Content

I. Our story
An autonomous future
Leading a revolution
The road to autonomy
The Smart Digital Reality

II. Our business
Hexagon at-a-glance
Fast tracking innovation
Futureproofing solutions
Customers served
Do well to do good

III. Our solutions
Core Competencies overview
Smart Solutions Portfolio overview
Smart Manufacturing
Smart Industrial Assets
Smart Mines
Smart Farms
Smart Autonomous Mobility
Smart Buildings & Infrastructure
Smart Cities & Nations

IV. Our experts
Smart Solutions experts

V. Our approach
A shared purpose
I. Our story
Global leader in **sensor**, **software**, and **autonomous** solutions committed to empowering an autonomous future
Leading a revolution
From automation to autonomy

Efficiency   Automation   Autonomy

MECHANISATION   MASS PRODUCTION   AUTOMATED PROCESSES   HYPER-CONNECTIVITY

Autonomy is the ultimate form of putting data to work
The road to autonomy
Enabled by our unique set of core competencies

We digitally CAPTURE and POSITION the physical world

We fuse the physical and digital worlds and leverage the power of algorithms to achieve AUTONOMY

We digitally DESIGN assets, SIMULATE real-world scenarios, and deliver situation awareness with LOCATION INTELLIGENCE
The Smart Digital Reality™

Our unique point of leverage – convergence of the physical and digital

DIGITALLY ACCESSIBLE
Seamless digital access to any physical world data

INFINITELY CONNECTED
Able to draw and act on multiple data sources simultaneously

AUTONOMOUSLY INTELLIGENT
Able to make unaided decisions and become smarter over time
II. Our business
Hexagon at-a-glance

Our focus is on autonomy
Leveraging data to its fullest potential is the outcome we want – moving beyond automation to autonomy.

Our commitment is to innovation
With nearly 4,000 employees in R&D and more than 3,700 active patents, our technology leadership is clear.

Our value is strategically vital
Efficiency, productivity and quality results in scalable sustainability – fewer resources, less waste, less pollution.

Our stability is consistently proven
Sales growth from €500 million in 2000 to €3.9 billion in 2019 with approximately 20,000 employees across 50 countries.
Fast tracking innovation

We invest heavily in R&D to accelerate innovation, spending 10–12% of net sales.

Did you know?
Not only is Hexagon one of the world’s largest R&D spenders but also a High-Leverage Innovator – the 9% of global companies which financially outperform industry peers while spending less on R&D.

– The 2018 Global Innovation 1000 study, PwC
One of our major R&D initiatives is the continuous development and implementation of a technology framework called Xalt, which is being actively deployed and will eventually underpin all of our solutions—making them faster, easier to use, more connected, and autonomously intelligent.

**Xalt framework:**
- Artificial intelligence
- Edge computing
- Mobility
- Advanced visualisation
- Enterprise integration
Customers served
Ecosystems vs. markets

- Production
- Urban

- Agriculture
  - Sugar cane
  - Forestry
  - Grains

- Mobility
  - Personal and public transport
  - Unmanned (aerial, ground, marine)

- Buildings and Infrastructure
  - Heavy construction
  - Buildings
  - Surveying

- Cities and Nations
  - Public safety
  - Utilities
  - Transportation
  - Land management
  - Defence & intelligence
  - Geospatial content

- Mining
  - Coal
  - Metals
  - Minerals

- Manufacturing
  - Automotive
  - Aerospace
  - Electronics
  - Medical devices

- Industrial Facilities
  - Oil & gas
  - Power
  - Shipbuilding
  - Pharmaceutical
  - Chemical
  - Metals & mining
Our mantra: Do **well** to do **good**

We believe growth doesn’t have to be at the expense of the planet.

When we do well – boosting efficiency, productivity, and quality outcomes at *scale* – we do good for the planet.

**Scalable Sustainability**

Sustaining growth for our businesses, as well as this ecosystem we all share.
III. Our solutions
## Core Competencies overview

The foundation for our Smart Solutions Portfolio

<table>
<thead>
<tr>
<th>Sensor Solutions</th>
<th>Autonomous Solutions</th>
<th>Software Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reality Capture</td>
<td>Autonomous Technologies</td>
<td>Design and Simulation</td>
</tr>
<tr>
<td>Positioning</td>
<td></td>
<td>Location Intelligence</td>
</tr>
</tbody>
</table>

### Reality Capture Technologies
Digitalise the physical world with measurement, 3D models, monitoring, and surveillance

### Positioning Technologies
Locate, track, navigate and/or control anything, anywhere (machines, objects, vehicles, etc.)

### Autonomous Technologies
“Autonomise” any task, process, or workflow – or entire operation

### Design and Simulation Technologies
Replicate real-world scenarios in virtual environments with computer-aided design, simulation, and predictive modeling

### Location Intelligence Technologies
Enable active, geo-referenced, situational intelligence for any application
Smart Solutions Portfolio overview

By putting data to work, our smart solutions empower increasingly autonomous, connected ecosystems that drive sustainable value creation.
Smart Manufacturing
that learns and adapts quickly to changing conditions in real time, pursuing perfect quality with optimised design, requiring fewer inputs and producing zero waste.

Did you know?
Each year, Hexagon technology touches:
• 75% of cars produced
• 90% of aircraft produced
• 85% of smartphones produced

We have expertise in and connect all stages of the manufacturing lifecycle:
DESIGN AND ENGINEERING (CAE)
Optimise designs and ensure manufacturability
PRODUCTION (CAD/CAM)
Deliver on design intent and product quality with minimal waste
METROLOGY HARDWARE/SOFTWARE
Capture real-world data for positioning and inspection
Smart Industrial Facilities

that ramp up quickly while operating safely and reliably throughout a more sustainable, longer-term lifespan.

Did you know?

Over half of all oil, gas, and chemicals products worldwide are delivered more efficiently due to Hexagon technology.

We have expertise in and connect all stages of the engineering lifecycle:

**ANALYSIS**
Automating manual, time-consuming tasks into seamless processes

**ENGINEERING & SCHEMATICS**
Intelligent facility engineering

**3D DESIGN & VISUALISATION**
True workflow-managed integration

**PROCUREMENT, FABRICATION & CONSTRUCTION**
Saving valuable production time

**PROJECT CONTROLS & PORTFOLIO MANAGEMENT**
Budgeting/forecasting for optimal performance

**ASSET INFORMATION MANAGEMENT**
Enabling electronic organisation of facility data

SUSTAINABLE
VALUE CREATION
• Rapid startup at lower cost
• Safe, efficient operations
• Longer lifespan

PRIMARY
APPLICATIONS
• Oil and gas
• Power
• Shipbuilding
• Pharmaceutical
• Chemical
• Metals and mining
Did you know?

Hexagon is the only company to solve surface and underground challenges with proven technologies for planning, operations, and safety.

We have expertise in and connect all stages of the mining lifecycle:

**PLANNING**
Geology, engineering and production suites for exploration, modeling, design, scheduling, & operation

**OPERATIONS**
Fleet management, machine guidance, & operator assist

**SAFETY**
Collision avoidance, vehicle intervention, fatigue monitoring and personal protection

**ENTERPRISE**
Connecting processes and converting data into real-time information for proactive mine management

**SURVEY & MONITORING**
Slope stability monitoring and mine measurement systems

Smart Mines

that are efficient to operate, while maximising safety and minimally impacting the environment throughout the life of a mine

SUSTAINABLE
VALUE CREATION
• Minimum impact
• Safety prioritised
• Maximum efficiency

PRIMARY
APPLICATIONS
• Base metals
• Precious metals
• Energy minerals
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.

Did you know?

- **Smart Farms**
  that cultivate data in ways that will optimise inputs and drive higher yields while lowering costs

- **We have expertise in and connect all stages of the agriculture lifecycle:**
  - **CULTIVATION**
    Optimising and automating entire crop cycle (planning, soil preparation, planting and cultivation)
  - **HARVESTING**
    Optimisation and automation of logistics operations, from harvest to transportation
  - **ORIGINAL EQUIPMENT MANUFACTURER (OEM)**
    Custom solutions for machines, tractors and agricultural implements tailored to each partner’s needs

**SUSTAINABLE VALUE CREATION**
- Optimised inputs
- Higher yields and less waste
- Lower costs

**PRIMARY APPLICATIONS**
- Sugar cane
- Forestry
- Grains
Smart Autonomous Mobility
that is reimagining autonomous transportation with sustainability in mind – ensured safety, clean and more efficient

SUSTAINABLE VALUE CREATION
• Greater safety
• Improved productivity
• Maximum efficiency

PRIMARY APPLICATIONS
• Personal and public transport
• Unmanned (aerial, ground, marine)

Did you know?
Hexagon has delivered more safe, reliable autonomous driving research vehicles than any other company in the world.

We enable, accelerate and deploy autonomous mobility:
ENABLE
Provide comprehensive autonomy development solutions with all necessary hardware/software components for autonomous driving designs in complex environments
ACCELERATE
Facilitate a seamless workflow between real and simulated worlds to optimize, verify and validate
DEPLOY
Quickly scale from prototype and R&D phases to production
Did you know?

Hexagon’s technologies helped build:

- **The world’s longest railway tunnel** (Gotthard Base Tunnel, Swiss Alps)
- **The world’s tallest tower** (Burj Khalifa, Dubai)
- **The world’s widest suspension bridge linking two continents** (Yavus Sultan Selim Bridge, Istanbul)

We have expertise in and connect all stages of the asset lifecycle:

**DESIGN & ENGINEERING**
Feasibility analysis; estimation and project planning; surveying, mapping; procurement and contracting

**CONSTRUCTION & DELIVERY**
Computer-aided design (CAD); building information modeling (BIM) planning and scheduling; project controls; digital layout; machine automation; construction management; progress documentation, as-built

**OPERATIONS & MAINTENANCE**
Asset management, repairs, renovation, and monitoring & surveillance

---

**SUSTAINABLE VALUE CREATION**
- Optimised resources
- Less rework
- On plan, on time, on budget

**PRIMARY APPLICATIONS**
- Heavy construction
- Buildings
- Surveying
Did you know?

Over half of the earth’s geospatial imagery is either collected, processed or used with Hexagon’s solutions (sensors/software/solutions) and almost 1bn people on the planet are protected by Hexagon’s public safety solutions.

Our solutions power cities and nations, keeping them safe and resilient:

DIGITAL CITY
3D digital capture (above and below ground) of city environments and surrounding landscapes to enable management, positioning and monitoring of infrastructure and other asset

PUBLIC SAFETY
Call-taking, dispatch, major incidents, investigations, & law enforcement

DEFENCE SOLUTIONS
Image exploitation, geoprocessing, location data analysis and intelligence creation

LOCATION INTELLIGENCE
Real-time geospatial visualisation and analysis for any application (including crowdsourcing citizen reporting and participation)
IV. Our experts
Mapping Hexagon’s domain expertise

Smart Solutions experts

- **Smart Industrial Facilities**
  - PPM
  - Design, construction and operation solutions

- **Smart Manufacturing**
  - Manufacturing Intelligence
  - Design and engineering, production, and metrology solutions

- **Smart Mines**
  - Mining
  - Life of mine solutions

- **Smart Farms**
  - Agriculture
  - Cultivation, harvesting and transport logistics solutions

- **Smart Autonomous Mobility**
  - Autonomy & Positioning
  - Autonomous vehicle and positioning solutions

- **Manufacturing Intelligence**
  - Autonomous vehicle simulation software

- **Smart Buildings & Infrastructure**
  - Geosystems
    - Life of heavy infrastructure project solutions
    - Life of building solutions
  - PPM
    - Building construction solutions

- **Smart Cities & Nations**
  - Safety and Infrastructure
    - Public safety, utilities, and transportation solutions
  - Geospatial
    - Geospatial products, solutions and applications for any industry and defence, aviation, maritime and transportation-specific solutions
  - Geosystems
    - Reality capture technologies and solutions
    - Digital city/nation mapping content and services
V. Our approach
Purpose is good.

Shared purpose is better.

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

Putting data to work to boost efficiency, productivity, and quality outcomes is a purpose that we share with you.
Thank you.