

# Digital technology superpowers Driven by the Internet of Things (IoT)

May 2021

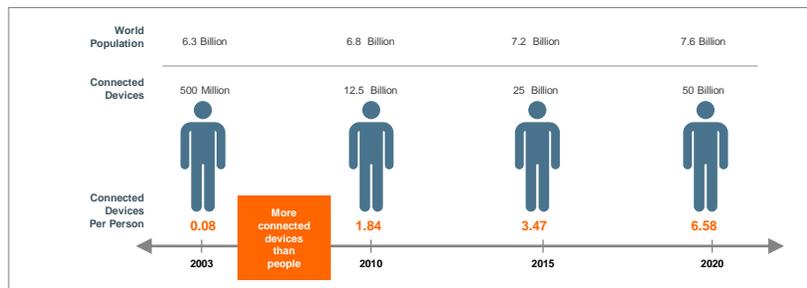
## HOW THE NEXT EVOLUTION OF THE INTERNET IS CHANGING EVERYTHING

### What is IoT?

IoT can be defined as the intelligent connectivity of physical devices and people. Devices are equipped with sensors and designed for the remote collection and exchange of real-time data and measurements from user environments, leading to massive gains in efficiency, business growth, and service quality. The Internet of Things (IoT) represents a huge leap forward in our ability to gather, analyze and distribute data, converting it into information, knowledge and insights.

Figure 1. The internet of things was "born" between 2008 and 2009

Source: Cisco IBSG, April 2011



According to the Cisco Internet Business Solutions Group, the IoT represents the point in time when more "things or objects" are connected to the internet than people. Based on this definition, the IoT was born between 2008 and 2009.

In 2020, with a world population of 7.6 billion people, it was estimated that 28 billion devices were connected to the internet. What does it mean for business to have billions of devices online that can sense and communicate from anywhere in the world?



Grain Smart Warehouse is an example worth mentioning. To improve the service to customers, our Grain Smart Warehouse service is based on the in-house SGS designed and developed solution for monitoring cargo condition, movement and motion. It forms an integrated digital offering for assuring the 360° 24/7 quantity and condition monitoring service for stored commodities.

The IoT helps us to introduce innovative and smart ways of doing business by leveraging the knowledge and experience accumulated while performing testing and inspection services. It provides us with new ways to monitor and manage objects in the physical world, while new streams of data provide better avenues for decision making.

At SGS, we strongly believe in the potential of the IoT to shape the way we do our core business: from providing innovative services to higher customer engagement and satisfaction, and operational efficiencies to completely new business models.

The IoT will help SGS to start performing its comprehensive, world-leading inspection and verification services in a smart way, such as checking the condition and weight of traded goods during transshipment, controlling quantity and quality and meeting all relevant regulatory requirements across different regions and markets.

We can use the IoT to ensure that products and services comply with global standards and local regulations in virtually every industry, covering the entire supply chain from raw materials to final consumption.

The IoT market is growing by 7% per year and the digitalization of inspection services is also rapidly expanding.

To accelerate the digitalization of its services, SGS is partnering with leading telecommunications companies, including Swisscom, Microsoft, LORIOT, and Redexia, to build an IoT Competence Center in Madrid. For example, Swisscom is providing a dedicated, secure IoT network to transport the data collected by sensors stored on Microsoft's dedicated IoT Cloud Hub solution for monitoring and analysis by qualified SGS inspectors.

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## THE IOT TECHNOLOGY STACK



### How the IoT Competence Center Will Benefit SGS Customers

<p><b>Improving the Customer Experience</b></p>	<p>An open, flexible and easy-to-configure IoT solution, composed of standard building blocks (sensors, devices, gateways, connectivity network and platform – all seamlessly connected!), enables the deployment of a plethora of affordable TIC services, each specifically tailored to needs of the customer. An online IoT service configuration and ordering platform, together with online training modules, user forums and data presenting capabilities on the cloud, helps increase customer engagement while providing valuable insights into customer behavior and needs. 24/7 collection of customer data and measurements unlocks the potential for creating new value-added services (preventive maintenance, predictive analytics, cost avoidance, etc.).</p>
<p><b>SGS Core Operations</b></p>	<p>The SGS IoT Platform helps harmonize the standardization, control and orchestration of our TIC services, empowering employees to find new and innovative solutions for SGS's customers.</p>
<p><b>Efficiencies</b></p>	<p>Releases inspectors from manual data collection: instead of traveling 100s of miles to take a sample or measurement in the field, the data can instantly be delivered 24/7 onto the inspector's computer, tablet or cell phone.</p>
<p><b>Process Standardization</b></p>	<p>Standardized IoT solutions will bring cross functional efficiencies through the implementation of the same technical solutions across business units/countries/regions.</p>
<p><b>Innovative Business Models</b></p>	<p>Digital platforms for providing and delivering IoT services to customers will help reinvent the business model, from a standard one-shot sale of TIC services to a subscription-based service model.</p>
<p><b>New Value-added Services</b></p>	<p>Collecting these large quantities of data will enable the creation of completely new services and business models, like preventive maintenance, subscription-based monitoring, 24/7 asset control, predictive analytics (complementing workers and improving management). It will also prepare us for inevitable evolutions in the Statutory Inspection market.</p>

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## IoT Center in Madrid:

Established in Madrid but Operating Globally, our **Mission** is to lead and support Digital Transformation in creating Next Generation Monitoring Services through the provision of state-of-the art IoT solutions. Our **Vision** is to become the globally recognized benchmark, both internally (SGS) and externally (business stakeholders, partners, clients, IoT community), for providing innovative, sustainable and cost effective IoT solutions.

Our **Strategy** is to focus on quick wins, return on investment and in-house solutions, partnering with the best-in-class, value-added services.

Together we can design successful and innovative customer-centric business models around your ideas. Our unique skillset within the IoT organization will allow us to quickly and cost-effectively validate the concept, test the idea in practice, and rapidly deploy and scale the service for customers.

As you read this paper we are:

- **Sensing and collecting** valuable data and helping our clients to preserve their grain commodities in Kazakhstan, the Baltic States, Spain, Bulgaria, Hungary, The Netherlands and Turkey. 24/7, day in, day out
- **Monitoring** the active usage of Mining LAB equipment to optimize CAPEX investment and secure the correct allocation of resources
- **Rolling out** projects for air quality monitoring to clients in Spain and developing one-of-a-kind IoT solutions for the predictive maintenance of Gross Pollutant Traps in Australia
- **Developing** a unique offering in combination with one of the leading global players in the insurance industry for Cargo Insurance 2.0. Providing real-time loss prevention, increased transparency and advanced claim handling during transportation on PANAMEX vessels
- **Supporting** SGS Australia in better serving their customers in health care through the unique combination of inspection and testing services and real time operational IoT data
- **Testing** our unique agglomeration control, social distancing and contact tracing IoT application in SGS Geneva – SocialSense
- **Engaging** in sustainability projects, helping our customers to decrease their CO<sub>2</sub> footprint



### For all enquiries and information, contact:

**Aleksandar Mitrevski**  
Head of IoT Services  
Digital and Innovation  
[Aleksandar.Mitrevski@sgs.com](mailto:Aleksandar.Mitrevski@sgs.com)



### An invitation to you

To start creating value through digital innovation, I would very much like to invite you to share your insights and ideas in an open dialogue. Please reach out to me at [DigitalAndInnovation@sgs.com](mailto:DigitalAndInnovation@sgs.com).

**Siddi Wouters**  
Senior Vice President Digital & Innovation at SGS

*We're helping SGS  
to enable a Better,  
Safer and More  
Interconnected World*