KOZO KEIKAKU ENGINEERING Inc.



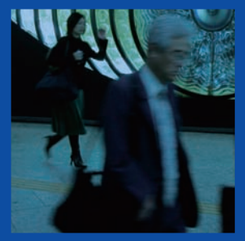













Business & Services

KKE is a professional engineering design firm that acts as a bridge between academia and business worlds.

KKE

Corporate profile

Top Message

We aim for the essence of “Engineering” interwoven with “Knowledge”

It is said that the 17th century Italian philosopher, Francis Bacon, first discovered the “Potential” resulting from mutual interaction of academic knowledge acquired through learning, and practical experience through specialty practice. That potential itself is “Engineering”.

Since inauguration as a structural design office in 1956, we fulfilled the responsibility towards various social needs with our self-created “Engineering” without getting caught up in the existing framework. We formulated a policy for making full use of academic knowledge in society and solved the social problems by the practical application of this knowledge. In particular, we continued this by rendering a social sense to knowledge and bridging the gap between the academic world and the business world.

Our business is represented by the five words, all of which start with “I”. These five words are Intelligence, Interdisciplinary, Innovative, International, and Independent.
The company’s strength lies in “state-of-the-art business creation” and “verification of those advanced technologies.” Thus, we aim to further expand our business in manufacturing and demande-producing market.

Though there is increasing uncertainty in our environment, Kozo Keikaku Engineering will always provide the best solutions to meet our clients’ expectations. As a “professional engineering design firm”, we will integrate our knowledge acquired through theory and practice to propose and implement highly developed solutions to solve our clients’ issues.

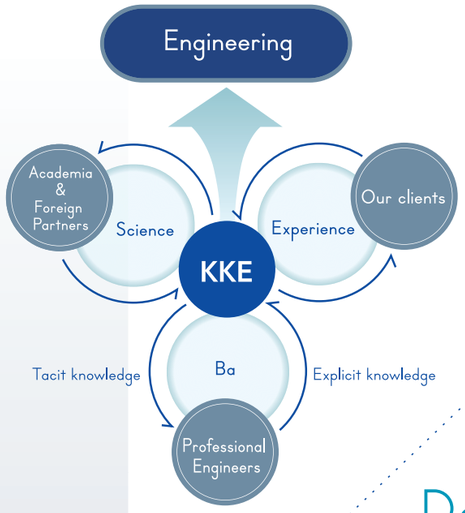
President, CEO
Kozo Keikaku Engineering Inc

Circulation of knowledge

The company is
a professional engineering
design firm
that bridges academia
with the business world

The more advanced and diversified the society evoloves, the more complex and diverse the clients’ demands and needs become. As a “professional engineering design firm,” Kozo Keikaku Engineering provides value added solutions that correspond to various tasks and challenges of the society and the companies, through creative mind, wide knowledge, and collaboration with overseas partners of distinguished acknowledgement.

* Honorary professor of Hitotsubashi University
This is our corporate philosophy – applying the “knowledge framework” advocated by Mr. Ikujiro Nonaka to. He was voted one of the most influential Business Thinkers by the Wall Street Journal on May 5th, 2008.



Five ”I”s

Good to Great. In order to become an even better firm, we aim for constant, sustainable growth. Our work is represented by five words that begin with the letter “I”.

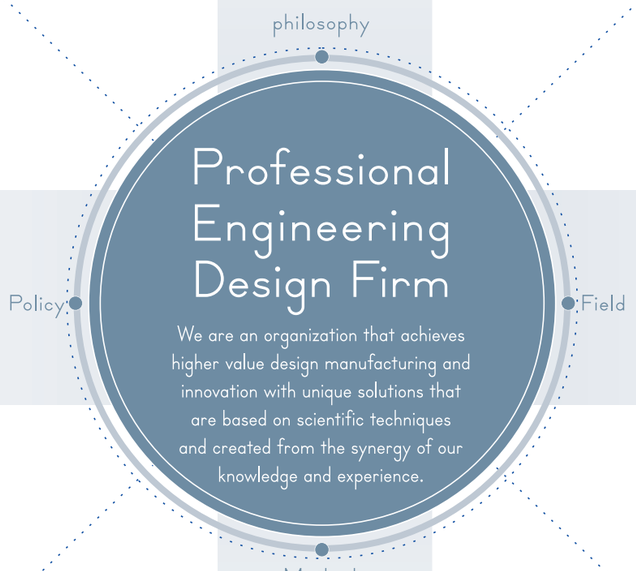
Intelligent
Bisiness based on compensation for knowledge and social contribution

Interdisciplinary
Integration and fusion of diverse academic fields

Innovative
Backbone, culture and DNA for always challenging things that are new

International
Alliances with overseas partners possessing different knowledge

Independent
Established a space for totally unrestricted, free thinking

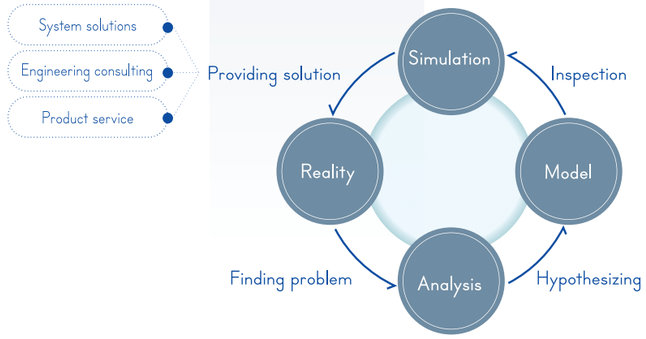


Design Methods

In the beginning, we started with structure analysis (artifact) and architectural planning. At that time we asked ourselves “how is the artifact affected by natural environmental factors such as Earthquakes and Tsunamis?” In order to answer this question, we expanded our business to engineering consulting and system development which has proven profitable. And now, we strongly believe that the connection with people is imperative as well.
In the future we plan to expand our scope to deal with social systems and environmental issues.

Service model

Our strategy involves looking at what’s really there to determine the underlying problem, and once the problem is discovered and an analysis is preformed, we will perform tests based on our hypotheses, compare the results, and finally inspect the problem again. This process allows us to provide advanced system solutions, engineering consulting, and products services.



Our technologies are leveraged in various scenes of the society

Our technology is widely used in the front stage as well as in back stage of society. Whether creating innovation with manufacturing and distribution systems, or building infrastructure using high-tech IT and disaster protection networks, we will have exceptional results.

History of Innovation

Makoto Hattori, the founder, incorporated Kozo Keikaku Engineering, Inc. in 1956. Soon after, he went to the U.S. to study advanced technologies. In a time when calculations were merely approximations, structural calculations made a huge impact. He and his team had a strong passion and declared "we need to innovate new anti-seismic design using advanced digital computers for Japan!" With this goal in mind, the company became the pioneer of architecture in Japan by bringing innovation that revolutionized the industry. Since then, they have applied the technology to the IT field, allowing them to analyze building structures, design, expand to OR-technology, and recently provide valuable solutions for decision making through simulation technologies. The company has been making revolutionary innovation and changes to the world.

1950

Construction Field

[1956] Started as Makoto Hattori Kozo Keikaku Engineering

Founder went to U.S. to examine the usage of computers

Taking the advantage of pioneer spirit for introducing computers and starting software development business

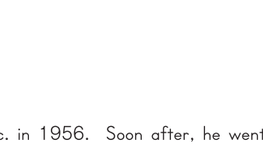
Information and Communication Field

Starting entrusted development of software
[1969] Establishing a subsidiary in U.S.

Starting the business of system efficiency evaluation by simulation

Manufacturing Field

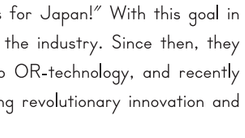
Establishment of Operations Research Division



Adopting the simulation for the problem of decision-making

Decision Making Support Field

Developing the tool for consulting



1960

[1961] IBM1620 introduced

1970

Research of numerical analysis and earthquake resistance simulation

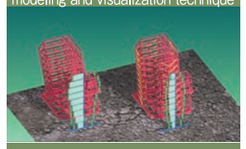
Software engineering research having high development efficiency

[1985] Have an edge on manufacturing field, incorporated with Pritsker Co., USA

Consultation that analyzes decision making structure is started

1980

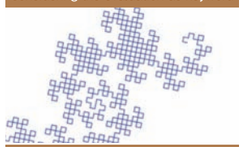
Development of implementation and application technique of modeling and visualization technique



Research of ADA language

Starting to provide the solution to builders and household equipments manufacturers

Expanding the target field by considering the evaluation as keyword



1990

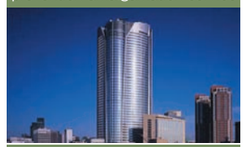
The assurance and reliable design from safety design

Developing the software reliable for quality, cost and speed

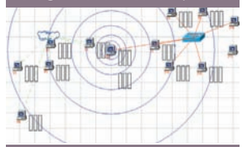
Promoting customer-driven business

2000

Development of IT and disaster prevention amalgamation service



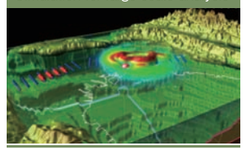
Research and development of next generation network protocol



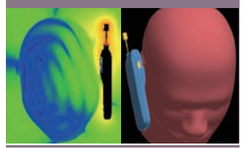
Developing solutions with the goal of creating a sustainable society.

2010

Eco-friendly IT solution services Simulation for large scale analysis



New wireless technologies



Development of solutions for all manufacturing processes

Construction Field

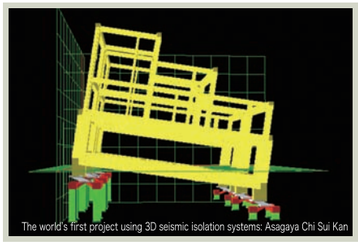
- Structural design and management
- Analytic consulting
- Seismic quake evaluation
- Seismic risk evaluation
- BCM (Business continuity management) support
- Oceanic and river system evaluation
- Flood and Tsunami simulations
- Evacuating simulation
- Air quality evaluation
- Wind atmosphere evaluation
- Global warming evaluation

Striving for SAFE and SECURE SOCIETY that could overcome disasters.

Since our establishment as a structural design firm, we have accumulated numerous achievements in design works of highly earthquake-resistant structures using base-isolation, damping devices, and other quake-resistant engineering technologies. We propose the best way to reduce the seismic risk of your building and business by the state-of-art simulations.

Structural design and supervision for high rises

Our milestone includes Roppongi Hills, the largest in total floor area (as a single building) in Japan, for which we have provided structural design as well as supervision of the construction. We've also designed structurally and supervised the 492m tall Shanghai World Financial Center in China.



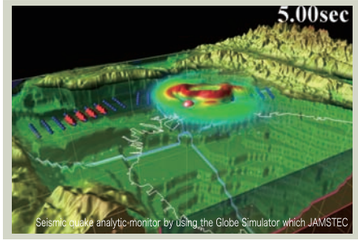
Analysis and design of base isolation and vibration control systems

We are a leading company providing globally adopted devices and techniques for seismic isolation systems. Our comprehensive services cover R&D and design phase upto evaluation committee attendance and correspondences to governmental administrations. In February 2011, we built Asagaya Chi Sui Kan, a pilot building equipped with the world's first 3D seismic isolation devices.

ODB (Oil Dumper Brace)

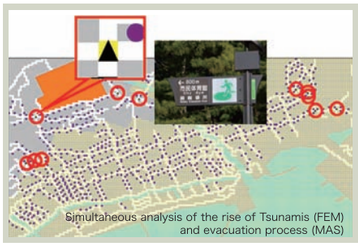
3D seismic isolation system:
Hyper Air Suspension

*Note: the Hyper Air Suspension is a joint development of the Shimizu Corporation, Kayaba System Machinery Co., Ltd., and Kozo Keikaku Engineering, Inc.



Seismic motion assessment

Through seismic simulations and prediction of estimated damages such as land slides, we provide analytic services and consulting that support reducing damages from earthquake disasters.



Information technology for disaster reduction

Simulating the damages and impacts of a disaster and capturing the practical evacuation plan quantitatively, we support disaster reduction planning and countermeasures that encompasses the damages of buildings, facilities and equipment as well as business impacts due to the damages.

Engineered approach for renewable energy

After the revision of the Building Standards Action in 2007, any wind turbine systems taller than 60m is required to have specific earthquake resistant features just like high-rise buildings. we provide the complete solutions from analysis, evaluation, approval process to supervision of wind turbine generator systems and wind farms.

- Wireless Network Simulation
- Radio Propagation Analysis
- Electromagnetic Analysis
- Mission-Critical Large-Scale System Developments
- Researching Next-Generation Wireless Network Systems
- Leading-Edge Applications Development on Smart-Phone (such as Android)
- Location Information Systems for Public Transportations

Making our Society Comfortable and Convenient by Evolving Network Systems.

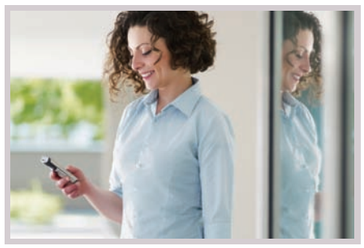
Since early 1960's, we launched software development business utilizing our pioneer spirit. Our software development expertise and simulation technology have obtained customers' high trust through developing systems of cellular network, location information system and leading-edge applications for Smart-Phone, and prototyping next-generation wireless network systems, simulating radio propagation, providing electromagnetic analysis consulting as well as packaged software sales and support.

Mission-Critical Large-Scale System Developments

The cellular operator's systems have to be mission critical, working through 24 hours, 365 days. We have expertise in developing high quality and large scale systems through the cellular operator's system developments.

Researching Next-Generation Wireless Network Systems

We have several useful wireless simulation tools. Especially, the radio propagation simulator is developed by our own. We are also joining many research projects through our research experience and technical expertise.



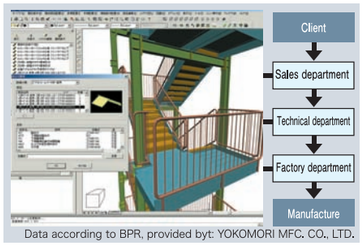
Location Information Systems for Public Transportations

We provide the leading-edge wireless applications that make the user comfortable. For example, the providing the delay information system of the commute bus, the user is able to know it through the cellular phones at home. In addition, we know very well regarding how to develop these applications on the smart phone.

- Design support systems
- Sales support systems
- Configuration
- CAD integration
- Production management systems
- Production line optimization
- Stock optimization
- Distribution management
- Quality risk management solutions
- Thermal conduction
- Vibration
- Safety design
- Prevention
- Reliability evaluation

Bringing business process reengineering to your company.

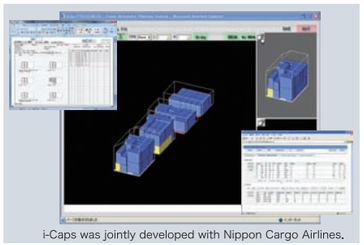
How can we fulfill the diversifying and ever-changing customer needs flexibly and promptly? As all the manufacturing companies encounter this challenge, we utilize our expertise on information technology in order to readjust the whole business process. We have successfully contributed to our customers in shortening development cycle and reducing cost by providing simulation based design (SBD) tools which enables designers to run analysis and evaluate their design on their desktop during upstream design phase.



Data according to BPR, provided byt: YOKOMORI MFC. CO., LTD.

Design specification support system

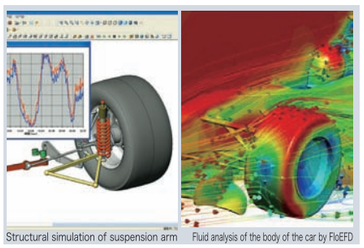
Accessing design information, proposing financial figures, and modifying specifications can all be handled smoothly through a centralized configuration system. We support your business process reengineering to achieve flexible and prompt business operations.



i-Caps was jointly developed with Nippon Cargo Airlines.

Air cargo loading simulation system: "i-Caps"

We developed a cargo loading optimization system with high-speed image rendering. You can view the maximum load and calculate an efficient cargo loading plan automatically. You can also change the location of the cargo in 3D models. Whenever you are, you can access this system from a PC browser.



Structural simulation of suspension arm Fluid analysis of the body of the car by FloEFD

SBD (Simulation Based Design)

SBD enables you to evaluate your product's structural strength, thermal distribution, airflow, mechanical dynamics, etc. on 3D CAD system during the early phase of the design process. You can explore many ideas in the development phase and save a huge amount of time upfront.

Decision-Making Support Field

- Marketing analysis
- Service engineering
- Productivity improvement
- Result evaluation
- Scheduling
- MBO (Management by Objectives)
- Management simulations
- Monte Carlo method simulation
- Sustainable solutions
- Service risk analysis
- The multi-agent simulation
- OR (Operations Research)
- Mathematical optimization
- Image recognition

We´ll support your decision making by scientific investigation of human behavior.

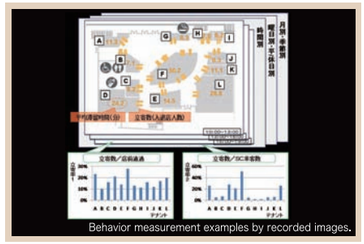
We capture the structure of the society scientifically by various means of analysis such as;
- Marketing analysis to find out consistent rule on "human decision making"
- Risk analysis on decision making
- Providing comprehensive service on quantitative measurement of human/commodity flow, from video monitoring and counting, to analysis and optimization.
- Multi Agent Simulation to handle difficult problems which involve people, animals, countries, etc. interactively in artificial society.

..and more. As a knowledge technology firm, we provide solutions that meet the changing social needs.

Example of conjoint analysis

Marketing related business

Our marketing analyses are based on the thought that a market is comprised of the collective thoughts of the individuals within it. By knowing how a products features and pricing affect consumer behavior, we can plan a marketing strategy that will be right on target.


Behavior measurement examples by recorded images.

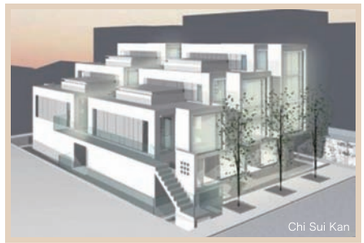
Measurement and analysis of behavior through motion capturing

Using sensors to capture movement and flows of goods and/or people, we can interpret and draw conclusions from human behavior. We provide a consistent service for gathering, measuring, and analyzing basic information for marketing and raising productivity in regards to manufacturing and service industries.


Evacuation model by using the multi-agent simulation

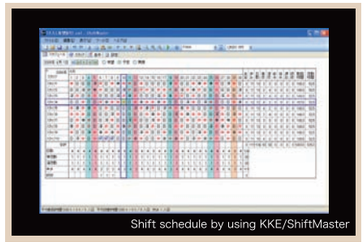
The multi-agent simulation "artisoc"

We provide a new decision making support tool using hypotheses from analyzing what influences the decision making process. By modeling the human behavior in an artificial society, a new kind of decision-making method can be realized.


Chi Sui Kan

Sustainable solution

Providing new value by combining information and products through our IT and measurement technology. We contribute to create a sustainable society. For instance, we have designed and built the Chi Sui Kan in Asagaya which functions as an experimental facility by measuring and monitoring energy usage and environmental data.


Shift schedule by using KKE/ShiftMaster

Shift scheduler for optimal workforce efficiency "KKE/ShiftMaster"

Because of the increasing need for improvement of productivity in the service industry, we provide system consulting services using the technologies we have innovated, called KKE/ShiftMaster, which is result of our OR (operations research) techniques and experience.