



Terdapat gambar dan video yang menunjukkan bagaimana kami menggunakan teknologi digital untuk meningkatkan efisiensi dan keberlanjutan operasi kami. Untuk informasi lebih lanjut, kunjungi situs web kami.

TNChE Asia 2024

Smart Digital Reality™ Driving Sustainability Across Asset Lifecycle

Wednesday, June 19th

Understanding Sustainability

What Does Sustainability Mean to You?



Understanding Sustainability

What Does Sustainability Mean to You?



Corporate

Maintaining and **exceeding ESG & CSR goals** across the enterprise from the top down



Operational

Understanding equipment health to **support efficient operations** & meet corporate goals from the bottom up



Financial

Realizing the **financial benefits** of corporate & operational sustainability while simultaneously **building market share**



Supply Chain

Ensuring SCM needs are handled in efficient ways by adopting new technologies or **partnering with sustainable 3PLs**



Materials

Identifying actual materials needs to **reduce waste** both financially and environmentally

Why Sustainability, Why Now?

ESG in the News

WORLD ECONOMIC FORUM

Global Agenda | Davos 2022 | Climate Change | Energy

How businesses are taking the lead to get the world to net-zero

GENERAL EARTH INSTITUTE, SUSTAINABILITY

Environmental Sustainability as a Business Opportunity and Risk

BY STEVE COHEN | MAY 31, 2022


To reduce corporate emissions, CEOs need to be bold risk takers

Ashrafee Tanvir Hossain, Memorial University of Newfoundland
Published: May 15, 2022 6:44am EDT

What IT Leaders Should Do Now to Prepare for ESG Standards

Whether environment, social, and governance initiatives are written into your IT plan or not, they're going to play a major role. Now is the time to start strategizing.

June 10, 2022

 **Mary E. Shacklett**
President of Transworld Data

COMMENTARY • CLIMATE CHANGE

Yes, carbon offsets are imperfect—but we need them

If we're to have a hope of preventing catastrophic global warming, offsets must be one of several tools in our arsenal.

BY SAM GILL

Aviation can meet Paris targets — if it makes massive changes

Sustainable fuels and increased efficiency could put the industry on track for limiting warming to 1.75 deg

By SHANNON OSAKA PUBLISHED JUNE 11, 2022 7:29AM (EDT)

The Maritime Executive

"No Standout Outcome" From IMO's Latest Greenhouse Gas Talks

PUBLISHED JUN 10, 2022 4:28 PM BY THE MARITIME EXECUTIVE

UW NEWS

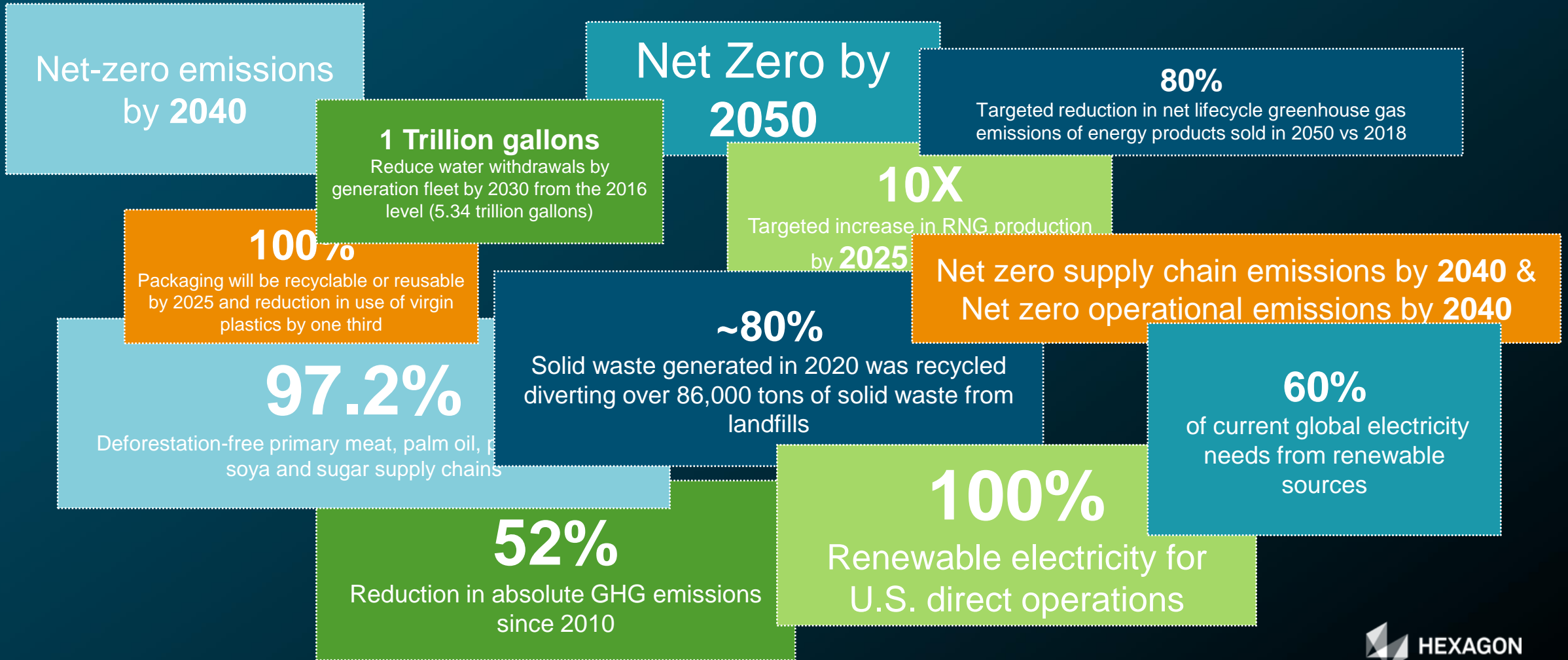
ENVIRONMENT | NEWS RELEASES | RESEARCH | SCIENCE

Including all types of emissions shortens timeline to reach Paris Agreement temperature targets

Hannah Hickey
UW News

Why Sustainability, Why Now?

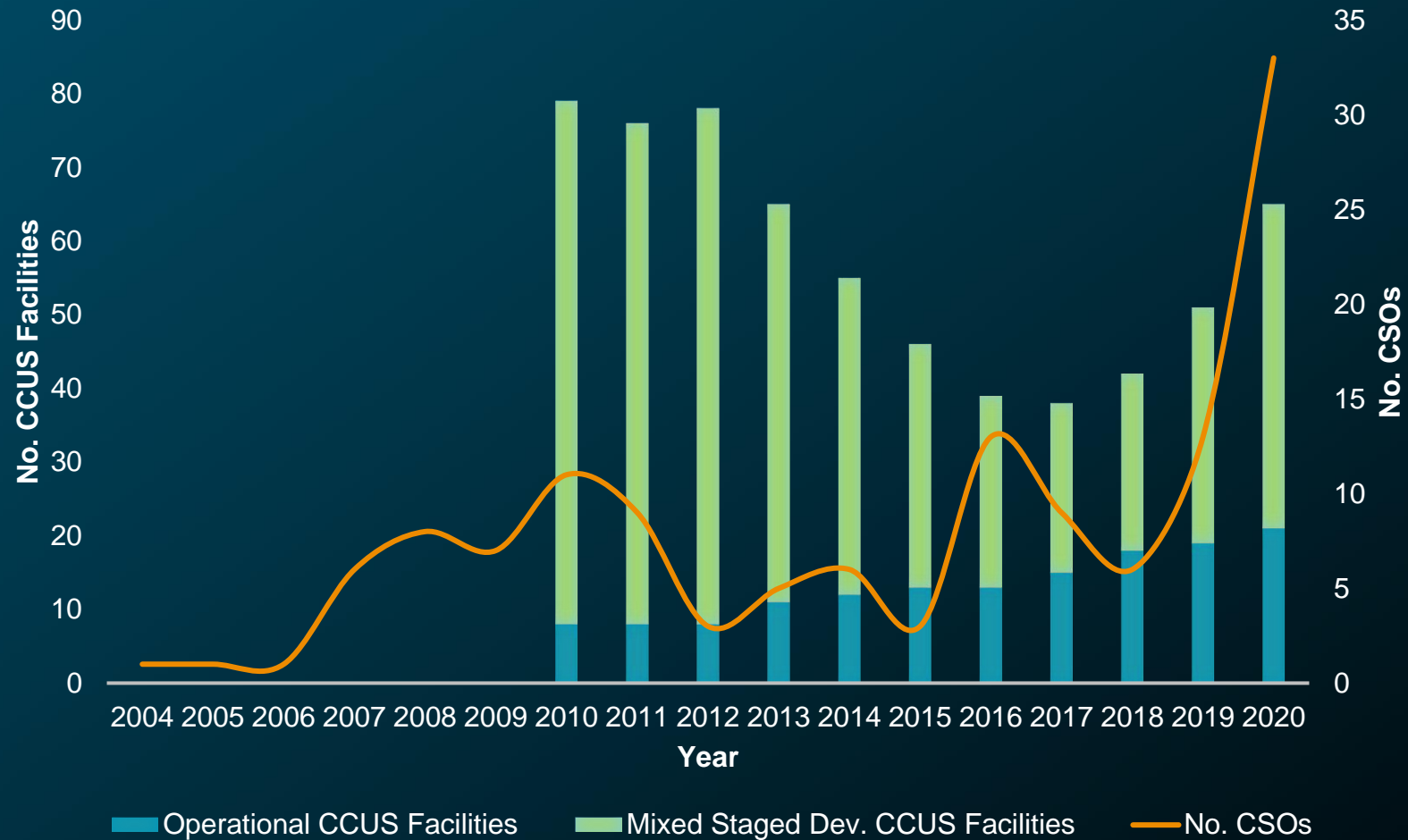
ESG Corporate Goals – a Resurgence in Importance & Visibility



Why Sustainability, Why Now?

Visualizing Market Trends

No. CSOs vs No. CCUS Facilities



SUSTAINABILITY

integral to our strategy

Since 2000

Creating continuous and meaningful improvements toward a more sustainable future via our solution portfolio

Last 10 years

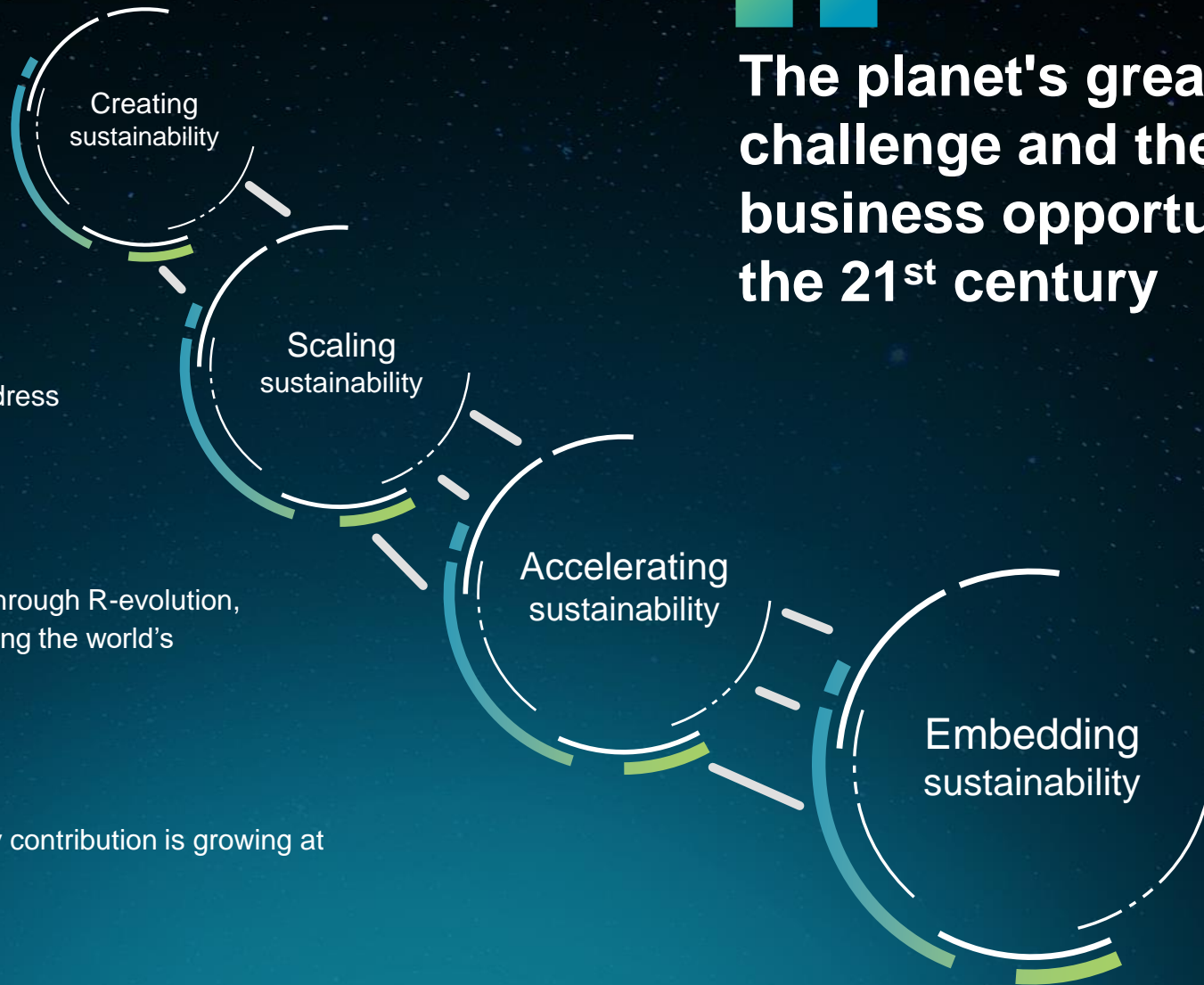
Portfolio expansion and innovation to better address the urgent needs of green-tech markets

2021—a pivotal year

Further scale and accelerate our commitment through R-evolution, a business venture 100% focused on accelerating the world's sustainable transition using our technology

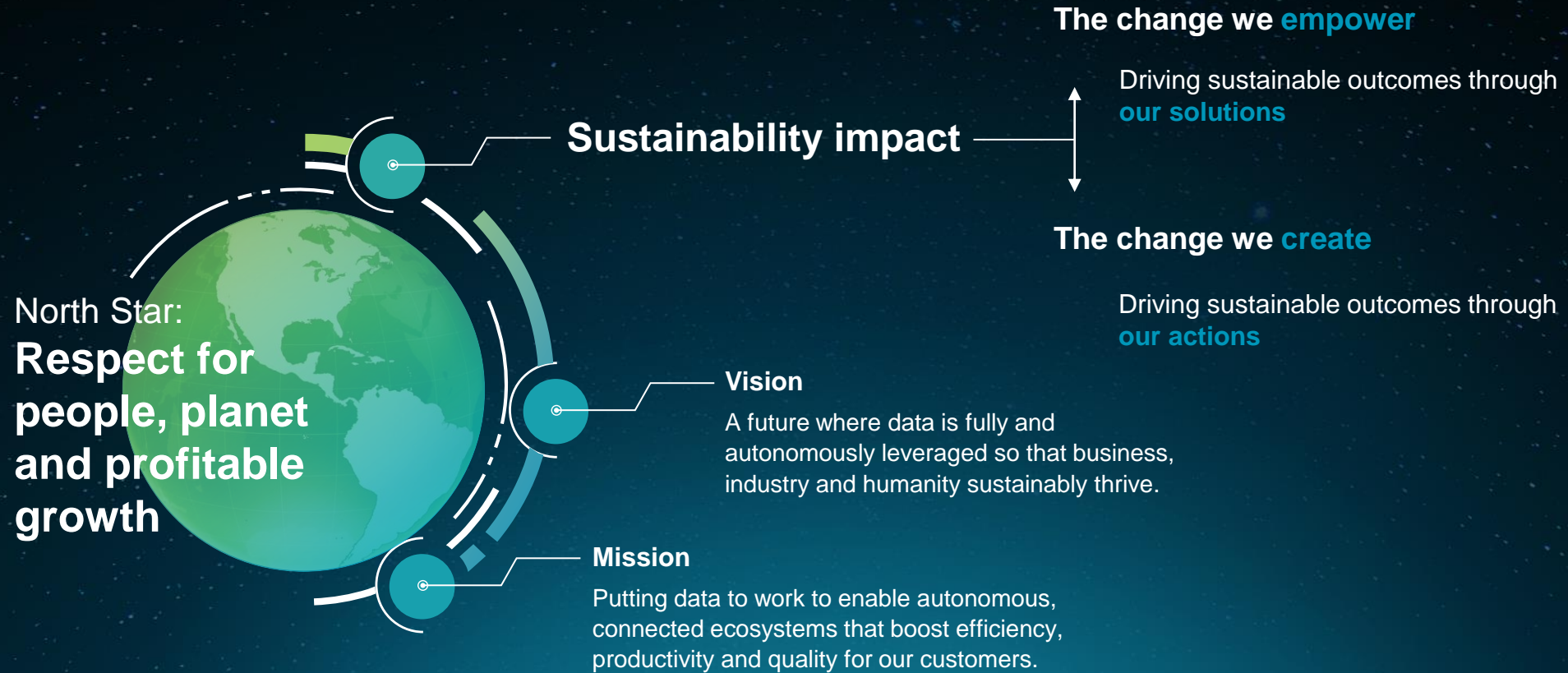
Today and beyond

We are committed to ensuring our sustainability contribution is growing at an increasingly faster rate



The planet's greatest challenge and the biggest business opportunity of the 21st century

Our sustainability impact is two-fold, supported by our vision and mission



Sustainability strategy

Change we empower

Enabling sustainability through our solutions

- Sustainability criteria in product innovation
- Innovations to optimize efficiency, productivity, quality, and safety at scale

Empowering other stakeholders to accelerate change

- Engaging Industry specific platforms
- Distribution Partners Program
- Accelerating green-tech with R-evolution



Change we create

Improving sustainability across our value chain

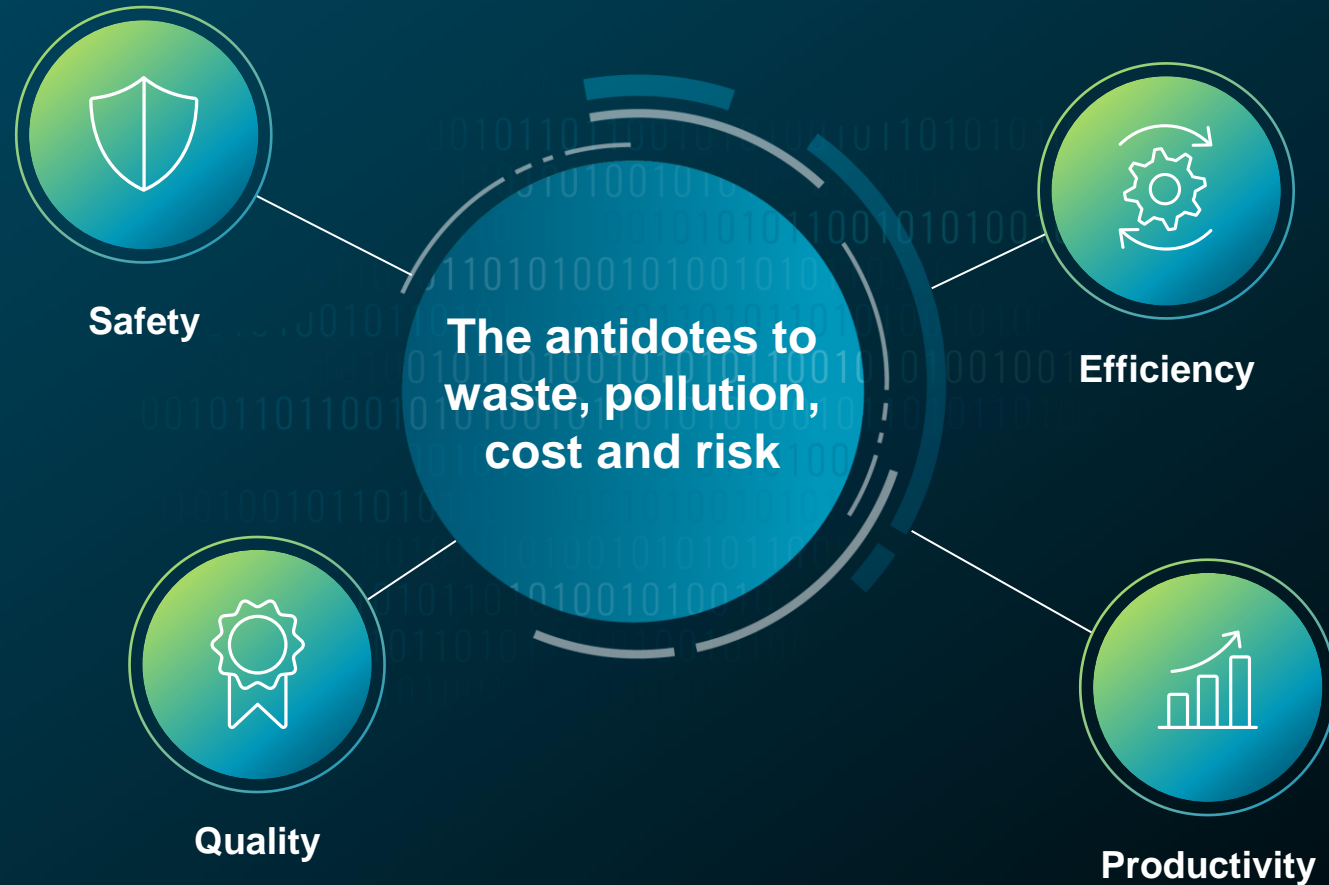
- Division specific Net-Zero Roadmap
- Resource efficiency improvements
- Sustainable Procurement Program

Driving sustainability through our culture and our people

- Inclusive and performance driven culture
- Social Responsibility through education and partnerships

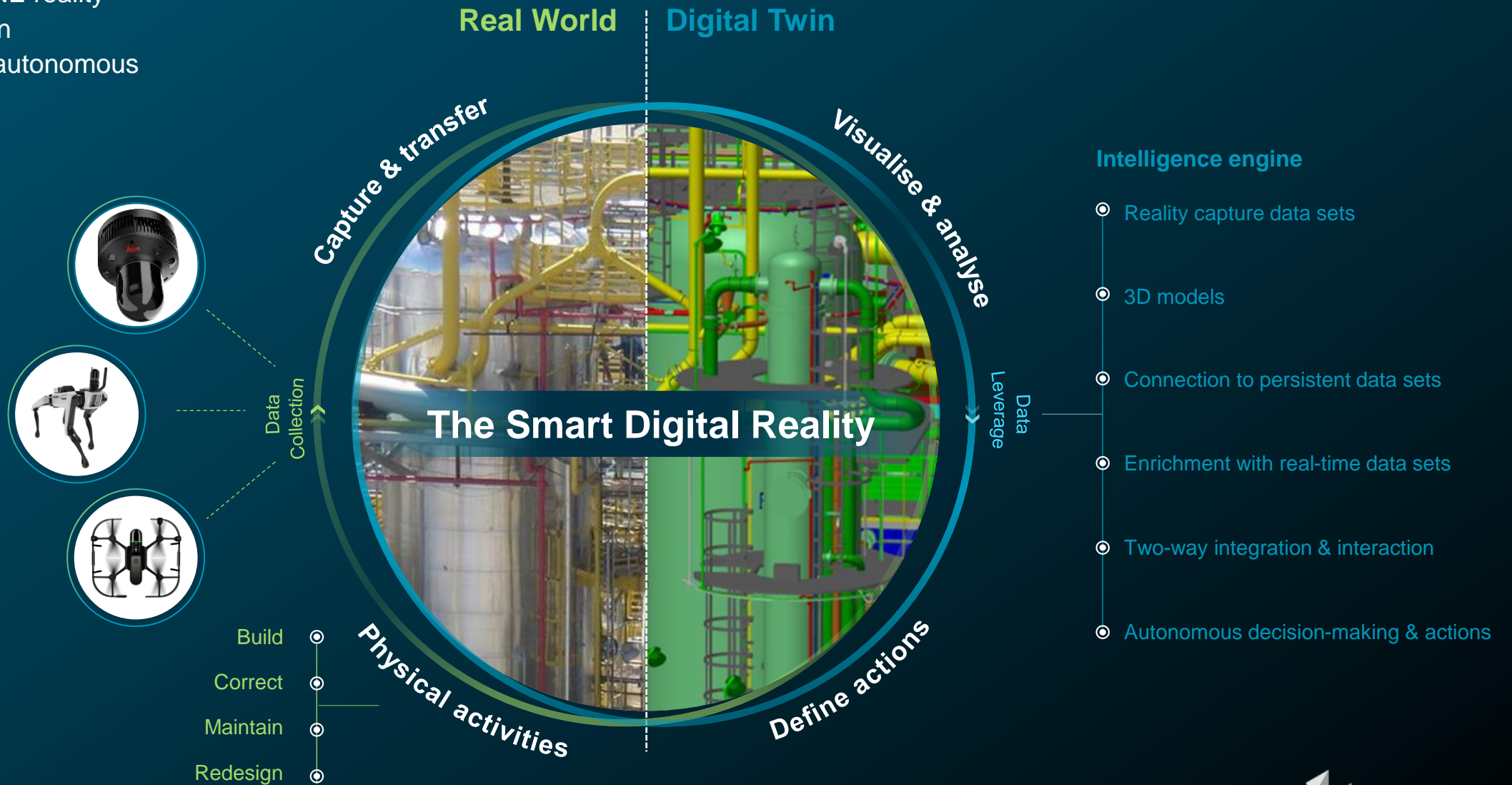
Driving sustainable outcomes through **our solutions**

Our solutions **put data to work to drive efficiency, productivity, quality and safety**—the antidotes to waste, pollution, cost and risk.



The Smart Digital Reality

Two worlds, ONE reality
Workflow-driven
Real time and autonomous



The Smart Digital Reality™ – Realizing More Value from Your Data



SAFETY



QUALITY



EFFICIENCY



PRODUCTIVITY

Digital Projects

Digital Assets

Plan	Design		Execute			Operate	Maintain			Secure	
Portfolio & Project Planning	Conceptual Design	Detailed Engineering	Supply Chain	Fabrication	Construction	Operations Management	Environment, Health & Safety Risk	Maintenance Management	Asset Integrity & Reliability	Sustaining Engineering	OT / ICS Cybersecurity

Data Services

« Digital Backbone »

Application Services

Reality Technology

Digitalization 

Reality Capture 

IIoT / Sensors 


Common Data Environment 


Analytics 


Artificial Intelligence 

Cloud / SaaS 

Mobility 

Visualization 

Integration Middleware 

Interoperability Connectors 

Robots & Scanners 

Digital Projects

Portfolio & Project Planning



- Portfolio investment
- Resource planning
- Work packaging

Conceptual Design
Detailed Engineering



- PFDs
- Equipment & line lists
- Facility layouts
- Project deliverables for handover

Supply Chain
Fabrication
Construction



- Equipment instructions
- As-built fabrication
- Material quality traceability
- Commissioning certificate

Operations Management
Environment Health & Safety Risk



- Shift operations
- Critical alarms
- EHS Incident
- Real-time operational risk

Maintenance Management
Asset Integrity & Reliability
Sustaining Engineering



- Preventative maintenance plan
- Work performance
- Asset condition
- Equipment reliability
- Evergreen as-built model

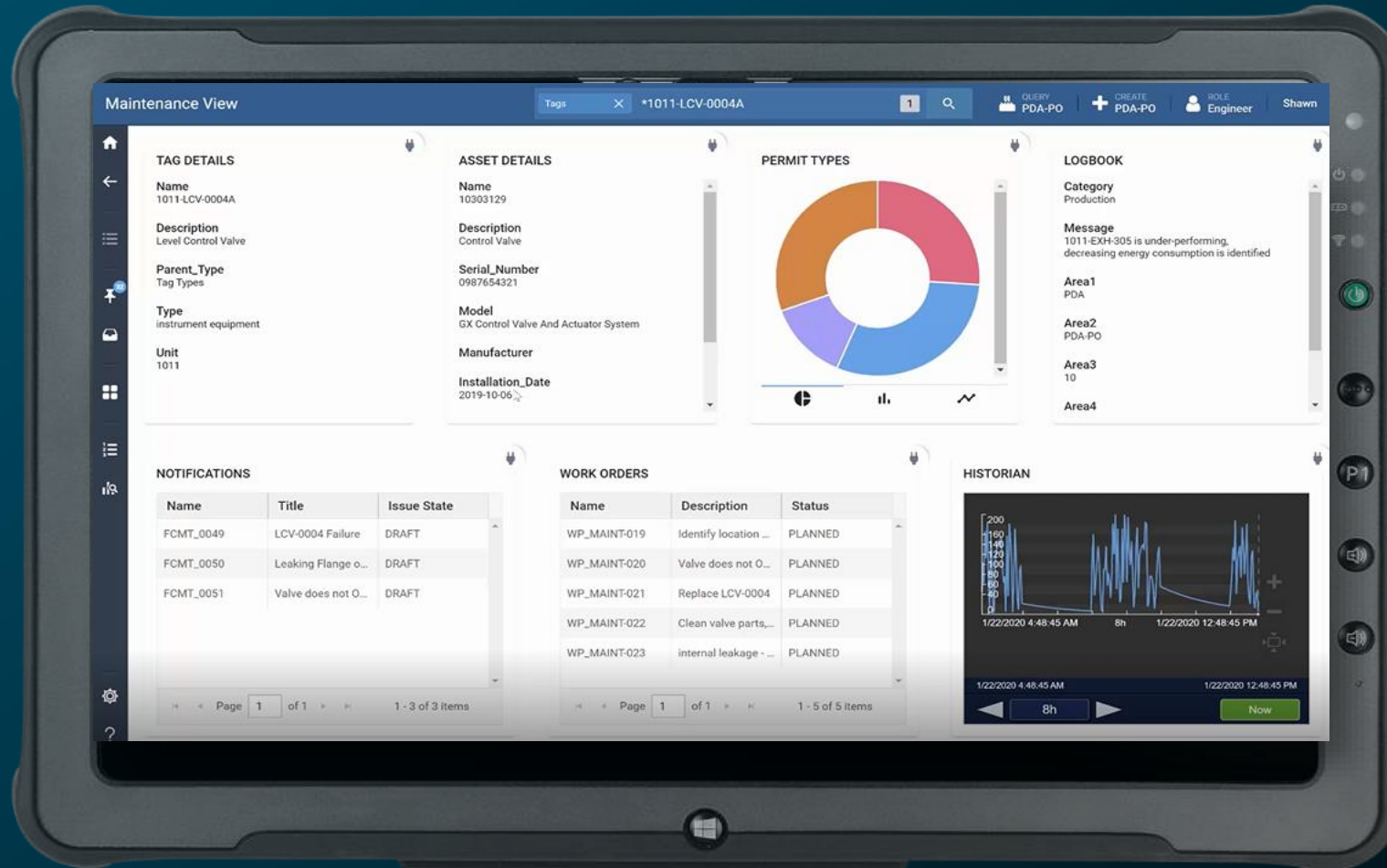
OT/ICS Cybersecurity



- Asset visibility
- Configuration management
- Response and recovery

Digital Assets

Role-Based Single Pane of Glass, empowered by the Smart Digital Reality™



SAFETY



QUALITY



EFFICIENCY



PRODUCTIVITY

EFFICIENCY



Optimize spending the project

Improved Materials Readiness and Tracking **avoids waste, reducing project CO2 Emissions**

Industry average CO2 output of 1.6 metric tons per \$10,000 USD in TIV

Reduced CO2 Emissions

By implementing HxGN EAM, a customer managed to **extend the life expectancy of their equipment by up to 20%**, reducing energy consumption and capital expenditures.

Optimizing efficiency with information baselines

New Acquisition Expands APM Capability for Hexagon

WHO IS ITUS DIGITAL?

- New Hexagon acquired company who is offering best-of-breed APM to further enhance Asset Lifecycle

WHAT WE DO:

- Operationalize asset strategies to maximize asset value by balancing performance, cost, and risk
- Enable a proactive work process that:
 - **Assesses** and prioritizes your asset risk exposure
 - **Protects** assets against known failure modes
 - **Monitors** asset condition & performance
 - **Acts** when risk increases or threats emerge



Sustainability & Reliability Focused Asset Management

Delivering Tangible Business Value



Asset Utilization

Increased asset availability will result in higher production output and therefore lead to increased revenue



Cost Optimization

Efficient operations for maintaining mission-critical equipment have a **positive effect on margin**



Capital Allocation

Effective use of capital increases asset service life, **reduces capex** and improves spare part inventories



ESG & Compliance

Sustainable asset management helps to **achieve decarbonization goals**, and auditability helps compliant operations



Digital Operations

Digital technology harnesses knowledge, provides safe operations and **increased productivity**

Hexagon's Impact



Reduced
rework in
construction
15% to 1%

Reduced
scrap rate at
factories by
20%

Increased
wind turbine
efficiency by
30%

Reduced
weight of
components by
20%

Our **core competencies** add up to perhaps the **most dynamic and powerful use of data in history**—**The Smart Digital Reality™**

It's what we aim to deliver with every solution.

Smart workflows

Purposefully integrated sensor-software systems, specifically tailored to bring agility and speed to any workflow

Two worlds, ONE reality

The ultimate form of feedback loops, where lines between the physical and digital worlds blur into one, providing certainty of *complete* line-of-sight to ever-changing situations

Beyond the digital twin

Brings autonomy to the digital twin, creating systems that reduce, or even eliminate, human intervention



Hexagon's Asset Lifecycle Intelligence (ALI)

Construct and Operate More Profitable, Safe and Sustainable Industrial Facilities

Our Approach – Your Success

Hexagon Puts Data, Digital, and Automation to Work for You – and a More Sustainable Planet



Thank you