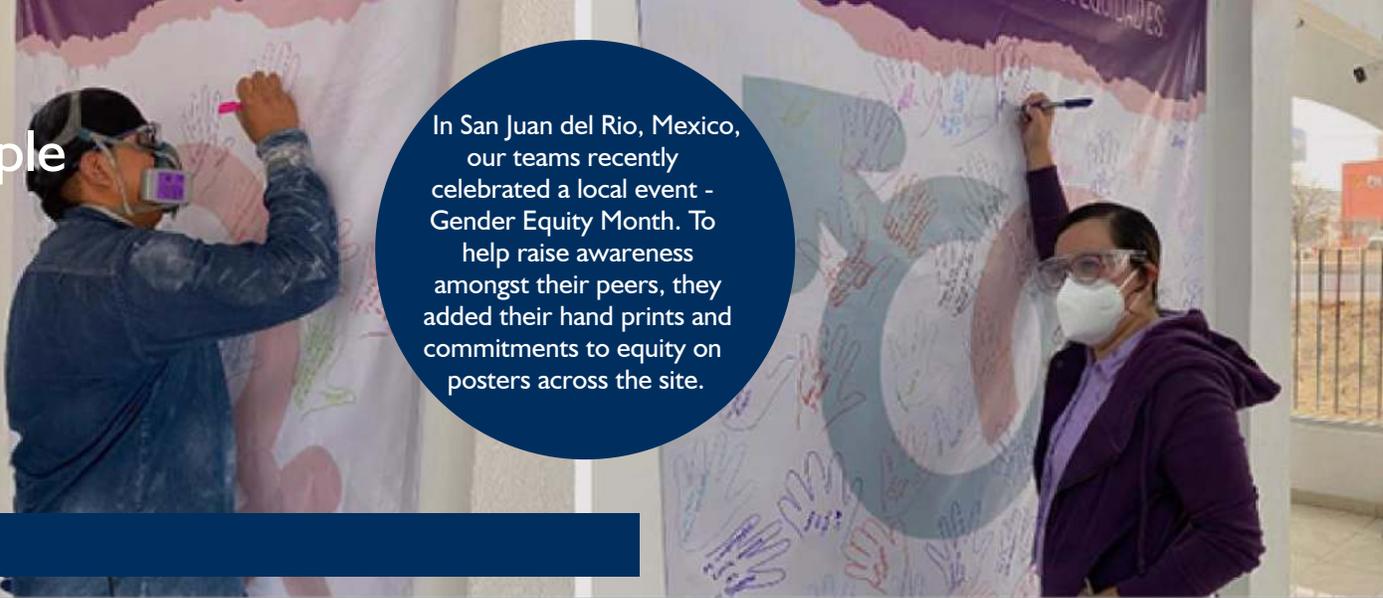
Our Stourport team have begun

using mixed reality technology, through HoloLens, to enable an increase in operational efficiency, reduce errors and improve safety.

A great way to overcome a new challenges all while enabling remote and on-site collaboration.



People



In San Juan del Rio, Mexico, our teams recently celebrated a local event - Gender Equity Month. To help raise awareness amongst their peers, they added their hand prints and commitments to equity on posters across the site.

June 2021



IMPROVING OUR DIVERSITY

Diversity is not about treating everyone the same. It is about understanding, accepting and valuing differences.

Our global family is strong because of the diversity of the people who are part of it. Our 2030 strategy includes diversity and inclusion goals as we aspire to have an employee population more reflective of the communities in which we operate. As a company, we will ensure 40% of our leadership population will be female by 2030, and we have a good starting point.

Currently, 43% of our Board members are female and 27% of our leadership population are female, with our total

workforce at 27% female as of June 2021. Our female leadership population is down from 30% as compared to end of year 2020. This is a result of more open vacancies and because our overall population has changed.

Gender diversity is just one of the steps on our journey to create a diverse and inclusive team. We are passionate about working with our people across the world to foster a varied and rich culture so that our people and our business can thrive.

In Q1, the executive team held a workshop on diversity and inclusion to review our progress to date, and discuss the areas we should focus on next across the group.

The focus areas included organisational approach, buy-in and commitment, people data, identification of needs, initiative implementation, communication and measurement of impact.

During 2021 this high level framework will be developed further and will include Group and GBU activities.

The essential elements of an inclusive culture were also discussed. At Morgan, an inclusive culture is one where employees feel valued with a sense of belonging, one of respect and equality, safe and open and one where employees feel empowered and can grow.



“All elements of diversity, equity and inclusion are important but if we are to have an engaged workforce where everybody feels valued we need to continue to develop a respectful culture. Respect is a concept that works everywhere.”

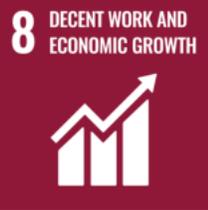
Maria Antoniou | Group Human Resources Director

People

June 2021

On May 17, Morgan supported the International Day against Homophobia, Transphobia and Biphobia (IDAHOBIT). This global event is a way to promote diversity and inclusion amongst a group that often feels excluded.

ON THE JOURNEY TO INCLUSIVITY



An inclusive culture is one in which everyone feels empowered to fulfill their full potential and somewhere people can bring their full self to work. This is a culture we are working together to create.

We are committed to a workplace that inspires authenticity at work for all our people.

We promote equal opportunities for all employees and job applicants, and do not discriminate on the grounds of gender, pregnancy/maternity /paternity leave, marriage/ civil partnership status, gender reassignment, race, disability, sexual orientation, age, religion or beliefs.

We make reasonable adjustments to accommodate any employee who may have a disability within

the meaning of all global equality legislation, and where the Company is aware of such disability.

We are proud to put our voice to the global fight to end all forms of racism and racial discrimination.

We are a zero discrimination employer, and our Morgan Code underpins our shared values to ensure people can thrive in a safe and ethical workplace.



Being in the privileged position of working with a number of cross cultural groups on some of our training programmes, the richness of conversation, ideas and challenge, from the different perspectives everyone brings, always energises and adds greater value to those involved. ”

Philippa Phipps | Group Head of Talent and Development

People development



June 2021

CREATING A FOUNDATION FOR SUCCESS



In 2021, Morgan Advanced Materials continued our partnership with Impact International to build upon the award winning development courses designed and implemented in 2020.

In 2021, we have continued with our global leadership programmes – Catalyst and Ignite.

Our programmes are designed to drive greater global consistency in leadership behaviours, and improve alignment to our future capability needs.

Each programme involves a 14 to 24-month blended development journey, with the objective of empowering participants to deliver leadership and change across the organisation.

Since the beginning of 2021, we have used our experience of running our engaging development programmes virtually, and applied this knowledge to our new and improved Elevate programme.

Elevate is a Morgan specific management or supervisor level programme, which aims to give line managers and supervisors introductory level management training.

We are expanding our offering by training more of our people to deliver Elevate in local languages, adapting it for both face-to-face and virtual delivery.

We have also provided additional support and guidance for the line managers of participants. This additional support is to ensure that learning is embedded in the workplace, such that changes in behaviour and approach positively impact business outcomes.

The development of the programme means it is now more inclusive, allowing us to facilitate a greater understanding of our business and improve the culture.

Wellness and our communities

June 2021

HELPING PEOPLE AND CHANGING LIVES



We pride ourselves on having some of the most passionate and inspiring people working at Morgan.

Not only do our people have a real love of science, maths and technology, but many also bring that passionate spirit into other aspects of their lives, to give back to their local communities.

We want our people to have the freedom to support what they care about most. We share these stories through our internal social media platform Yammer, where you will often see the generous spirit and nature of our employees - from bake sales to cultural celebrations and charity donations to sponsorship events.

As our sites and operations are spread across the globe it gives us the opportunity to work with many communities. We pride ourselves on being involved at a local level and look to understand the community's priorities and concerns.

As an example, our Augusta employees support the United Way CSRA community initiatives for children, young adults & families, through payroll contributions and other volunteer efforts.

In 2021, Paige Walden our MMS Division HR Director & Group Head of Reward became a member of the board.

United Way of the CSRA serves six counties in the state of Georgia and two in the state of South Carolina; encompassing

urban, suburban and rural communities with diverse needs. The charity 'unites people and mobilises community resources to create lasting changes that transform lives', a mission which Paige felt immediately connected to.

Paige will be part of a team who aspire to have the highest performing board in the non-profit sector, and who work collaboratively to provide strong leadership and governance to the organisation.



Wellness and our communities

June 2021

3 GOOD HEALTH AND WELL-BEING



BREAKING THE STIGMA

The COVID-19 pandemic brought mental health to the forefront. At Morgan we are bridging the gap between physical health and mental health.

The COVID-19 pandemic brought both new and existing mental health concerns to the forefront. Isolation brought about by extended periods of lockdown increased feelings of loneliness and associated health issues. Similarly, the virus also exacerbated existing issues.

There are ample studies which detail the short and long-term mental health consequences of the pandemic. At Morgan, we take this topic seriously, and have engaged our employees in regular discussions around mental health in an attempt to break the stigma and provide more opportunities for our teams to reach out for help.

We continue to engage our employees in regular team building activities, either virtually or face to face (where COVID-19 restrictions allow). We are providing resources to our teams regarding health and wellness through internal and via external local outreach programmes.

We encourage our teams to commit to acts of kindness to boost the teams mood, as well as helping others. Words of encouragement and mental health awareness are sent regularly in our emails, hoping to brighten someone's day or provide additional insight.

Recently our Stourport, UK, site supported a number of employees to become fully qualified mental health first aiders. Other sites will look to do the same this year. First aiders are ready to listen to our people and point their colleagues to further support, if necessary.

In 2021, Morgan has partnered with Health Assured in the UK, to offer employees (and their families) access to a new employee assistance programme (EAP). This tool provides guidance on all matters of health, safety and wellbeing. This free service is available to employees 24 hours a day, 365 days a year.

An EAP service is now available in the US and UK, and we are investigating similar services for our other locations.



Even simple acts of kindness go a long way with our teams. Shown here is Susan Miglionico, ISO Coordinator, Augusta USA walking the site to hand out sweet treats to our teams to show her appreciation for everyone giving their best.

Morgan code and policies

June 2021

TREATING OUR PEOPLE FAIRLY AND PROTECTING OUR BUSINESS

8 DECENT WORK AND ECONOMIC GROWTH



Central to the Morgan Code is always working safely and ethically. Everything we do in Morgan has this ethos at the core.

The Morgan Code is a set of principles (supported by policies) that lays out how we should conduct ourselves. The Code applies to all employees and, to the extent appropriate, to Morgan's business partners including agents, joint venture partners and third-party representatives.

Processes are in place at site level to ensure the policies are effectively implemented. Morgan's internal audit function monitors compliance with key ethics and compliance processes and ensures that the ethics hotline and its availability are adequately promoted.

As part of our continued responsibilities and in support of the Morgan Code, the following policies have been updated and/or developed in 2021:

- EHS Policy updated March 2021
- Board Inclusion & Diversity Policy updated February 2021

- Modern Slavery Statement updated June 2021
- Conflict Minerals Policy June 2021
- Morgan Supplier Code June 2021

Morgan continues to focus on leadership training for our Morgan Code and global business ethics. For our training topics through the first half we have achieved a 100% global completion rate for assigned ethics training.

For more information, on our Morgan Code and all of our applicable ESG policies, please visit our website.

"Doing business the right way, safely and ethically, is fundamental to the way we do business.

It is the top priority for Morgan".

Pete Raby
Chief Executive Officer



IMPROVING OUR NETWORK AND ENHANCING SECURITY

Network modernisation is a strategic priority this year. This will improve speed, reliability and most importantly it will improve the user experience of connecting and interacting with the Morgan network in office or on the road.

Our network modernisation programme has entered the pilot phase. This is an exciting update for Morgan, which will create a new internet focused design to deliver enhanced reliability and security, improved management, and

real performance benefits across our sites.

We have adopted multi-factor authentication (MFA) which is now underway to help keep our systems safer. In 2021, we are also introducing our workplace productivity campaign and continue to provide on-going top-tips to our employees to improve performance.

As part of our thinkSECURE programme, we have implemented internal controls to ensure we stay current on evolving security technology.

We have also launched multiple educational webinars to educate our

teams on how to protect our ERP systems from both internal and external cyber threats.

A thinkSECURE SharePoint page was developed by our IT team which offers resources and links to policies, access to our cybersecurity awareness champions programme, session recordings, presentation decks and more.

**#Morgan
thinkSECURE**



“As we see a continued increase of cyber threats in the world around us, we do need to act to protect our company assets. Fortunately, we have a comprehensive cyber security programme in place, with projects to put additional controls in our IT environments. I am also pleased to see great participation in our security awareness campaigns, and we are continuing with our phishing simulations to keep reminding people of the risks. Everyone can be exposed to a cyber attack, so we will need everyone to remain alert to prevent breaches occurring.”

Ria van Waes | Chief Information Officer

Product stewardship



SAFER PRODUCTS FOR PEOPLE AND THE PLANET

June 2021

We've seen growing demand for advanced materials, as customers push the boundaries of technology to make their processes and products more sustainable.

We supply products that, when used in compliance with product safety communications and common safety practices, will not present an unacceptable risk to human health and safety.

We strive to maintain communications with stakeholders on environmental and health and

safety matters to ensure transparency and alignment with their needs and expectations.

Morgan's businesses maintain policies, programmes and practices to comply with laws and regulations, and to conform to Morgan's corporate standards regarding the products we sell.

In addition, our businesses communicate and cooperate with suppliers and customers, to conform to regulatory requirements that apply through the supply chain (such as REACH and RoHS in the EU, California Proposition 65, Conflict Mineral regulations and similar laws). We register the manufacture and import of substances, notify others to the presence of substances of heightened concern in products or restrict usage of such substances.



HTIW COALITION



Collaborating With Regulators

Morgan Advanced Materials is an active member of the HTIW Coalition in support of our product stewardship programme. The HTIW Coalition represents the North American High Temperature Insulation Wool (HTIW) industry, in matters relating to health and safety. Its members manufacture a broad range of HTIW products that are essential in industrial applications, such as the thermal insulation of furnaces, other thermal process equipment and automotive.

OSHA recently renewed its agreement with the HTIW Coalition to protect worker safety and health, learn more on their website.



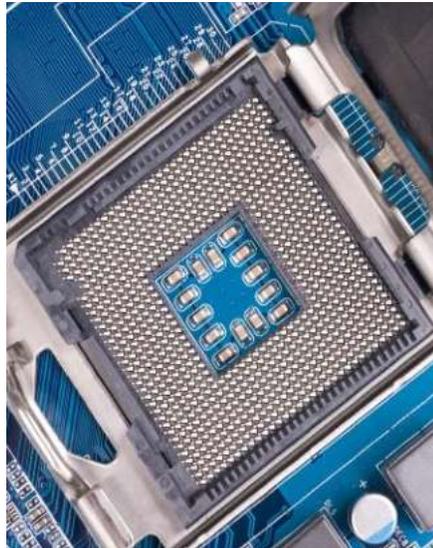
ECFIA

Promoting Safe Product Use

As part of our product stewardship programme we are also an active member company associated with ECFIA. ECFIA is a trade organisation representing the High Temperature Insulation Wool (HTIW) industry in matters relating to Health, Safety and the Environment in Europe. It was created in 1979 as the European Ceramic Fibre Industry Association and is based in Paris, France.

A key component of ECFIA's Product Stewardship Programme is CARE. CARE stands for 'Controlled and Reduced Exposure' and is a cross-industry programme of exposure monitoring and risk assessment for all HTIWs, encompassing ongoing reporting, workplace measures and control recommendations at both user company and manufacturer levels.

Our products



WE DELIVER PRODUCTS THE WORLD NEEDS TODAY

June 2021

It is not just what we do, but how we do it that matters. At Morgan we don't just support customers in the green energy or green technology markets, we also apply 'green thinking' to our own designs and manufacturing processes.

Utilising carbon and ceramics, we develop advanced materials to *make the world more sustainable, and to improve the quality of life*. This purpose drives our people to solve complex customer problems: from managing heat and enabling greener technologies, to supporting improved medical diagnostics and protecting life. Working across many industries and geographies, we deliver the materials science and technologies the world needs now.

Our diversified and resilient business supports growth and enables us to achieve long-term success. In our core markets, our customers have an increasing need to reduce their energy consumption and carbon dioxide emissions. They need to make their businesses more sustainable. We have a key role to play in helping them achieve their goals as our products and technology provide:

- insulation solutions in the chemical industry
- seals for high efficiency pumps
- ceramics for test and measurement equipment
- carbon insulation for heat treatment.

All this means advanced materials are more important than ever, and that gives us a once in a lifetime opportunity to make a difference.

CLEAN ENERGY

Our new ceramic materials for customers producing **solar panels**, support the latest generation of production technology. In addition, we are developing **brushes** that provide longer lifetimes and higher current carrying capability to support the next generation of **wind turbines**.

We support the EV market with **alumina seals and bearings** for cooling pumps, which are produced to fine dimensional tolerance and improve efficiency while minimising pump noise. Our thermal insulation **Superwool®** is used in heat recovery steam generators, fuel cells, and energy storage walls to improve energy efficiency.

SEMICONDUCTORS

Our materials are used throughout the semiconductor manufacturing process, in etch, ion implantation, photo-lithography, and deposition steps. As chip density increases, the manufacturing processes get more demanding and put increasing demands on the components.

We are working with our customers on carbon and ceramic materials and product configurations to support the latest generation of equipment.



Our products



WE IMPROVE EFFICIENCY AND REDUCE ENERGY

June 2021

Product solutions to improve the safety of workers and reduce environmental impact.

We manufacture, design and install high performance thermal and passive fire protection insulation, that reduces energy consumption and emissions in a variety of thermal processing and transportation applications.

In the power generation industry, our Superwool® thermal insulation has excellent thermal conductivity values, providing significant energy savings.

In addition, our FireMaster® products are used globally to protect people and infrastructures against fires.

These products are used in commercial buildings, hotels, sports stadia, and in airport terminals, industrial plants, petrochemical plants, offshore platforms, FPSOs, cruise ships, military vessels, yachts, ferries, tunnels and underground construction. This group of products are comprehensively certified and extensively tested to meet national and international standards, offering our customers the security of global proven fire performance in various market sectors.

INDUSTRIAL

We engineer components which are highly resistant to chemical and physical wear, corrosion, and extreme temperatures, sitting at the heart of many industrial processes. Our products help customers, especially those operating energy-intensive processes, to reduce energy consumption, emissions and operating costs.

Our technological developments have resulted in:

Superwool® XTRA - an alternative to refractory ceramic fibre.

The production of reduced wear, **reliable seals** which extend pump life by up to 4x, (compared to spray coated stainless steel rings), resulting in the significant reduction of through life costs.

Pyro-Bloc® modules for regenerative thermal oxidisers. These reduce the number of through-joints between modules, resulting in fewer opportunities for heat loss, and reduced fuel related expenses.



Our products



WE MAKE TRANSPORTATION SAFER AND CLEANER

June 2021

There are significant trends shaping our modern world. Resources are becoming scarce and harder to access, and there is increasing demand for new, advanced, materials.

Our Seals and Bearing components allow pumps to run more efficiently, reducing CO₂e emissions in internal combustion engines and reduce electricity consumption in electric vehicles. Applications include fuel management, thermal management,

emissions management and braking systems.

Our Thermal Ceramics business manufactures a wide range of materials and components used throughout the global automotive market.

From thermally insulating heat shields and exhaust after treatment components, to advanced fibre technology for electric vehicle lithium ion battery systems. We are at the forefront of technology, helping manufacturers improve safety, performance, energy efficiency and comfort to create more fuel efficient, vehicles.

CLEAN TRANSPORTATION

Our streamlined production processes for **carbon strips** allow us to develop and test new materials formulations quickly, in order to meet the diverse needs of customers in the rail and metro markets.

We have a leading range of products and solutions that provide **fire protection** around battery packs in electric vehicles, and we are constantly innovating these to meet the myriad of requirements of our customers.

We work with our rail customers to overcome technical challenges and optimise system performance with our **carbon brushes** and holders, earthing brushes, and third rail shoes.

We produce a wide range of products which are used to transfer electrical current between stationary and rotating or linear moving parts, in motor, generator, and current collector applications.

Our seals and bearings are used in **vehicle fuel and thermal management**, providing near frictionless running and low wear rates. Whilst our **fused silica** and **mullite rollers** thermally anneal automotive chassis parts.

11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



Our products



WE IMPROVE THE QUALITY OF LIFE

June 2021

We engineer high performance functional and structural ceramic materials, components and sub-assemblies to address customer-specific technical challenges.

For over 20 years, our Technical Ceramics business has produced a wide array of implantable ceramic feedthroughs.

Designed to provide superior reliability and durability, our medical implants feature innovative ceramic-to-metal seal assembly technology.

Utilising our application engineering expertise, we custom manufacture these ceramic feedthroughs to meet the specific needs of the medical implant market.

For over 40 years, we have also specialised in the production of blood shear valves and peripheral components used in haematology instruments (used for blood cell counts and related testing).

Our materials provide a barrier to organic growth. They offer resistance to harsh reagents and cleaning chemicals used in these instruments, making them an excellent choice for haematology applications.

HEALTHCARE

We improve the quality of life by providing innovative solutions to the healthcare industry. We provide ceramic and brazing products for diagnostic and life support equipment, and for implantable devices. Our materials are used in **power tubes** for medical scanning and with new materials design we can increase the lifetime of products.

We have developed new capabilities for the implantable **feedthroughs** market (e.g., for cochlear implants and neuro-stimulation) that allow us to provide higher pin densities and therefore enabling smaller package sizes for our customers' next generation products.

Our **ablation tips** for cancer treatment enable minimally invasive procedures, resulting in reduced patient trauma and recovery time, and our biocompatible technical ceramics are utilised in **apheresis systems**, micro-dosing systems and oxygen compression.

Our products transform peoples' lives.



Our products



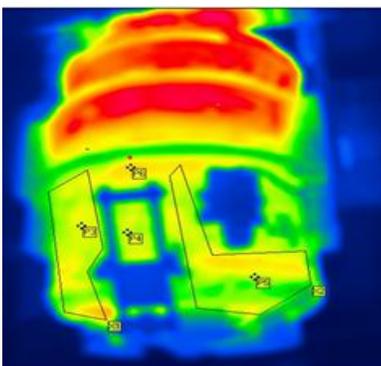
June 2021

WE ENGINEER UNIQUE SOLUTIONS

Thermal Ceramics has developed a unique system solution for molten metal transfer applications, to support the Iron and Steel sector and further our commitment to carbon emissions reduction.

The tightening of carbon emission regulations across manufacturing, in industry sectors like Steel, continue to grow investor and public interest in sustainable changes to products.

We are committed to developing solutions that improve sustainability in material ways that benefit the business bottom line and benefit our customers.



In-Situ application performance verified lab testing and customer achieved 40°C lower skin temperature.

Our Thermal Ceramics business is investing and developing solutions like Superwool® I 650SI Board, using advanced raw materials and unique manufacturing technologies. Partnering with Steel industry experts, we bring improvements in worker and process safety, energy usage and material consumption which result in lower carbon emissions.

Superwool® I 650SI Board is designed especially for backup insulation in high-temperature molten metal transfer applications such as ladles, tundishes and torpedos.

The outstanding performance of Superwool® I 650SI Board offers our customers a unique value proposition:

- High-temperature capability providing increased safety to the worker and process
- Best-in-class insulating and thermal performance – 60% improvement – resulting in excellent energy savings and reduction in emissions
- Optimum mechanical strength providing reliability of ladle performance

In application performance of two 110 tonne steel ladles, our customer observed that the Superwool® I 650SI Board, in combination with WDS® LambdaFlex® Super Microporous Panel, showed a significant improvement of ~ 40°C skin temperature drop during operational conditions. This compared to the lining profile using backup insulating boards from a leading global supplier.

These observations verified the results of our internal benchmarking (of thermal conductivity values) where our research and development team reported that Superwool® I 650SI Boards provide a minimum of a 60% improvement in insulation performance.

The outstanding performance of Superwool® I 650SI Board validates further our products and solutions contribution, as we aim to reduce emissions in steel applications for molten metal transfer.



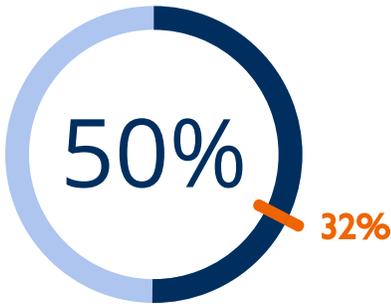
Steel ladle illustrating lining layers, including the Superwool I 650SI Board and WDS® LambdaFlex® Super Microporous Panel.

Committing to our future - where are we now

OVERVIEW OF OUR 2030 AMBITIONS AND GOALS

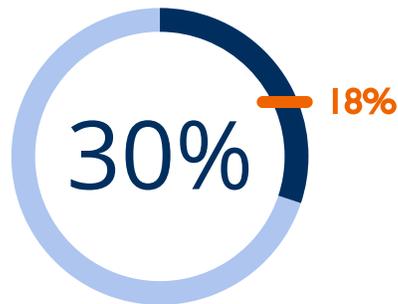
June 2021

Protect the environment¹



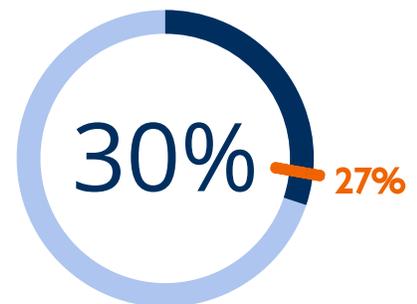
50% reduction in Scope 1 and 2 CO₂e emissions.

Our aspiration is to be net zero by 2050.



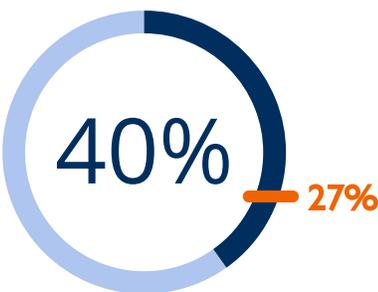
30% reduction in water withdrawal in high and extremely high stress areas.

Our aspiration is to use water sustainability across our business.



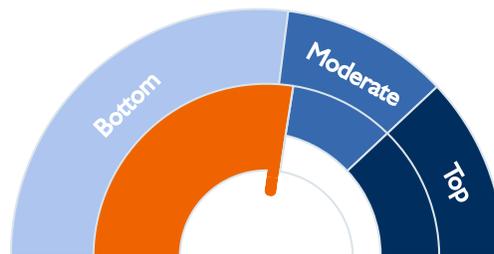
30% reduction in total water withdrawal.

Provide a safe, fair and inclusive workplace¹



40% of our leadership population will be female.

Our aspiration is to have a welcoming and inclusive environment where employees can thrive and grow.



Achieve a top quartile employee engagement score.



Achieve a 0.10 lost time accident rate.

Our aspiration is to ensure zero harm to our employees.

— 2021 Mid-Year Progress

¹All 2030 goals use 2015 as our baseline.

Our policies

ENVIRONMENT, SOCIAL AND GOVERNANCE

June 2021

We are committed to a sustainable future. Our aim is to ensure that our products and manufacturing processes are designed, built and managed in a way that enhances their value to society and our environment.

Read our policies and practices to learn how our ESG approach is governed.

[EHS Policy](#)

[The Morgan Code](#)

[Supplier Code of Conduct](#)

[Conflict Minerals Policy](#)

[UK Corporate Governance Code](#)

[Tax Strategy](#)

[Board and Committee Structure](#)

[Board Committees and Terms of Reference](#)

[Monitoring and Assurance](#)

[Policies and Control Practices](#)

[Board Inclusion and Diversity Policy](#)

[Modern Slavery Statement](#)

[Gender Pay Gap Report](#)

[Human Rights Policy](#)





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