

Hitachi Social Innovation

We Help Businesses Build a Healthier, Safer and Smarter Society

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Are You Ready for the Future of Business?

We all know that change is constant, and businesses must innovate to keep pace with global and local trends. But today, the pace and breadth of change is on a different scale. The world is more interconnected and shifting faster than ever. Disruptions are more common, pressures are bigger and, yes, business opportunities are greater as well. In fact, the Internet of Things is driving the biggest market opportunity in history, what many are calling “the next Industrial Revolution.”

One of the critical questions for organizations today is how to respond to the astounding rate of growth of connected devices and how to take advantage of the trillions of dollars of impact the Internet of Things will have on the global economy. In this highly pressurized environment, how do we innovate faster, make smarter decisions, build a more successful business and ultimately assist the world around us? At Hitachi, we ask this question every day: How can we build a prosperous business that also addresses larger societal goals to the benefit of everyone?

That goal is what Hitachi calls Social Innovation: We seek to build a healthier, safer, and smarter society through integrated technology and business solutions that address both larger societal trends and focused business needs. Social Innovation is our vision for the future, and it is how we can help your organization thrive for generations to come.

Global Trends That Shape Society and Business

No one can predict exactly what opportunities and challenges your organization will face in the coming decades. But we do know that global demographic and technological trends will shape society, with trickle-down effects for nearly every industry, worldwide.

The world population doubled over the last 50 years and will reach about 8.8 billion people by 2030, with a clear majority (6.3 billion) of those living in urban areas by 2050. Only 10% of the population will be over 65 by 2025, but a startling 70% of those will live in just 15 countries. These and other significant demographic changes will create challenges in healthcare. Such demographic shifts will mean opportunities for smart city planning, sustainable energy, improved transportation solutions and other infrastructure innovations.

Another trend that will influence every industry is the emergence of smart, connected technology. Over the next 5 years, we'll see up to 75 billion connected, data-generating devices as part of the Internet of Things. All those devices will continue to churn out big data: data that is generated faster, in greater variety, and in greater amounts than we've ever seen before. The challenge will continue to be to identify the data that matters, analyze that data, identify patterns, and use the findings to make better and faster decisions. This is a critical step in fueling Social Innovation.

Hitachi Strategies for Social Innovation

Hitachi, Ltd., was formed not long after the first Industrial Revolution, and we built our first product in 1910: a 5-horsepower electric motor. By the late 20th century, we were an innovator and driver of the Information Revolution. We developed everything from the world's first domestically produced supercomputer in 1982 to a holographic electron microscope in 2000.

Today, we are using our uniquely broad experience across social infrastructure (industrial applications), IT infrastructure, and big data analytics to develop reliable, resilient, enterprise-class solutions that are fueling the next Industrial Revolution.

Our Social Innovation strategy combines the resources and advanced approaches of Hitachi Data Systems, Hitachi Consulting Corporation, the Hitachi Global Center for Innovative Analytics, Hitachi, Ltd., and our many sister organizations: We all collaborate as one Hitachi. Together, we offer a unique and truly holistic perspective as:

- **Builders of the Internet of Things.** Our industrial experience includes building machines, sensors and intelligent devices, from medical scanners to trains that generate data.
- **IT professionals with experience in the Internet of Things and big data.** We build and manage the IT infrastructure, including IT hardware and software for 83% of the Global Fortune 100: We capture, manage and analyze their big data.
- **Users of the Internet of Things and big data.** We turn big data into big value through our Big Data Labs and consulting practices in areas such as urban



planning, communications, healthcare and public safety.

Through this combined expertise, we provide organizations and people the means to address today's most relevant challenges, from demographic shifts and urbanization to healthcare and natural resources. Our Social Innovation solutions and services go far beyond the data center to reach people's daily lives. We focus on core challenges across industries, developing flexible solutions that generate and identify the right data, collect and manage data effectively. And we analyze and apply information for better insights that drive enhanced business results.

Real-World Examples of Social Innovation in Action

Big trends and challenges lead to big promises and a lot of high-level chatter. Everyone thinks they have solutions that will help your business succeed in the years to come, but how do you know whom to trust? One place to start is with real-world examples of how Hitachi Social Innovation solutions are solving both business and social problems in 4 major industries.

Public Safety

Among the greatest barriers to improving public safety are the lack of access to comprehensive, real-time information, the inability to rapidly extract insights from that information, and limited tools to respond collaboratively as situations develop. Hitachi Visualization offers public safety solutions that address each of these challenges through connected intelligence:

We make society safer by leveraging the Internet of Things, big data analytics and IT infrastructure technologies.

The Washington, D.C. Metropolitan Police Department and many other public safety organizations use Hitachi Visualization solutions to respond faster and more efficiently to emerging issues. For example, from any networked device, hundreds of personnel can view integrated video feeds, sensor data and information from 3rd-party public safety systems. All information is overlaid onto a map of the relevant area. In the meantime, analytics software can tap into information from public sources such as social media and online news to search for correlations and anomalies. Organizations can use all this information to respond remotely by repositioning cameras, sending customized alerts to appropriate personnel, and storing data for evidence.

Hitachi Visualization solutions are the first comprehensive, intelligent, end-to-end solutions built specifically for public safety. They include edge video-capture devices known as Hitachi Visualization Platform, which make it possible to collect, share and analyze information with

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built-in wireless networked data and video feeds. The platform integrates with Hitachi Visualization Suite, a map-based software platform that enables public safety agencies to correlate disparate data and video systems geospatially.

Telecommunications

As users demand more bandwidth and lower prices, telecommunications companies are looking for more advanced technological solutions that will enable them to deliver better performance more efficiently and cost-effectively than ever before. Hitachi Social Innovation solutions are helping numerous telecom organizations across the globe, including MediaCorp, Singapore's leading media company.

MediaCorp relied on analog microwave link systems to cover temporary outdoor broadcasting venues at events such as parades and sporting events. The technology required line of sight, used huge amounts of bandwidth, and was susceptible to fading and reflection losses. MediaCorp upgraded to the Hitachi Digital Microwave Link, which can be used in areas with line-of-sight links and multipath interference. The solution greatly increases transmission capacity, enhances signal integrity and transmission robustness, and lowers overall production costs.

Hitachi telecommunications solutions also include our platform for network analytics, which can help telcos dramatically improve network visibility in real time, improve service quality, and even create new revenue streams through offerings such as analytics as a service.

Healthcare

Today's modern healthcare facility is faced with an explosion of medical images and other digital information from numerous clinical departments across the enterprise,

often within disparate information silos that prevent easy access. Simultaneously, these providers are under pressure to better manage an increasing number of patients in more diverse settings than ever before. They are expected to increase productivity, while also seeking to improve clinical outcomes.

Enter Hitachi Clinical Repository, an enterprise-class medical repository composed of storage, mobility and security elements that are integrated on a standards-based interoperability framework. Hitachi Clinical Repository accepts nearly any data type, parses it, indexes the metadata and makes it available for enterprise-wide access and distribution. This process enables interoperability of the data with external and external applications, mobile devices and remote locations. Numerous facilities worldwide have taken advantage of this unique approach.

Klinikum Wels-Grieskirchen in Austria has leveraged Hitachi Clinical Repository to integrate its radiology, mammography and cardiology departments, allowing authorized medical staff uninterrupted and secure access to all information on a particular patient. This access helps to avoid medical errors and increases the efficiency of medical services. In addition, it provides the flexibility to integrate this data with electronic medical record systems to create a comprehensive enterprise-class repository. The entire solution is designed to improve clinical productivity and overall clinical care outcomes.

Government

Government decisions touch all areas of society, from education to transportation to the environment. In each area, better governance depends on better information as well as smarter and more efficient industrial solutions. Through our unique combination of industrial and technology experience and expertise, Hitachi is helping governments improve decision-making and create innovative solutions to solve the most complex problems.

In Abu Dhabi, for instance, the government's environmental agency needed to find a better way to provide a constant supply of clean water to a threatened species, the Arabian Oryx. Hitachi Ltd. developed an environmentally friendly solution for providing water in the desert: self-contained water desalination plants where everything is powered by solar energy.

Fifteen of the plants have now been constructed in the region's remote desert regions, and are now providing water not only directly to the threatened Arabian Oryx but also to irrigate the areas in which they feed. The desalination plants are one of many examples of an energy-efficient, scalable, lower-cost Social Innovation solution that also addresses a pressing social need.

Change the Future of Your Business Today

Since our founding in 1910, Hitachi has delivered outstanding returns to our shareholders, but we have always measured success by the difference we make in the world. This guiding principle has ushered us into the 21st century as a global leader in Social Innovation. Through innovative technologies and total solutions for sustainable urban development, we are addressing critical global issues to improve business, as well as the lives of people around the world.

You can start building the future of your business today with Hitachi Social Innovation solutions and services. Drawing from our unique capabilities and history in both industrial applications and advanced technology, we can help you address today's real-world business issues and prepare for a more prosperous future. Together, we believe we can shape a healthier, safer, smarter society built on solutions that are good for business and good for us all.

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