



HEXAGON

empowering an autonomous future

Corporate Overview

Q2 2021

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I. Introduction

Global leader in digital reality solutions

combining sensors, software and autonomous technologies to fuel our commitment toward

empowering an autonomous future





Play video

The importance of autonomy

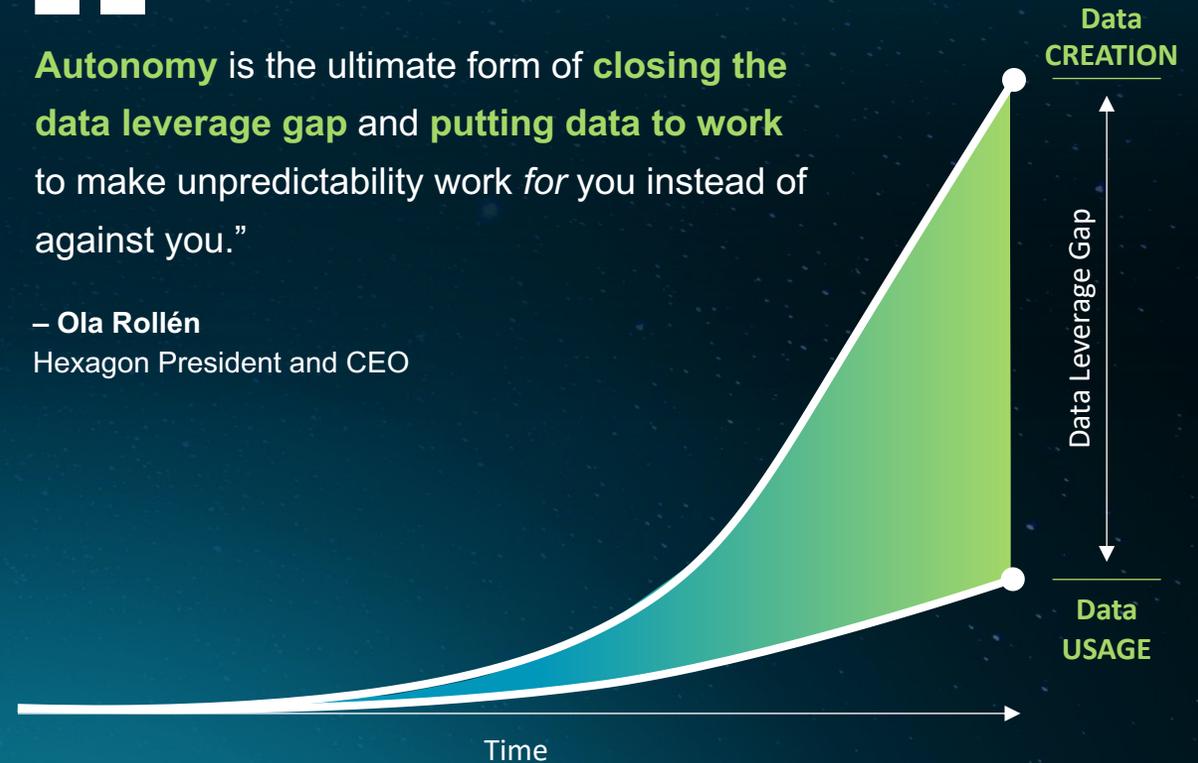


The future of business requires a *big* shift.
Automated processes are ideal for a predictable world.
But, the world is rarely predictable.



Autonomy is the ultimate form of **closing the data leverage gap** and **putting data to work** to make unpredictability work *for* you instead of against you.”

– Ola Rollén
Hexagon President and CEO



Towards autonomous solutions

Core competency:

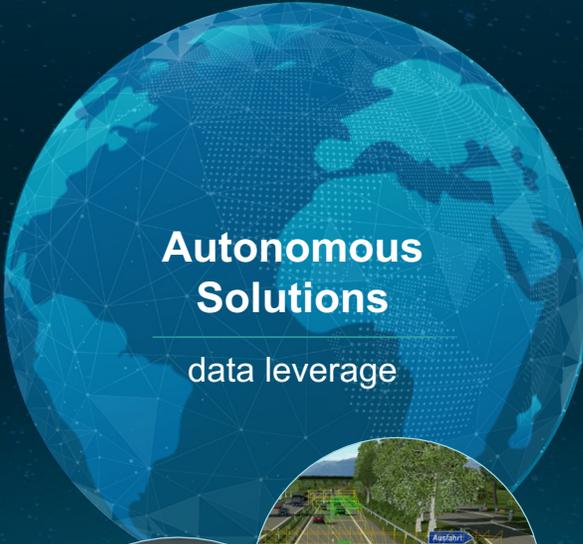
Reality Capture



Core competency:
Positioning

Sensor Solutions

data capture



Autonomous Solutions

data leverage



Core competency:

Autonomous Technologies

Software Solutions

data intelligence

Core competency:

Design & Simulation



Core competency:

Location Intelligence

Core competencies in action



Reality Capture

Digital capture and measurement of the physical world—distance, objects, sites and 3D environments

[▶ Watch video](#)

Positioning

Location, tracking, navigation and control of anything, anywhere

[▶ Watch video](#)

Design & Simulation

Design and replication of real-world scenarios in virtual environments

[▶ Watch video](#)

Location Intelligence

Active, geo-referenced, situational intelligence for any site or application

[▶ Watch video](#)

Autonomous Technologies

Any task, process, machine or entire operation that works autonomously, without human intervention

[▶ Watch video](#)

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



II. Story

Hexagon at-a-glance

Innovation

Our commitment is to relentless progress

- 10-12% of revenues for R&D
- ~5,000 R&D employees and thousands of active patents
- Complementary emerging technologies through acquisitions (160+ in 20 years)

Relevancy

Our value is strategically vital

- Vital industries—from manufacturing to infrastructure, construction, city services and more
- Efficiency, productivity, quality and safety gains through our solutions—resulting in fewer inputs, less waste and less pollution



Stability

Our strength is consistently proven

- €500mn (2000) to €3.8bn (2020)
- More than 21,000 employees across 50 countries
- Increasing role in customers' businesses

Sustainability

Our ESG strategy defines our future

- Unleash data for the environment
- Double down on our social impact
- Transparency in governance

Innovation with intelligence built-in

The Xalt Platform

Fast-tracks the ability to harness IoT data and extract its full value

- Radical new approach to accelerating digital transformation
- Deep and comprehensive in the core capabilities needed today
- Infinitely scalable for the future, easy to implement, and compatible with existing information and operational technologies



Industry relevancy

Manufacturing

Aerospace
Automotive
Consumer products
Electronics

General manufacturing
Healthcare & life sciences
Heavy machinery & equipment
Shipbuilding

Urban & government services

Defence
Government
Public safety (incl. forensics)

Transportation
Utilities & communications

Energy & resources

Agriculture
Chemicals
Energy & power generation

Forestry
Mining
Oil & gas

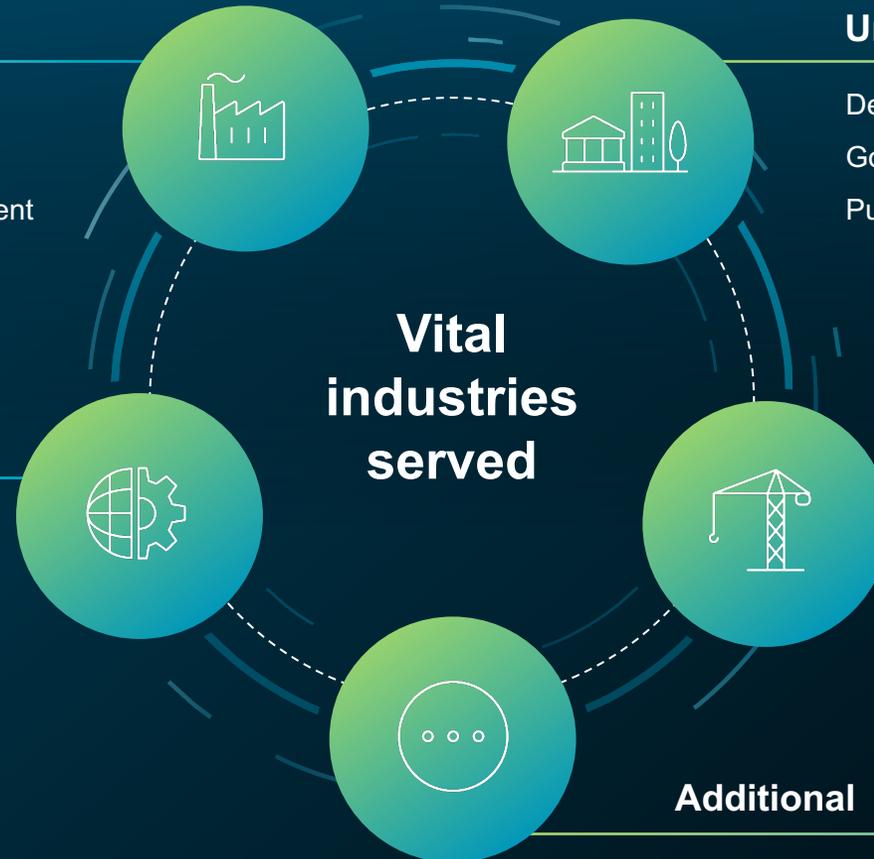
Construction

Buildings
Heavy construction – industrial facilities
Heavy construction – infrastructure
Surveying

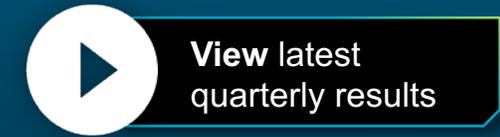
Additional

Education & research
Engineering services
Mapping & geospatial content

Marine positioning
Other...



A history of growth and success

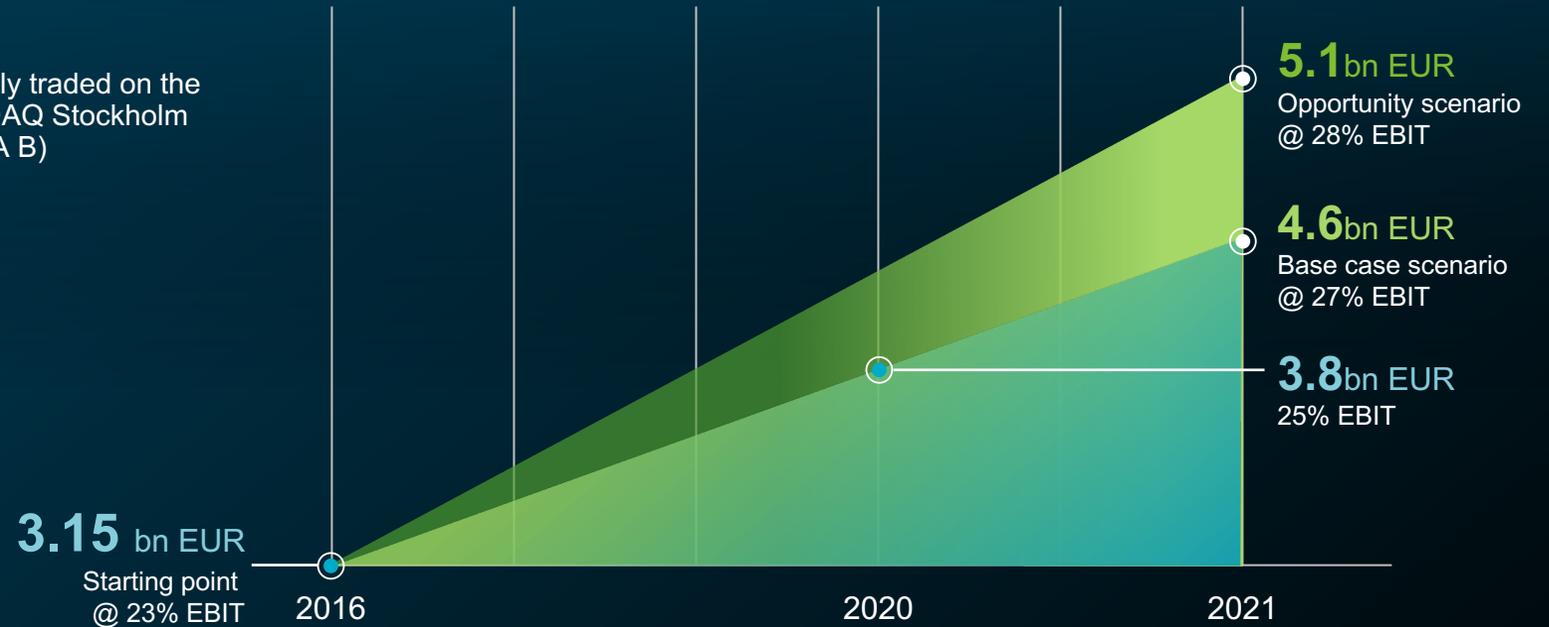


Growth and market cap facts:

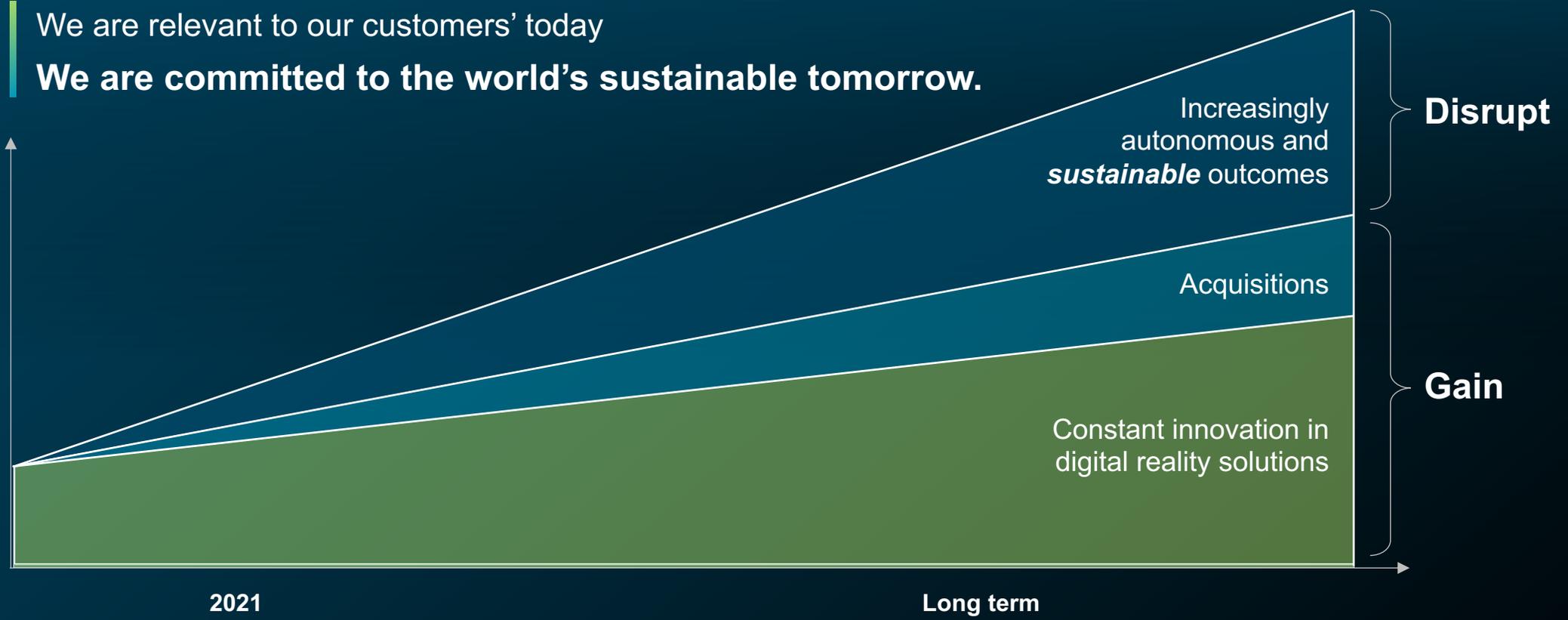
	2000	2020
Revenues	~500mn EUR	3.8bn EUR
Market cap (at FYE)	169mn EUR	26.3bn EUR
Operating margin	6.0%	25.4%
Number of employees	~4,000	~21,000
Countries of operation	17	50

Headquartered in Stockholm, Sweden

Publicly traded on the NASDAQ Stockholm (HEXA B)



Value that outpaces industry—*sustainably*



III. Sustainability

Our sustainability journey

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

Our pledge: Further scale and accelerate our commitment to respect the planet, generate positive social contributions and ensure robust corporate governance through our own processes and actions

R-evolution: New business venture 100% focused on accelerating the world's transition to green-tech markets using our technology >>>



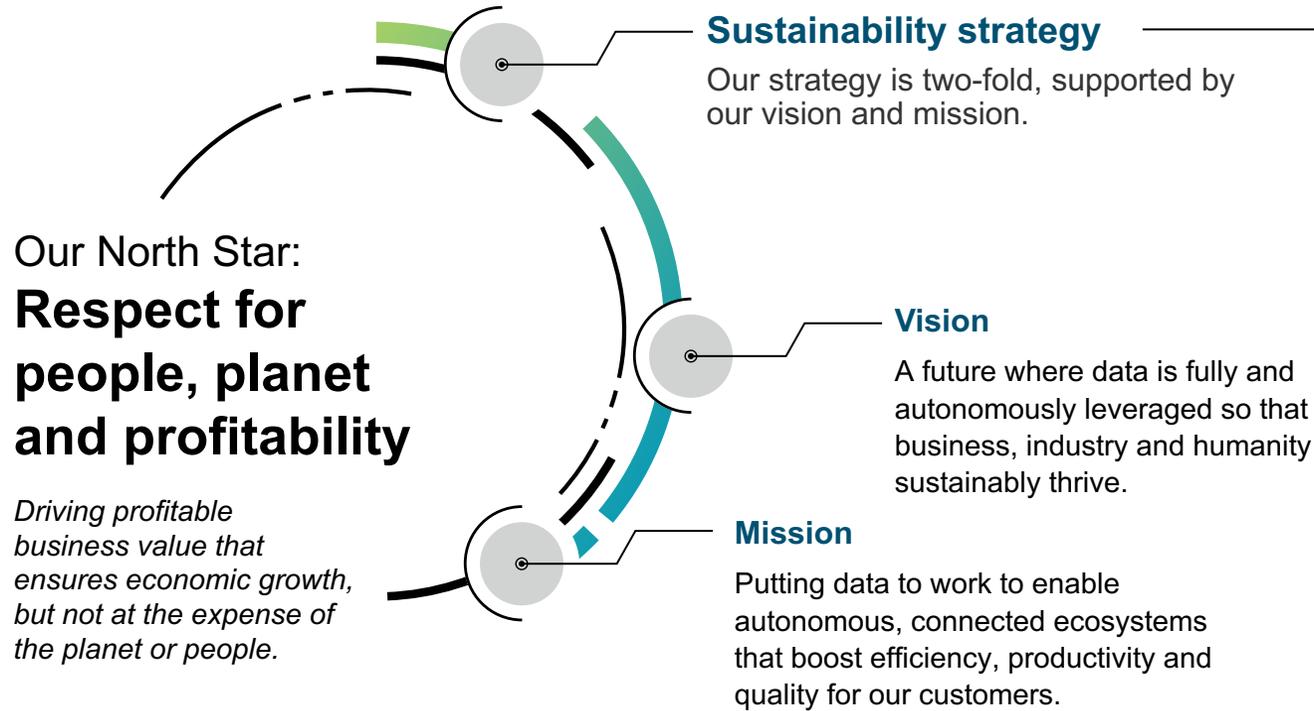
Today and beyond

Deeply embedded in simultaneously advancing the world's social, economic and environmental vitality >>>



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

Our sustainability commitment



1

The change we empower through innovation:



Driving sustainable outcomes through **our solutions**

2

The change we create through our own actions:



Driving sustainability in **our supply chain**



Promoting diversity and inclusion in **our workplace**



Operating sustainably to improve **our environmental footprint**



Giving back to **our communities**

1

The change we empower through innovation

Our motto: Do good by doing well.

Do good for society, the economy and our planet by doing well in our businesses—increasing efficiency and productivity, the antidotes to resource depletion and waste, while simultaneously improving safety and quality.

BETTER

Creating **better and meaningful improvements** in **conventional markets**
(i.e., oil & gas)



DIFFERENT

Adopting **different and unconventional ways** that lead the transition to **green-tech markets**
(i.e., renewable energy)

It's not an either-or proposition.

Both approaches offer badly needed solutions. Neither one alone moves the needle fast enough.

Putting data to work

to drive efficiency, productivity, quality and safety

Our safety solutions are putting data to work to accelerate SDG 11 – to make cities and human settlements inclusive, safe, resilient and sustainable.

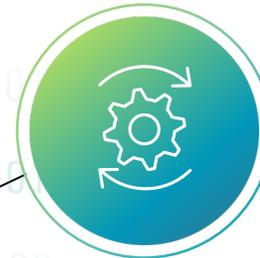


Safety

Huge waste and losses occur because of poor quality. We put data to work to drive quality improvements, increasing the potential for sustainable development in operations.



Quality



Efficiency

We have technologies available today that can put data to work to improve performance and reduce emissions immediately across heavy industries.



Productivity

We put data to work to drive resource productivity increases, because sustainable development means creating more and using less.

Accelerating the UN's SDGs

by driving efficiency, productivity, quality and safety



2

The change we create through our own actions

Areas of focus



Driving sustainability
in **our supply chain**



Promoting diversity
and inclusion in
our workplace



Operating sustainably
to improve **our
environmental
footprint**



Giving back to
our communities

Focus area details and targets



Driving sustainability in our supply chain:

- Employee and supplier Code of Conduct training
- Supplier risk assessments and sustainability audits
- Conflict mineral reporting for all relevant suppliers



Conduct sustainability supplier audits on 100% of our direct suppliers in risk areas **by 2023**



Promoting diversity and inclusion in our workplace:

- Gender diversity criteria in recruitment processes
- Training in diversity and inclusion for all employees



Achieve at least 30% women in leading positions **by 2025**



Operating sustainably to improve our environmental footprint:

- ISO 14001 certification or equivalent in major production facilities
- Company fleet policies that aim to reduce GHG emissions
- Increased share of renewables in energy mix



Carbon neutral in scope 1 and 2 emissions **by 2030**

Carbon neutral in entire value chain (scope 1, 2 and 3) **by 2050**



Giving back to our communities

- CSR programme and activities focused on environment, education, innovation and diversity

IV. Solutions

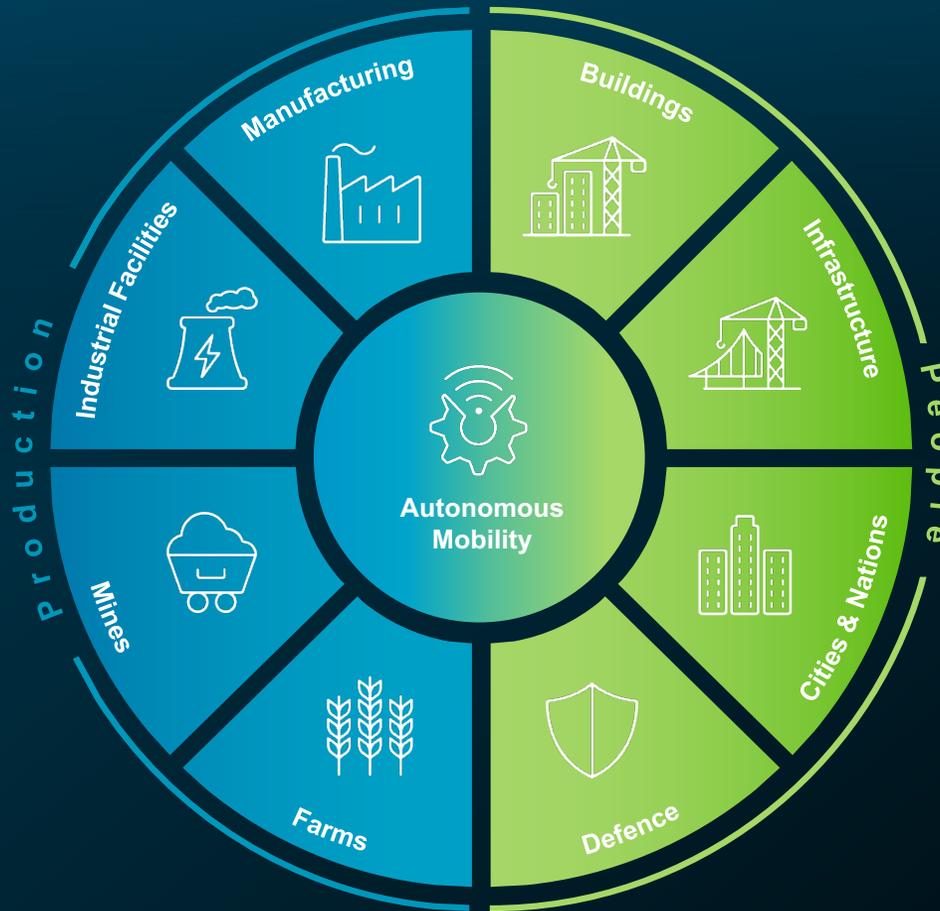
Solving challenges in the world's most complex ecosystems

With solution offerings that drive sustainable value creation

Production ecosystems

Solutions for the complete lifecycle of discrete manufacturing, complex industrial plants and ships, open pit and underground mines and agricultural crops and forests

Solutions that accelerate the R&D and deployment of autonomous industrial applications, including off-road vehicles and equipment, marine vessels, drones and robotics



People ecosystems

Solutions for the complete lifecycle of vertical structures and large-scale engineering projects

Solutions for ensuring public safety, economic vitality and quality of life for citizens, as well as the security and defence of nations

Solutions that accelerate the R&D and deployment of autonomous applications, including on-and-off-road vehicles and equipment, drones and robotics

Autonomous Mobility ecosystem

Digital reality solutions for the research, development and deployment of autonomous applications

On-and-off-road autonomous vehicles and equipment, marine vessels, drones, robotics and more, that reframe autonomy with sustainability in mind — less pollution, ensured safety and greater efficiencies

Autonomous Mobility

Hexagon's solutions are critical to capturing, connecting and fusing the vast amounts of data required to deliver the world's safest, most advanced autonomous mobility solutions for on-and-off-road vehicles and equipment, marine vessels, drones, robotics and more:

- **Enable**
Autonomous mobility research and development platforms that enable autonomous mobility systems across a diverse set of vehicle platforms and industrial applications.
- **Accelerate**
Autonomous mobility testing that creates a seamless workflow between real-world and simulated environments to accelerate, optimise, verify and validate billions of test drive miles and real-world scenarios
- **Deploy**
Comprehensive solutions that enable customers to quickly scale from prototype R&D and testing phases to production in a variety of emerging and fast-paced autonomous market segments

Sustainable value



Did you know?

Hexagon has delivered more safe, reliable autonomous driving research vehicles **than any other company in the world.**

Human failure causes 94% of traffic accidents.

Autonomous vehicles are increasing mine productivity by 30%.

Autonomous robotics reduce consumption of agrochemicals by 90% and improve yield by 5-10%.

Industries served

Aerospace, agriculture, automotive, defence, education & research, engineering services, heavy construction (infrastructure), heavy machinery & equipment, mapping and geospatial content, marine positioning, mining, surveying, transportation and utilities & communications

Buildings ecosystem

Digital reality solutions for the complete lifecycle of vertical structures

Ensuring projects are optimised to reduce rework and build to plan — on time and on budget — while protecting human and material resources throughout the life of the asset.

Buildings

Hexagon is changing the way buildings are planned, designed, constructed and utilised—with solutions that ensure data is captured, connected, visualised and updated at each stage of the lifecycle to deliver built environments with better performance, lower environmental impact and at a lower cost:

- **Design phase**
Capture an accurate digital reality of a site's existing conditions, features and positioning, and digitally design initial concepts to minimise inputs and reduce waste during the project.
- **Plan phase**
Transform vision and design into a plan of action, digitally mapping out every detail for the construction phase including time, materials, scheduling and cost.
- **Build phase**
Orchestrate the construction process more simply, creating a model of productivity and efficiency, with higher quality, fewer reworks and less waste.
- **Operate & maintain phase**
Access a living digital twin that delivers full transparency of all components in the completed building to optimise operations, maintenance and resiliency.

Sustainable value



Did you know?

Hexagon's solutions helped build the **world's tallest tower**—the Burj Khalifa in Dubai

Sustainability diet needed—#1 consumer of global raw materials is the construction industry

Energy and climate change—40% of global greenhouse gas emissions are attributable to our built environment

Industries served

Buildings, chemicals, engineering services, government, heavy construction (Infrastructure), surveying, transportation and utilities & communications

Cities & Nations ecosystem

Digital reality solutions for the complex systems of ensuring public safety, economic vitality and quality of life for citizens

Enabling governments, industry and citizens to work together to build safe and vibrant communities that promise the highest quality of life and sustainable economic vitality

Cities & Nations

Hexagon's solutions connect organisations with the mission-critical and business-critical data to make better, timelier and more informed decisions throughout a city or nation's ecosystem:

Public safety; Public administration

Improve the quality, accuracy and availability of critical information with integrated solutions that enhance public safety, security performance and productivity.

Easily share and act on data in a secure environment with a cloud-based collaboration workspace for organisations, cities and nations.

Transportation; Utilities & communications

Deploy intuitive, integrated solutions for traffic, railways and airports to ensure fast and effective incident response, enhance safety and minimal disruption.

Achieve greater reliability, enhance network integrity, increase efficiency and fulfill the expectations of stakeholders with Hexagon's location-based technologies.

Mapping

Leverage location intelligence with solutions that visualise, analyse and derive insights from location information to solve mission- and business-critical problems.

Industrial & commercial resiliency

Forge safe and resilient industrial and commercial facilities with scalable dispatch, surveillance and geo-fencing.

Sustainable value



Did you know?

Over half of the earth's geospatial imagery is either collected or leveraged using Hexagon's solutions.

Almost 1bn people on the planet are protected by Hexagon's public safety solutions.

Cities Can Save the World—Actions in cities could achieve up to 40% of the emissions reductions necessary to limit global warming to 1.5 °C.

Industries served

Aerospace, agriculture, automotive, defence, education & research, engineering services, heavy construction (infrastructure), heavy machinery & equipment, mapping & geospatial content, marine positioning, mining, surveying, transportation and utilities & communications

Defence ecosystem

Digital reality solutions for the complex systems of ensuring security and defence of nations

Delivering constant situational and strategic awareness—autonomously
and securely

Defence

Whether operating in hostile environments or during peaceful times, Hexagon's solutions help transform complex data into meaningful information necessary for mission-critical decision-making:

- **C4ISR**
High-performance visualisation and analysis applications for C4ISR across air, land, sea and joint battlefield operations and command center strategies
- **Mapping**
End-to-end capabilities that improve mapping workflows with integrated capabilities for geospatial data collection and management, map production and information-sharing
- **Administration solutions**
Safe and resilient base facilities with scalable CAD (Computer-Aided Dispatch), surveillance sensors, geofencing and cyber security
- **Assured Autonomy**
The power of GNSS (Global Navigation Satellite Systems) and INS (Inertial Navigation Systems) with global corrections services for assured autonomy, including anti-jamming and anti-spoofing technologies

Sustainable value



Did you know?

Robot Warriors

The relationship between human and machine is increasing—from autonomous systems to exoskeleton technology, human-machine collaboration will deliver unprecedented capabilities.

Jamming and Spoofing on the Rise

Over 7,900 ships have experienced GPS outages connected with GPS spoofing activity since 2016.

Industries served

Aerospace, agriculture, automotive, defence, education & research, engineering services, government, heavy construction (infrastructure), mapping & geospatial content, marine positioning, surveying and utilities & communications

Farms ecosystem

Digital reality solutions for the complete lifecycle of agricultural crops & forests

Enabling farms to cultivate data in ways that will optimise inputs and drive higher yields while lowering costs



Farms

Hexagon's solutions connect and leverage data from cultivation through harvesting, enabling customers to harvest data that can optimise resource usage, increase crop yield, lower costs and reduce waste:

- **Cultivation phase**
Plan, monitor and automate the entire agricultural and forestry cultivation cycles with data-driven precision agriculture.
- **Harvesting phase**
Optimise, manage and automate harvesting, transportation and logistics operations for farms and forests.
- **OEM solutions**
Complete Original Equipment Manufacturer (OEM) portfolio, with custom solutions tailored to each partner's needs.

Sustainable value



Did you know?

Nearly one-quarter of the world's greenhouse gases come from agriculture, forestry and land use changes, and Hexagon is working with the industry to lower this impact simply by putting data to work.

Farming the planet

Food production takes up almost half of the planet's land surface and threatens to consume the fertile land that still remains.

Industries served

Agriculture, automotive, education & research, engineering services, forestry, government, heavy machinery & equipment, mapping & geospatial content and surveying

Industrial Facilities

ecosystem

Digital reality solutions for the complete lifecycle of complex industrial plants and ships

Enabling industrial assets to ramp up quickly while operating safely and reliably throughout a more sustainable, longer-term lifespan

Industrial Facilities

Hexagon's solutions are enabling customers to leverage more data throughout the asset lifecycle—transforming industrial facilities into lean, efficient, safe operations that improve the bottom line while accelerating a sustainable future:

- **Plan phase**
Capture a perfect digital reality of a site's existing conditions, features and positioning, and digitally design initial concepts to minimise inputs and reduce waste during the project.
- **Design phase**
Transform a megaproject vision into a smart digital reality with design and engineering software that sets the standard for precision and ease of use.
- **Build phase**
Orchestrate a mega construction project that is a model of productivity and efficiency—with the highest quality, fewer reworks and less waste.
- **Operate & maintain phase**
Leverage data—from planning, design and build phases—to access an operational twin: a smart digital reality that connects people, processes and events.

Sustainable value



Did you know?

Hexagon's technologies are **driving efficiency for more than half** of all oil, gas and chemicals processed in the world.

Oil demand is expected to peak by 2030 at about 100 million barrels per day.

Worldwide, electricity demand is growing almost twice as fast as total energy demand.

Industries served

Chemicals, energy & power generation, engineering services, general manufacturing, heavy construction (industrial facilities), heavy machinery & equipment, marine positioning, mining, oil & gas and shipbuilding

Infrastructure ecosystem

Digital reality solutions for the complete lifecycle of large-scale engineering projects

Ensuring projects are optimised to reduce rework and build to plan — on time and on budget — while protecting human and material resources throughout the life of the asset

Infrastructure

Hexagon's solutions are putting data to work for the world's largest infrastructure projects, so data does the heavy lifting to deliver projects faster, more profitably and with a lower impact on the environment:

- **Plan phase**
Visualise the project site, above and below ground, digitally mapping out every detail with Hexagon's sensors and software .
- **Design phase**
Capture all the right distances and volumes that are key to construction performance, with accurate positioning and measurements captured in the 3D model.
- **Build phase**
Take a data-driven approach to orchestrate the entire build and heavy construction phase, automating and simplifying tasks for productivity, efficiency and speed.
- **Operate & maintain phase**
Make sure infrastructure operators have access to a living digital twin to optimise operations and maintenance, and extend the life and resiliency of the infrastructure asset.

Sustainable value



Did you know?

Hexagon's solutions helped build the **world's longest railway tunnel** (Gotthard Base Tunnel, Swiss Alps) and the **world's widest suspension bridge linking two continents** (Yavus Sultan Selim Bridge, Istanbul).

Not sustainable

Approximately 70% of global greenhouse gas emissions come from infrastructure construction and operations.

Industries served

Automotive, education & research, engineering services, government, heavy construction (infrastructure), mapping & geospatial content, surveying, transportation and utilities & communications

Manufacturing ecosystem

Digital reality solutions for the complete lifecycle of discrete manufacturing

Enabling manufacturing to learn and adapt quickly to changing conditions in real time — pursuing perfect quality with optimised design, requiring fewer inputs and producing zero waste

Manufacturing

Hexagon's solutions connect the vast manufacturing ecosystem with a digital thread of data throughout the product lifecycle:

- **Design & engineering phase**
Digitally see, test and simulate a product's entire lifecycle – from ideation to design and engineering, from production to assembly and product usage.
- **Production phase**
Maintain the digital thread through production, optimise machine tools, measure environmental variances and prevent downtime with predictive data analyses.
- **Inspection phase**
Automate and digitalise quality measurement with our world-leading metrology hardware and software, creating a bridge between the real and digital worlds.
- **Digital transformation**
Create and capture value across product lifecycles, transform business models and workflows, gain efficiency, boost productivity and improve safety and quality.

Sustainable value



Did you know?

Hexagon's technologies touch:

75% of cars produced worldwide

80% of aircraft produced worldwide

85% of smartphones produced worldwide

Manufacturing generates \$3.5 trillion dollars each year, or 16% of Global GDP.

17% of global CO₂ emissions, or 6B metric tonnes, were a direct result of manufacturing in 2019.

Industries served

Aerospace, automotive, buildings, chemicals, consumer products, defence, education & research, electronics, energy & power generation, engineering services, general manufacturing, healthcare & life sciences, heavy machinery & equipment and shipbuilding

Mines ecosystem

Digital reality solutions for the complete lifecycle of open pit and underground mines

Enabling mines to operate efficiently while maximising safety and minimally impacting the environment throughout the life of a mine



Mines

Hexagon's life-of-a-mine solutions connect and leverage data from planning to operations and from safety to sustainable reclamation, making it possible to extract 100% of a mine's potential value—safely, sustainably and profitably:

- » **Planning phase**
Access powerful 3D modelling, data visualisation and planning software for geologists and engineers, supporting seamless workflows from exploration to production.
- » **Operating phase**
Optimise workflows for open pit or underground with fleet management, machine guidance, operator assist, machine/asset health and fragmentation analysis.
- » **Safety solutions**
Deploy safety solutions that put people first, including digital collision-avoidance, proximity detection, UAV blast scanning and fatigue monitoring.
- » **Reclamation solutions**
Elaborate and execute reclamation plans and schedules with 3D mapping and design that returns the landscape to its original beauty.

Sustainable value



Did you know?

Safe with Hexagon

40% of worldwide mine sites and operators of more than 40,000 mining vehicles are protected by Hexagon's collision avoidance systems.

12% of Global GDP

Mining revenue is expected to reach \$2.4 trillion by 2025 with a CAGR of 7%.

Industries served

Automotive, education & research, government, mapping & geospatial content, mining and surveying

V. Approach

The contributors to our vision and mission

We rely on the unique contributions that each of our businesses add to the whole.

Manufacturing Intelligence

Converging design and engineering, production, and metrology solutions to enable smart factories for digital transformation.



PPM

Transforming unorganized information into smart digital assets to visualise, build, and manage structures and facilities.



Mining

Solving the toughest surface and underground challenges with proven technologies for planning operations, and safety.



Agriculture

Enabling better planning, efficient execution, precise machine controls, and automated workflows with advanced technologies.



Autonomy & Positioning

Pioneering end-to-end solutions for assured positioning and correction for land, sea, and air.



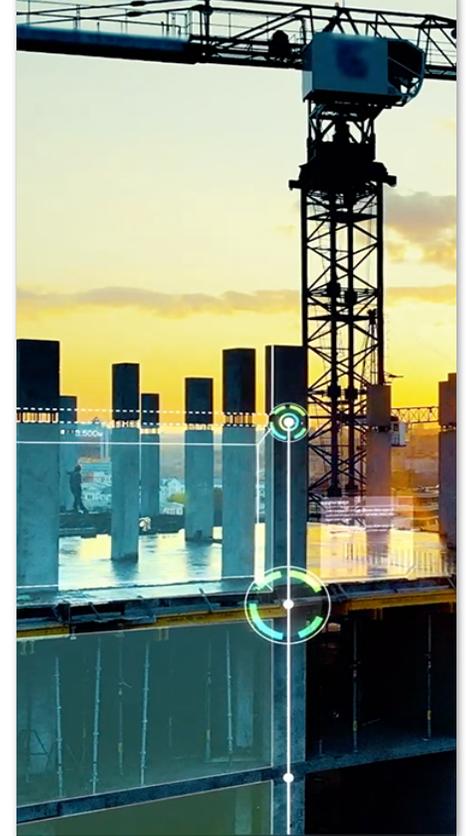
Geospatial

Delivering 5D smart digital worlds with location intelligence that conveys what was, is, could be, should be, and what will be.



Geosystems

Creating smart digital realities from different views with powerful technologies that capture, measure, and visualise data.



Safety & Infrastructure

improving the performance, efficiency, and resilience of vital services with software solutions for smart and safe cities.



Xalt Solutions

Accelerating digital transformation by solving workplace challenges with the industry's most agile framework.



Purpose is good. Shared purpose is better.

We see customers as **co-creators** of the solutions we deliver.

Putting data to work to increase efficiency and productivity—the antidotes to resource depletion and waste—while simultaneously improving safety and quality is a purpose we share with you.



Thank you.



HEXAGON

empowering an autonomous future

