

Product Engineering Services

Accelerate innovation, time-to-market and improve customer experience

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Leverage enterprise Hitachi expertise across the entire Product Development Life Cycle (PDLC) to accelerate innovation, time-to-market and improve customer experience

As the technology landscape rapidly shifts to Cloud and Internet of Things (IoT) enabled solutions, today's companies face a new set of critical challenges. Software companies are under pressure to move their offerings to cloud delivery and SaaS, and Industrial firms are adding software to their manufactured products to make them smarter/IoT-enabled. These shifts require fundamental changes in the way companies operate – from the need to innovate more quickly to getting new solutions to market faster.

To meet these demands and stay competitive, companies must keep pace with new Cloud and IoT technologies. But they also must balance the use of these new technologies for next-generation solutions with their need to sustain and/or re-engineer their legacy products. For many companies, juggling legacy, Cloud-based and IoT development can often lead to a skill gap that ultimately slows innovation and product time-to-market.

Cloud and IoT also require significant process change. To leverage the Cloud for their products, companies must evolve their development, operations, QA and DevOps capabilities, which emphasize collaboration between product marketing, management, engineering, sales and support. If done

correctly, this collaboration leads to an agile environment across the entire PDLC enabling innovation to occur rapidly and more reliably.

At the core of all of these challenges is human and financial capital – allocating the right mix of talent towards both legacy and new technologies. With limited resources, these become tough choices that can impact the bottom line. How then does a company find the right balance between its legacy inventory and new Cloud and IoT opportunities? Having an experienced product engineering partner can help with these critical allocation challenges.

Helping software companies across the entire product development life cycle

In this rapidly evolving and complex environment, it's critical to have a partner that will support your ability to deliver results across the entire Product Development Life Cycle (PDLC). Without end to end PDLC expertise, it's difficult for any one team to enjoy a deep understanding of how all the development pieces fit together during a product's creation and release.

Chief Technology Officers need a Product Engineering Services partner that adds value across this entire life cycle – from innovation to quality assurance to distribution. They want a partner who understands best practices and has the tools to simplify development and get their products to market ahead of competitors. By specializing in the entire PDLC an

Hitachi ecosystem drives digital transformation

Our parent company, Hitachi, Ltd, has a 100-year heritage of excellence in innovation, product R&D and engineering. Hitachi Consulting's Product Engineering Services is an essential component of that success. For close to two decades Hitachi Consulting has partnered with the world's leading enterprises and pioneering start-ups to create commercially successful and innovative products.

Backed by the power of Hitachi Ltd. and Hitachi Group Companies, we benefit from almost \$5 billion annually in research and development on new technologies and approaches to drive innovation that support more than \$80 billion in annual revenues. These resources afford Hitachi Consulting unparalleled insight into industry trends and innovation processes – and provide the breadth and depth to deliver complete Product Engineering Services solutions. Few companies provide end-to-end capabilities to transform your entire PDLC.

Hitachi is a pioneer in the creation and application of sensors to provide connected intelligence and support early IoT use cases in industrial markets, such as predictive maintenance and optimized factory. In fact, Hitachi was the first company to implement a Software Factory more than 40 years ago. The evolution of the Hitachi Software Factory was guided by new technologies and agile development insights. Today, Hitachi Consulting continues to build on the Software Factory's success with Global Development Centers (GDCs) that employ more than 4,500 people. In addition to offering large-scale software development, as an outsourced service, our GDCs help organizations develop and scale their own software development operations to meet the demands of a rapidly evolving marketplace.

experienced partner delivers process, technology and change management expertise to help product development organizations improve efficiency and drive dramatic results.

By serving as a trusted partner, Hitachi Consulting helps companies innovate, prioritize, develop, bring to market, and manage new product offerings. Innovating new software products and becoming more responsive to market demands requires faster release cycles, product management improvements and evolution in the methodologies that drive development. We help you create strategies to optimize resources and stay ahead of the next wave of disruptive technologies.

We collaborate with your organization to determine how our expertise will best support your success. In some cases, companies may prefer to assign legacy support and maintenance to Hitachi engineers and allow in-house engineers to innovate and build new software products. Or organizations may rely on our Cloud expertise to create new products, while in-house talent supports legacy offerings. We also provide a wide range of testing and quality assurance capabilities, delivered under our unique Testing-as-a-Service commercial model.

Providing product development life cycle capabilities

To meet the needs of today's software development companies, Hitachi Consulting Product Engineering Services offer end-to-end PDLC capabilities.

These include:

- **Product advisory services** – Ideation, Product Feature Prioritization, Product Marketing, Portfolio Evaluation, Pricing Strategy.
- **Product management** – State-of-the-art Product Life Cycle Management (PLM) platform includes the tools to support continuous delivery practices, distributed source control and agile project management.
- **Product development** – Full PDLC services, including architecture, design, development, integration and customization.

- **Product re-engineering** – Re-engineering existing software to meet new regulations, enable Cloud connectivity, integrate new features and help enhance products to drive added revenue.
- **Product testing and quality assurance** – Complete menu of testing capabilities includes functional, compatibility, regression, installation, and test automation using QTP and accelerators.
- **Product sustenance** – Efficient software product maintenance enables faster upgrades with fewer resources, a reduced timescale, and more time for your team to develop new products.
- **Product implementation services** – From planning to upgrades to migrations, our proven implementation services reduce risk and speed the deployment of your most critical projects.

Summary – building software and smart products for the enterprise of tomorrow

Cloud delivery and IoT place tremendous pressure on the entire PDLC. This challenge impacts broad segments of our economy - software companies, industrial manufacturers, automakers and any other organization that makes products that involve software. Customers expect rapid innovation in the products they consume. Product management wants to drive more frequent releases. Continuous development and integration is radically disrupting the world of DevOps. All of these challenges are against a backdrop of legacy code, deep-seated processes and financial constraints. And it's all moving at an accelerating pace.

Hitachi Consulting's Product Engineering Services team specializes in the entire PDLC, so we can **deliver the process, technology and change management** expertise needed to help product organizations improve efficiency and effectiveness. With our rich Hitachi ecosystem of products and resources, we're a go-to-market partner that can deliver the expertise and process support to thrive and lead in your industry. Let us help you fill the knowledge gap.

How Hitachi Consulting accelerates software product innovation

- **Industry foresight:** Assess, define and understand market trends and competitive positioning to set strategic performance targets.
- **Portfolio strategy:** Set portfolio mix targets, evaluate opportunities, and establish an offering roadmap to attain desired mix.
- **Strategic alignment:** Align on strategic process area touch-points, innovation organization design, and execution enabling IT platforms roadmap.
- **Process improvement:** Assess and align on innovation process scope to attain desired business results; identify and prioritize innovation process gaps and decide among alternatives on what improvements to pursue; design, develop and deploy streamlined process improvements.
- **Organizational design:** Assess the current decision-making structure and design the recommended structure with vertically and horizontally aligned roles and responsibilities.
- **Performance management:** Identify and prioritize innovation performance; design, build and execute a performance management program focused on improving performance through innovation.
- **Assess and prioritize:** Address technology gaps that need to be addressed to achieve innovation maturity goals.
- **Implement integrated capabilities:** Leverage tech resources to support a sustainable innovation process.

Product engineering services in the real world

Here are three success stories that demonstrate how Hitachi Consulting Product Engineering Services help organizations keep pace with technology changes and stay ahead of competitors

Case Study 1: Improve cloud software PDLC and integration

- **Company:** Leading software provider whose application manages the entire sales life cycle for its business customers
- **Problem:** Wanted to move from on-premises license version to a cloud-based software-as-a-service (SaaS) model.
- **Solution:** Hitachi Consulting helped the company build and migrate products/ applications in a multi-tenant environment.
- **Results:** Enabled a pay-as-you-go, recurring revenue model, expanded their market share, and converted the application suite to SaaS model. The software provider maintained their position as a market leader and sustained high customer satisfaction.

Case Study 2: Develop information life cycle management product suite

- **Company:** Global provider of enterprise data management solutions for Oracle, SAP and custom applications
- **Problem:** Needed to manage increasing amounts of structured and unstructured data on production systems without sacrificing performance.
- **Solution:** Hitachi Consulting developed an Information Life Cycle Management Suite that drives cost-effective management of both production and non-production databases.
- **Results:** With solutions for data archiving, data provisioning, data security, application retirement, and divestitures with mergers and acquisitions, the company improved operational efficiency. It also met compliance requirements, and reduced the cost and risk of application data management.

Case Study 3: Evolve existing systems and processes

- **Company:** Global cargo inspection company
- **Problem:** Wanted to improve the product time-to-market to meet customer demands, and fine-tune its complete software development and maintenance processes to be more adaptive and efficient.
- **Solution:** Hitachi Consulting's expertise in Application Life Cycle Management helped the company set up robust processes to streamline the creation of the product roadmap by focusing on improved collaboration between business, R&D and product development teams.
- **Results:** The solution allows the company to respond faster to changes, improve visibility of progress, outcome management, software quality and implement shorter product release cycles.

About Hitachi Consulting

Hitachi Consulting is the global solutions and professional services organization within Hitachi Ltd., a global innovation leader in industrial and information technology solutions and an early pioneer of the Internet of Things. Hitachi Consulting is a business integrator for the IoT era and a catalyst for digital transformation. Using our deep domain knowledge, we strategically collaborate with our clients to help them innovate faster, maximize operational efficiency and realize measurable, sustainable business and societal value. As a consulting-led solutions company, we can help you leverage data as a strategic asset to drive competitive differentiation, customer loyalty and growth. To learn more, visit www.hitachiconsulting.com.