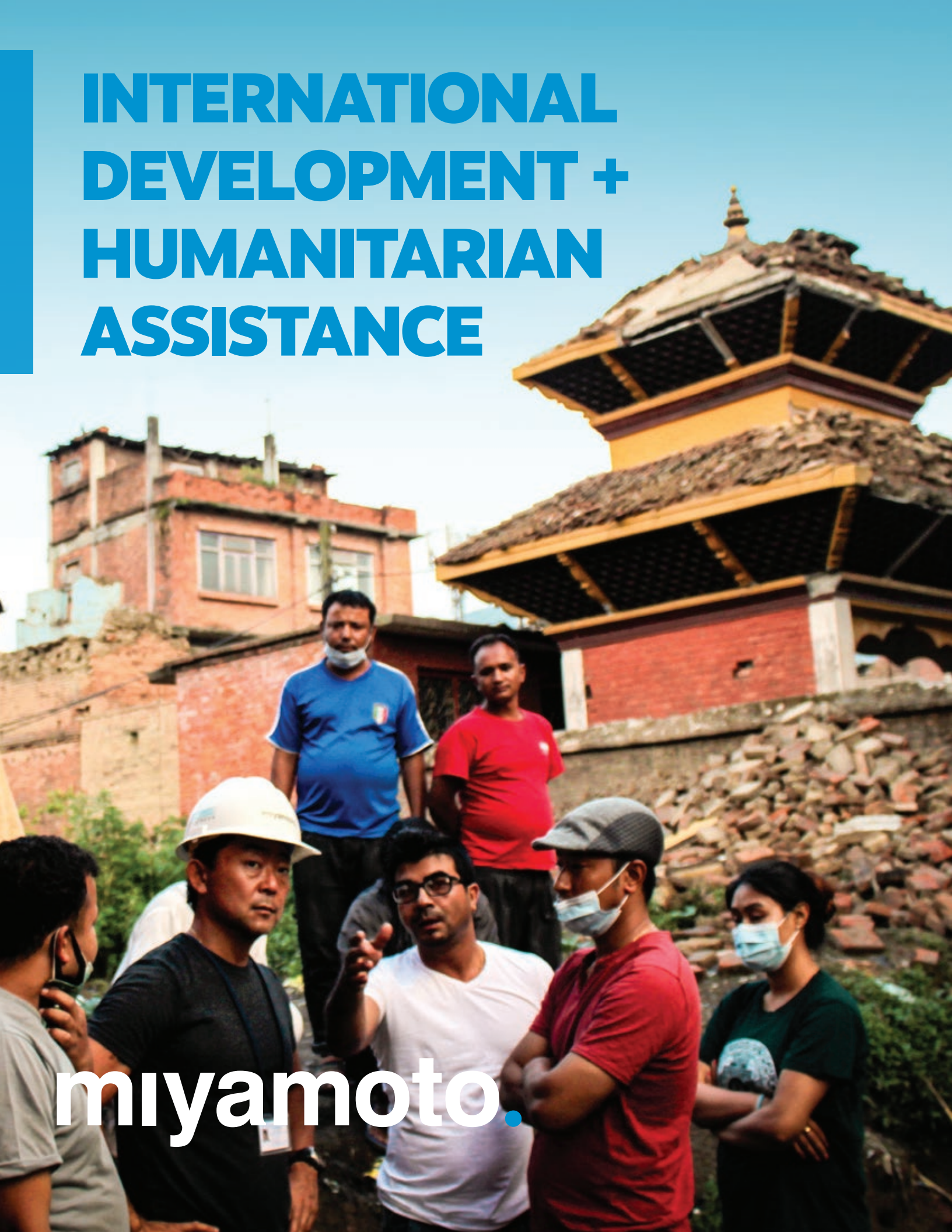
INTERNATIONAL DEVELOPMENT + HUMANITARIAN ASSISTANCE



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LETTER FROM OUR CEO

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I'm standing in the front of a collapsed school in Sichuan, China in 2008. I know over 5,000 students are buried in this mass of concrete rubble. This should never happen again.

This tragic event is what drives me and Miyamoto International. We are wholeheartedly committed and serious about disaster risk reduction.

To achieve the Sustainable Development Goals and to realize the Sendai Framework for Disaster Risk Reduction, both private and public actors must be ready to respond to a world of increasing complexity and risk.

With the frequency and intensity of natural disasters worldwide, our focus is on multi-hazard disaster risk reduction, response, and recovery. Our approach is collaborative, actionable, and data-driven, with the goal of protecting vulnerable countries and communities from the damaging economic, social, and environmental effects of earthquakes and other disasters.

We also recognize that building resilience is multi-dimensional. While we're a global leader in technical structural, earthquake and hurricane engineering, we realize that effective disaster risk reduction is not only about the built environment but also how those structures interrelate with communities, governments and the private sector. Both context, and process matters. For this reason, we also prioritize capacity strengthening and policy advocacy throughout our programs.

The Sendai Framework highlights priority areas of action around understanding risk, strengthening governance, investing in resilience and building back better. Together with national and international partners, we have been implementing programming worldwide to advance these priority areas.

"We are wholeheartedly committed and serious about disaster risk reduction."

Dr. H. Kit Miyamoto
President and CEO

We are committed to making the world a better, **safer** place.

HUMAN-CENTERED ENGINEERING THAT BUILDS RESILIENCE WORLDWIDE.

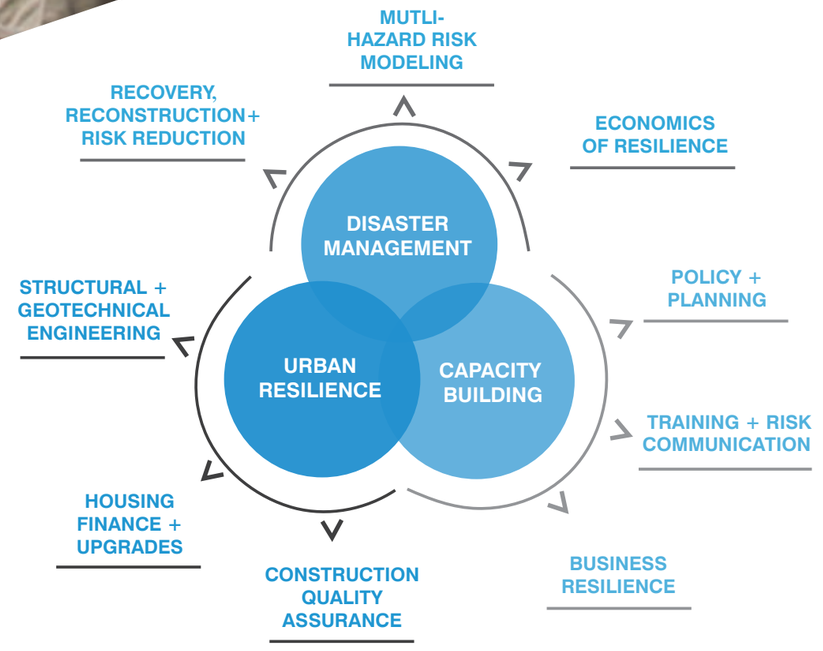
Miyamoto International is a global, multi-hazard engineering and disaster risk management firm that builds resilience to sustain economies, safeguard industries and save lives around the world.

Miyamoto combines the technical skills of engineers and data scientists, with the policy and coordination savvy of international development professionals. The firm applies 75 years of experience serving commercial, governmental, and nonprofit clients in over 50 nations to build lasting resilience across sectors. Miyamoto has dispatched experts to over 100 disasters and operates from 25 offices strategically located in disaster-prone regions.

Miyamoto prioritizes purpose-driven solutions by turning data into decisions that help communities adapt and thrive. The firm leads with world-class technical inputs that limit loss of life, damage and business interruption while facilitating recovery and risk reduction. Miyamoto develops recommendations for retrofits and new construction on public and private structures and critical infrastructure.

Miyamoto's work intentionally builds institutional capacity, with technical, policy and risk communication specialists acting as a catalyst to support and train local experts, leaders and laborers. Our expertise supports how our clients and partners address economic, political, technological, and social challenges to foster resilience and self-reliance.

OUR EXPERTISE



OUR SOLUTIONS

- Probabilistic risk scenarios
- Cost-benefit assessments
- Infrastructure vulnerability assessments
- Retrofit prioritization + solutions
- Construction/engineering training
- Code compliance + institutionalization
- Search and rescue team training
- Rapid and detailed damage assessments, plans + tools
- Private sector engagement
- Debris management planning
- Communications campaigns
- Construction QA/QC
- Affordable + sustainable housing

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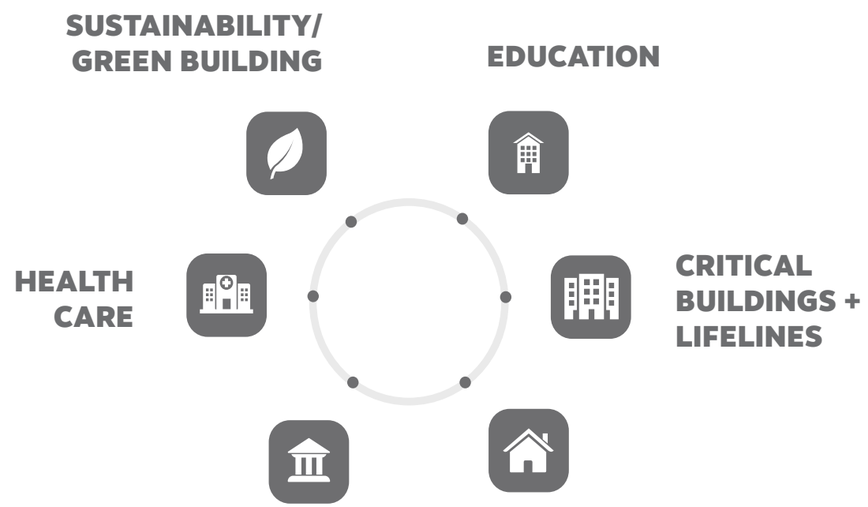
OUR INFRASTRUCTURE SECTORS



OUR PURPOSE

Save Lives, Impact Economies.

GLOBAL EXPERIENCE, LOCAL LEADERSHIP

Miyamoto works as one company to integrate global best practices with local priorities by sharing resources and expertise to deliver impactful programs.

DRIVEN BY DATA, INFORMED BY EXPERIENCE

We are renowned for our risk and cost assessments and experience providing technical advice in the most challenging environments. We translate highly complex vulnerability data for diverse audiences to facilitate informed, cost-effective decision making.

CO-DESIGN BY THE COMMUNITY, FOR THE COMMUNITY

Miyamoto relies on multi-stakeholder co-design of all program activities. We work across partners, organizations, governments, and the private sector to optimize knowledge transfer, build capacity and increase self-reliance.

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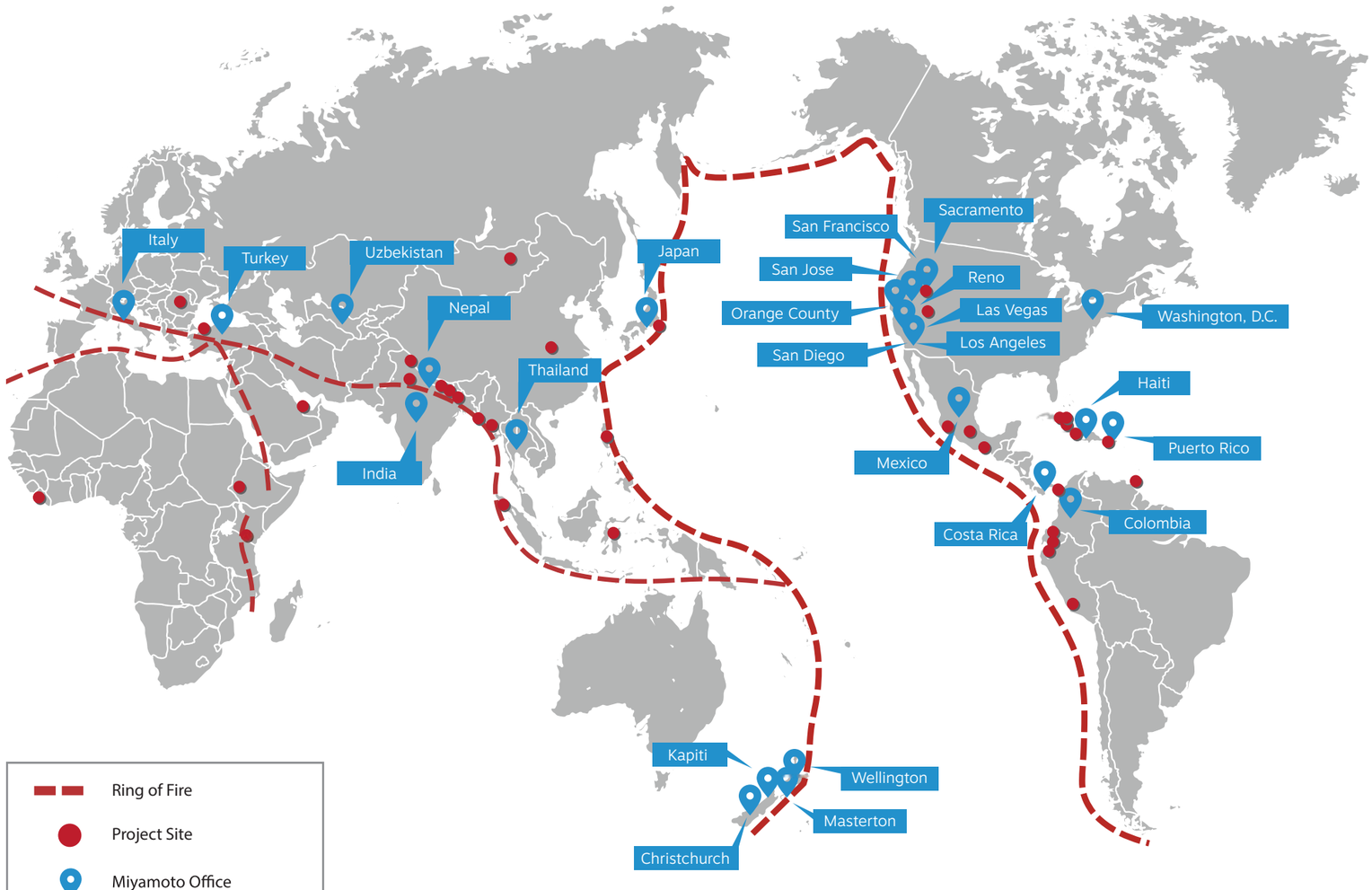
OUR LOCATIONS

STRATEGICALLY LOCATED

in disaster prone regions worldwide



OUR EARTHQUAKE EXPERIENCE

1971 San Fernando, CA (M6.5)
1972 Managua, Nicaragua (M6.3)
1973 Point Mugu, CA (M5.9)
1973 Managua, Nicaragua (M5.8)
1975 Ferndale, CA (M5.5)
1975 Lice, Turkey (M6.8)
1976 Friuli, Italy (M6.5)
1977 Vrancia, Romania (M7.4)
1978 Izu Peninsula, Japan (M6.7)
1978 Miyagi-Ken-oki, Japan (M7.4)
1978 Santa Barbara, CA (M5.1)
1979 Bishop, CA (M5.8)
1979 Gilroy, CA (M5.5)
1979 Imperial Valley, CA (M6.6)
1980 Livermore, CA (M5.5 and 5.8)
1980 Eureka, CA (M7.0)
1980 Mammoth Mt., CA (M6.5, 6.5, 6.7)
1981 Brawley, CA (M5.6)
1983 Coalinga, CA (M6.7)
1983 Borah Mt., Idaho (M6.9)
1984 Morgan Hill, CA (M6.2)
1985 Santiago, Chile (M7.8 and 7.2)
1985 Mexico City, Mexico (M8.1 and 7.5)
1986 Painesville, Ohio (M5.0)
1986 Adak Island, Alaska (M7.7 and 6.5)
1986 North Palm Springs, CA (M6.0)
1986 Chalfant Valley, CA (M6.0 and 5.5)
1986 San Salvador, El Salvador (M5.4)
1986 Northern Taiwan (M6.8)
1987 Cerro Prieto, Mexico (M5.4)
1987 Bay of Plenty, New Zealand (M6.2)
1987 Whittier, CA (M5.9)
1987 Superstition Hills, CA (M6.3)
1988 Gorman, CA (M5.2)
1988 Alum Rock, CA (M5.1)
1988 Saguenay, Quebec (M6.0)
1988 Armenia, USSR (M6.9)
1989 Acapulco, Mexico (M6.8)
1989 Loma Prieta, CA (M7.1)
1989 Newcastle, Australia (M5.5)
1990 Upland, California (M5.5)
1990 Bishop's Castle, Wales (M5.4)
1990 Manjil, Iran (M7.7)
1990 Central Luzon, Philippines (M7.7)
1991 Valle de la Estrella, Costa Rica (M7.4)
1991 Sierra Madre, CA (M5.8)
1992 Erzincan, Turkey (M6.8)
1992 Roermond, Netherlands (M5.8)
1992 Desert Hot Springs, CA (M6.1)
1992 Cape Mendocino, CA (M7.0, 6.0, & 6.5)
1992 Landers-Big Bear, CA (M7.6 and 6.7)
1992 Cairo, Egypt (M5.9)
1993 Scotts Mill, OR (M5.3)
1993 Nansei-oki Hokkaido, Japan, (M7.8)
1993 Agana, Guam (M8.2)
1993 Klamath Falls, OR (M5.7)
1994 Northridge, CA (M6.6)
1994 Tohoko-oki, Hokkaido, Japan (M8.1)
1995 Great Hanshin (Kobe), Japan (M7.2)
1995 Pereira, Colombia (M6.5)
1995 Sakhalin Islands, Russia (M7.2)
1995 Antofagasta, Chile (M7.4)
1995 Manzanillo, Mexico (M7.6)
1996 Duvall (Seattle,), WA (M5.3)
1997 Calico, CA (M5.0)
1997 Umbria, Italy (M5.5)
1998 Adana-Ceyhan, Turkey (M6.2)
1999 Armenia, Colombia (M5.0)
1999 Puerto Escondido, Mexico (M7.5)
1999 Western Washington (M5.8)
1999 Izmit, Turkey (M7.4)
1999 Duzce, Turkey (M7.2)
1999 Central Taiwan (M7.6)
1999 Athens, Greece (M5.9)
1999 Algeria (M5.5)
1999 Hector Mine, California (M7.1)
2000 Napa, CA (M5.2)
2000 Tottori, Japan (M6.7)
2001 Gujarat, India (M7.6)
2001 Seattle, WA (M6.8)
2002 San Simeon (Paso Robles), CA (M6.5)
2007 West Sumatra, Indonesia (M6.3)
2007 Niigata (Kashiwazaki), Japan (M6.8)
2008 Mexicali, Mexico (M5.1)
2008 Wells, Nevada (M6.3)
2008 Sichuan, China (M8.0)
2008 Chino Hills, CA (M5.4)
2009 L'Aquila, Italy (M6.3)
2010 Eureka, CA (M6.5)
2010 Haiti (M6.9)
2010 Chile (M8.8)
2010 Baja California, Mexico & CA (M7.2)
2010 Christchurch, New Zealand (M7.2)
2011 Christchurch, New Zealand (M6.3)
2011 Honshu, Japan (M9.0)
2011 Van, Turkey (M7.2)
2012 Finale Emilia, Italy (M6.0)
2013 Philippines (M7.1)
2014 Napa, CA (M6.0)
2015 Nepal (M7.8)
2016 Ecuador (M7.8)
2016 Norcia, Italy (M7.0)
2017 Central Mexico (M7.1)
2018 Indonesia (M6.9 and M7.5)
2019 Ridgecrest, CA (M7.1)
2020 Puerto Rico (M6.4)

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Disaster Management Experts
LATIN AMERICA + THE CARIBBEAN

Miyamoto International has spent more than a decade strengthening disaster risk management in Latin America and the Caribbean. With a roster of local engineers and risk management specialists, Miyamoto builds capacity alongside government agencies, engineering associations, universities, and vulnerable communities. The firm is a trusted technical partner of the U.S. Agency for International Development with a track record of using seismic data to inform risk management and response policy, planning and capacity.

OUR REGIONAL FOCUS

- Public-private partnerships
- Multi-hazard risk reduction
- Damage assessment tools + training
- Response coordination + capacity building
- Resilient infrastructure

MIYAMOTO'S PREPARE MODEL

Miyamoto launched the USAID PREPARE program in 2015 to provide decision-makers, first responders and urban planners with a clear picture of the impact of an earthquake on their city. Our specialists collect and analyze hazard and exposure data to produce risk scenario tools that build mutual understanding through estimates of fatalities, displacement, and damage. The program has expanded to include Costa Rica, Guatemala, Colombia, Mexico, El Salvador and Trinidad and Tobago.

RECOVERY SPECIALISTS

Miyamoto's specialists have responded to some of the region's most catastrophic disasters, including earthquakes in Haiti (2010), Ecuador (2016), Mexico (2017) and Puerto Rico (2020). Our specialists provide technical advice during difficult times and develop strategies for data-informed reconstruction. Miyamoto has on-going projects, offices, and staff in each of these earthquake-affected countries and continues to build long-term capacity by applying global expertise to local challenges.

BEYOND RELIEF
HAITI

After the 2010 earthquake, our team focused on getting families out of the shelters and back into safe homes. We trained 600 engineers to assess over 400,000 buildings. Our specialists set out to repair just 500 houses, but 500 turned into more than 10,000. Miyamoto continues to work with the government and national board of engineers to improve damage assessment methods, develop plan check processes and build resilient schools.

BUILDING RESILIENCE
ECUADOR

To reduce the vulnerability of affected communities after the 2016 earthquake, Miyamoto launched a technical capacity building program to strengthen knowledge and application of seismic-resistant construction practices. With support from USAID, Miyamoto continues to help masons and low-income homeowners rebuild or repair homes using bamboo and other traditional materials and seismic-resistant construction techniques. The program has trained over 700 people.

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Disaster Resilience Specialists
ASIA + THE PACIFIC

Miyamoto International is a multi-hazard engineering and disaster-risk management firm providing resiliency expertise that sustains industries and safeguards communities. For more than 15 years, Miyamoto has led international development efforts across Asia and the Pacific. With a regional presence in Bangkok, Thailand, the firm focus on disaster response, mitigation, preparedness, and private sector engagement.

OUR REGIONAL FOCUS

- Business resilience
- Multi-hazard risk reduction
- Sendai Framework implementation
- Resilient infrastructure
- Disaster response

NEPAL

After the 2015 earthquake, Miyamoto conducted structural and geotechnical assessments of trekking routes, bridges and villages to help recover the tourism economy. In 2019, Miyamoto won the Engineering News Record's Project of the Year for the restoration of an earthquake-damaged UNESCO World Heritage palace, the Gaddi Baithak.

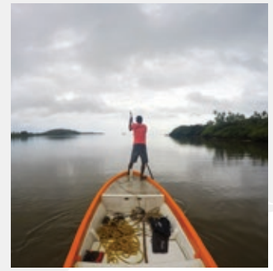
INDONESIA

In partnership with the World Bank, Miyamoto conducted post-earthquake infrastructure assessments and investment prioritization in Central Sulawesi and Aceh. Miyamoto also conducted vulnerability assessments of school buildings and developed retrofit solutions in Pidie Jaya, Bireuen, and the Province of Naggroe.

Built on decades of engineering experience in the field, our expertise supports how our partners address economic, political, social, sustainability and resiliency challenges in disaster risk reduction and post-disaster recovery and reconstruction.

FIJI

Miyamoto reviewed building codes and architectural designs and advised on resilience measures to ensure seismic resilience.



MYANMAR

Miyamoto collaborates with the Yangon City Development Committee to streamline retrofitting, assess critical public buildings, and conduct multi-hazard vulnerability assessments that inform policy.

PHILIPPINES

Miyamoto developed a multi-hazard risk mitigation program for Manila and responded to Typhoon Haiyan in 2013. Miyamoto also trained engineers to collect damage assessment data on over 3,800 schools and hospitals.

BANGLADESH

Miyamoto helps mainstream building code compliance in Dhaka, including an electronic permitting system, accreditation for architects and engineers and a city-wide risk campaign.

MONGOLIA

Miyamoto conducted multi-hazard vulnerability assessments and prioritized risk reduction and retrofitting of schools in Ulaanbaatar.

JAPAN

Miyamoto collaborates with the University of Tokyo and other leading disaster management institutions on research and development, putting Miyamoto at the forefront of new innovations, technologies, and knowledge sharing.

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Risk reduction specialists

CENTRAL ASIA

Central to our mission of “making the world a better, safer place” is working across countries and industries to invest in and design resilient infrastructure and improve disaster management and response. From offices in Uzbekistan and Turkey, our Central Asia specialists work across governments, development banks and community groups to provide seismic and structural assessments and build greater disaster resilience.

UZBEKISTAN

One of Miyamoto’s newest locations is an office in Tashkent, Uzbekistan, a city known for innovative industries, breathtaking tourism destinations and critical transportation routes. The office is headed by Dr. Shakzhod a world-renowned expert in seismic engineering and multi-hazard resilient designs.

TURKEY

Miyamoto has had an office in Turkey since 2008, because the region is one of the most energetic earthquake zones in the world. Miyamoto has assisted the Government of Istanbul with designing high-performance, cost-efficient earthquake engineering. Miyamoto also worked with Turkish engineers and academics to develop guidelines for the seismic rehabilitation of schools and hospitals.

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Trusted resilience experts

AFRICA

Miyamoto is a world leader in disaster and urban resilience. Our specialists have decades of experience implementing climate-smart housing projects and engineering designs throughout Africa and frequently serve as trusted technical advisors and expert speakers for urban resilience and affordable housing conferences throughout the continent.

GREEN BUILDING

Miyamoto’s in-house specialists focus on sustainable building, including EDGE certification and climate-resilient designs. In Kenya, Miyamoto provided designs for the Konza Technocity, considered one of the first Smart Cities in Africa.

CLIMATE RESILIENT HOUSING

Miyamoto’s experts have led housing development, policy and financing solutions throughout sub-Saharan Africa. This work has included providing technical advice, analysis and supervision for both private and government partners with the goal of creating affordable housing for all.

SOLUTIONS

- Retrofitting designs
- Government consulting
- Vulnerability assessments
- Recovery + reconstruction advising
- USAR training
- Construction training, project management + quality assurance
- Rapid and detailed damage assessment implementation, training and tool development

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RISK REDUCTION, RESPONSE + RECONSTRUCTION

When Miyamoto deploys our engineers and technical specialists in the days after a disaster, local governments are often overwhelmed by the scope of the emergency. The firm's experience gained working in post-disaster environments enables Miyamoto to share best practices in order to develop and implement effective response, early recovery and long-term risk mitigation plans.

In the last decade, Miyamoto has responded to major disaster events in Haiti, Indonesia, Nepal, Puerto Rico, Mexico, New Zealand and Ecuador, among other geographies. The firm's structural, geotechnical and sustainable development experts advise national and local governments on recovery and risk mitigation planning for homes, critical infrastructure, and citywide urban reconstruction.

Miyamoto uses extensive building stock data and technical inputs to enhance understanding of disasters and improve coordination across governments, the private sector, engineers, construction workers and homeowners. Our strategy is to build back better and more resilient in ways that honor local culture, build capacity, reduce risk, and get people and business owners back into their homes and workplaces quickly.

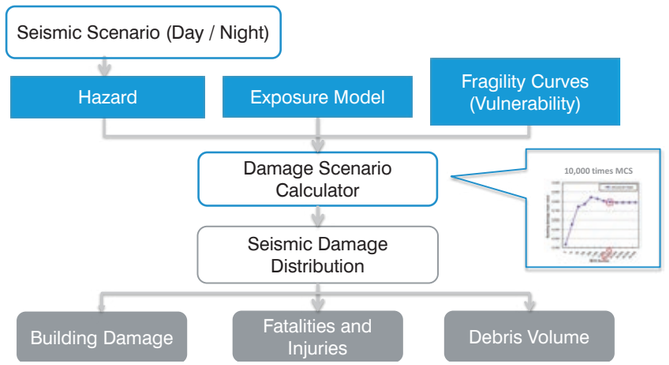
MULTI-HAZARD RISK MODELS

Government officials often have only a general understanding of how a disaster will affect their city. Miyamoto's technical inputs help bring diverse public and private sector stakeholders together by providing a common understanding of the probable scope and impact of a disaster that can be used as a starting point to develop collaborative, data-based investments in risk mitigation.

Using data to understand vulnerability

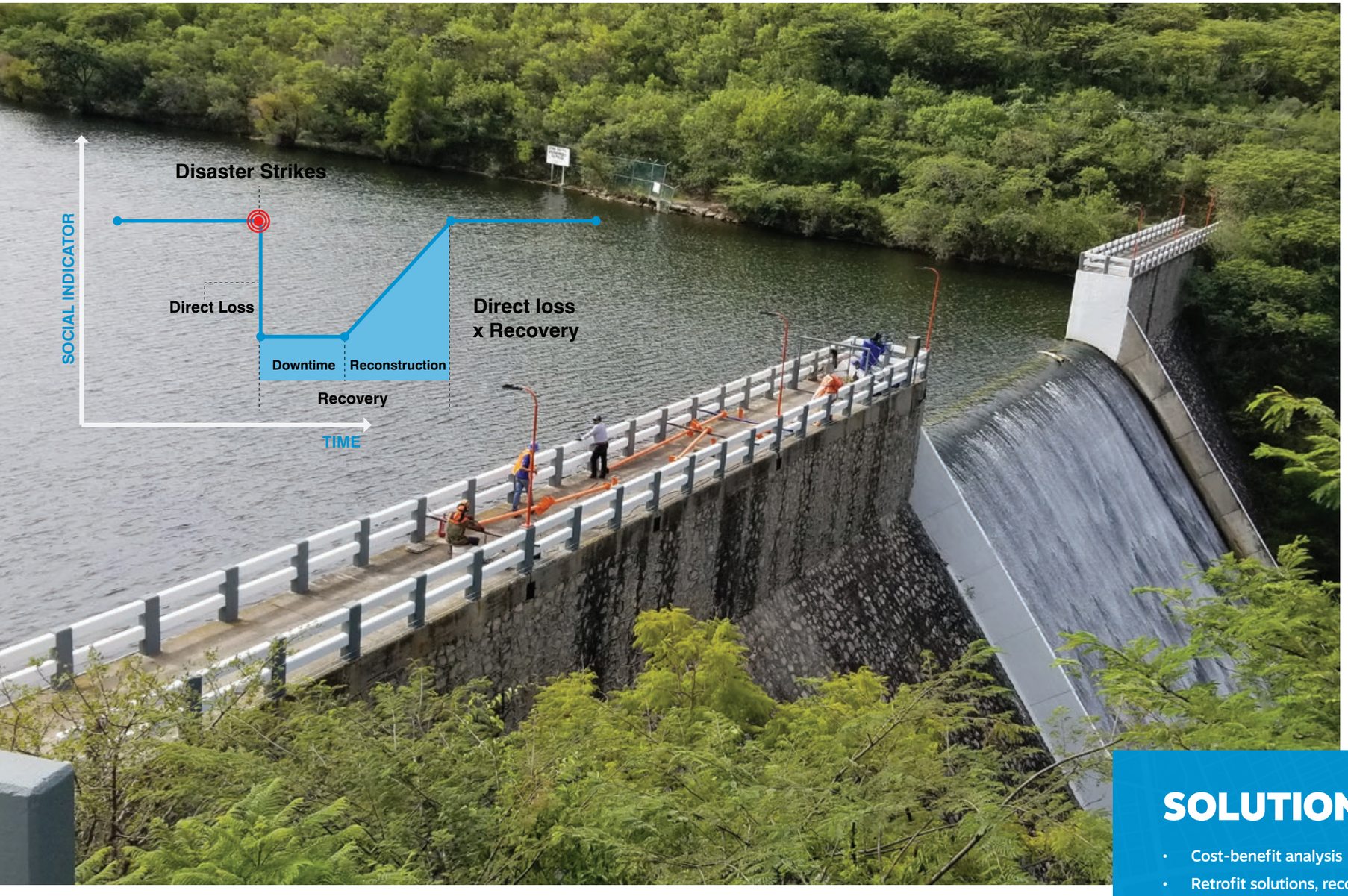
Over the last 30 years, Miyamoto has developed a global database on building typologies and their fragility or resistance to hazards. Miyamoto's risk engineering team uses this data for its signature risk analysis, MiyamotoQuake. The team also uses other open-source, risk-modeling platforms, such as HAZUS and the Global Earthquake Model's OpenQuake. The firm is also renowned for vulnerability, cost-benefit and prioritization methodology for buildings, facilities, and infrastructure.

Miyamoto's data modeling was used for the World Bank's flagship report *Lifelines: The Critical Infrastructure Resilience*, which informs ongoing investment in infrastructure strengthening around the world.



SOLUTIONS

- Probabilistic risk scenarios
- Vulnerability assessments
- MiyamotoQuake risk modeling
- Investment prioritization
- Cost benefit assessments
- Value engineering



ECONOMICS OF RESILIENCE

Miyamoto is sought out for our approach to evaluating the economics of resilience. We quantify the benefits of investing in strengthening homes, businesses, and infrastructure – or better yet, of building disaster-resistant structures the first time around.

Our expert engineering team specializes in carrying out cost-benefit analyses to guide and prioritize investment in risk mitigation strategies by determining the most feasible and impactful interventions within budget.

Miyamoto's analyses consistently factor in variables such as loss of revenue or structural operation to recommend realistic interventions. Our experts help governments, clients and communities protect assets and invest in smart, long-term risk reduction strategies to reduce economic disruption and protect lives.

We advocate for smart retrofitting solutions that cost a fraction of demolition and reconstruction, and reduce further displacement of neighborhoods and commerce following a disaster.

SOLUTIONS

- Cost-benefit analysis
- Retrofit solutions, recommendations + prioritization
- Probabalistic analysis
- Disaster and resilience assessments
- Damage assessments
- Policy recommendations

DATA-BASED POLICY + PLANNING

Pre-disaster efforts to reduce risk and improve response coordination can lessen hardships and avoid compounding economic and social devastation. Miyamoto shares lessons-learned from working in post-disaster environments across the globe with governments and the private sector alike to strengthen disaster-management capabilities and systems.

Our technical approach uses multi-hazard exposure models, not only as a scientific basis for informed planning and policy, but also to create a common understanding of risk that brings stakeholders together behind a shared goal of preparedness.

Miyamoto uses data to identify policy gaps, secure government buy-in and advance strategic response and risk reduction policy and planning. The firm frequently facilitates multi-sectoral technical working groups to develop strategies for critical issues, such as debris management, damage assessments, permitting systems and plan check processes.

SOLUTIONS

- Debris management plans
- Disaster preparedness + response planning
- Technical working group facilitation
- Damage assessment tools and trainings
- Stakeholder consultation
- First responder training
- Drills and scenario planning tools
- Risk communication
- Private sector engagement + coordination

RISK COMMUNICATION + TRAINING

Whether its resilient construction, damage assessments or community-level disaster preparedness, Miyamoto increases local capacity to leave stakeholders better equipped to reduce risk. With a unique combination of technical and sustainable development experts, Miyamoto develops and shares knowledge and tools to deliver training to government officials, engineers, homeowners, masons, contractors, and architects.

Miyamoto has an extensive library of training materials and in-house experts in stakeholder engagement, inclusion, strategic risk communications, graphic design, and training facilitation.

From building code compliance campaigns in Bangladesh to disaster resistant construction practices in Ecuador, Miyamoto's risk communication campaigns and technical trainings build not only knowledge, but specific skills that increase preparedness, create job opportunities and continue to improve the built environment into the future.

SOLUTIONS

- Training facilitation
- Training curriculum design
- Campaign planning + strategy
- Outreach material design + testing
- Social media
- Train-the-trainer methodology
- Gender and social inclusion
- Participatory program design
- Monitoring + evaluation
- Focus groups + survey design
- Virtual trainings and app development
- Behavioral change for DRR

BUSINESS RESILIENCE + PRIVATE SECTOR ENGAGEMENT

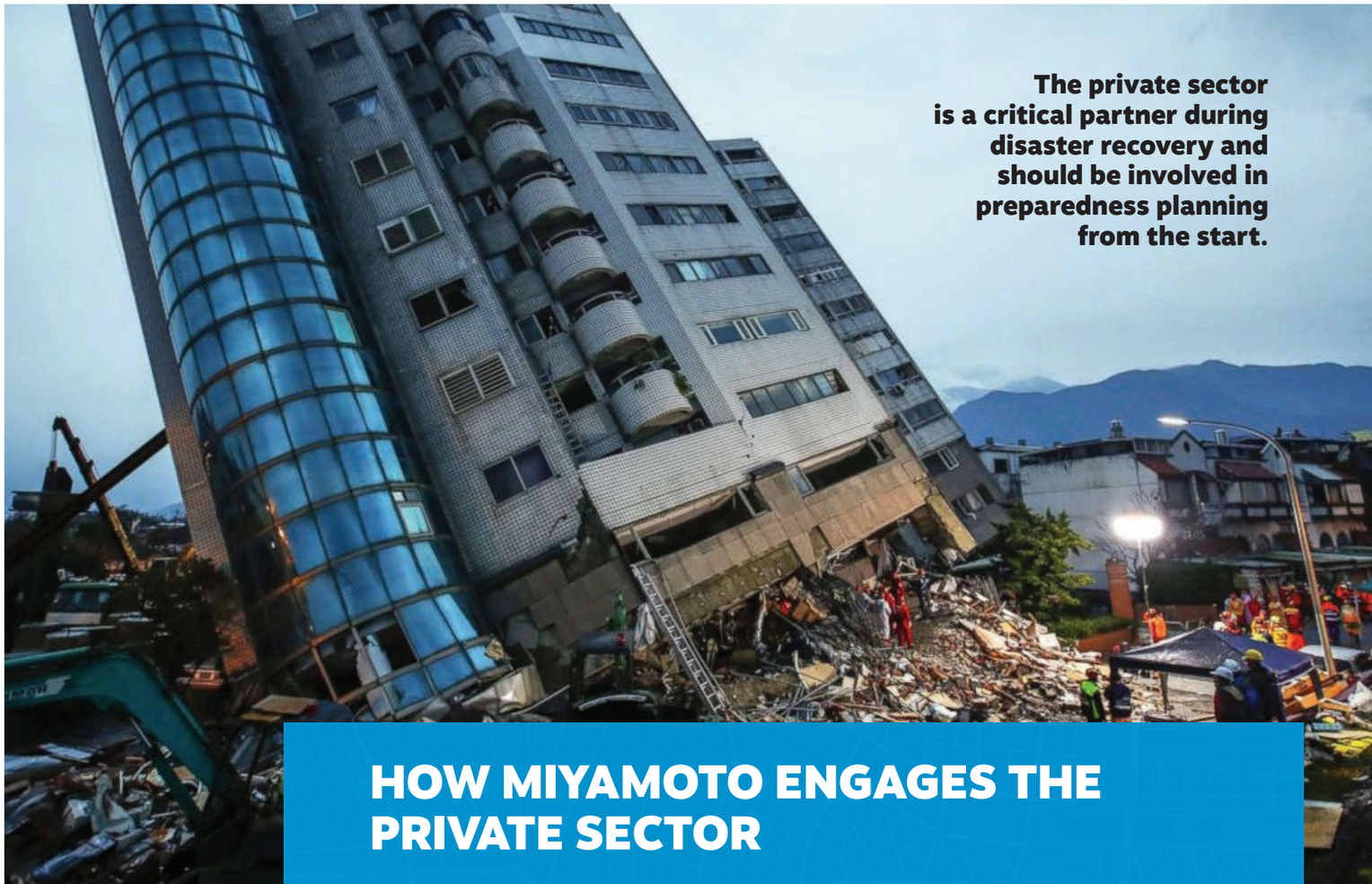
Businesses of all sizes are the engines of the economy and the drivers of innovation. They contribute to social stability and support jobs. They are also critical to disaster risk reduction, response, and reconstruction. After a disaster, governments and relief agencies coordinate with businesses to supply aid, support life-saving distribution, remove debris and provide reconstruction materials, among other recovery services.

Miyamoto's initiatives bridge the gap between private sector and disaster management authorities and ensure business priorities and resources are mapped, leveraged and integrated into response plans to ensure both preparedness and business continuity.

Integrating business continuity planning with disaster management

Miyamoto International supports the integration of the private sector into disaster management by advising on business continuity plans, training private sector engineers in damage assessment, facilitating technical working groups, assessing structural assets, and developing cost-efficient strengthening solutions.

Miyamoto approaches continuity planning from a technical lens, helping business leaders understand how they could be affected by a disaster and what can be done to reduce impact. The firm uses structural, geospatial and supply chain data to analyze systems and integrate businesses into disaster action plans and frameworks.



The private sector is a critical partner during disaster recovery and should be involved in preparedness planning from the start.

HOW MIYAMOTO ENGAGES THE PRIVATE SECTOR

- Information sharing + knowledge exchange
- Development of common standards + practices
- Public and private multi-stakeholder engagement to foster disaster resilience outcomes
- Cost saving and shared investments
- Positive behavior change of private sector in disaster risk reduction + disaster response
- Increase exploration and collaboration with humanitarian + development actors

SOLUTIONS

- Retrofit guidelines
- QA/QC + supervision
- Lean construction project management
- Cost-benefit analysis
- Cultural restoration + preservation
- Building code development + enforcement
- Disaster resilient construction + engineering training
- Local contracting + building material sourcing

CONSTRUCTION QUALITY ASSURANCE

Miyamoto achieves disaster-resilient, cost-effective, culturally appropriate and performance-based structures by relying on cutting-edge construction management technology and innovative approaches to building with local materials and contractors.

Rapid urbanization in disaster-prone areas is a major driver of risk in the developing world, setting the stage for higher economic and social losses and leaving urban populations highly vulnerable. Many buildings fail in earthquakes due to lack of quality control and oversight during construction.

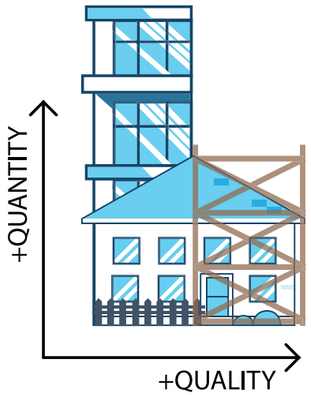
Miyamoto provides consultations on developing building code standards, seismic retrofit guidelines, and other technical resources and manuals. The firm has carried out large-scale construction supervision and quality-control programs after major disasters, such as the 2010 Haiti and 2015 Nepal earthquakes. The firm provides excellent trainig for contractors and their teams in scheduling and cost control measures, skills that remain in country for generations.

This state-of-the-art remote technology means that construction projects can be managed remotely with greater efficiency, transparency, and budget oversight. The app streamlines services like contracting and quality control, among other features. After the earthquake in Puerto Rico, the app helped manage repair assessments, saving homeowners hundreds of dollars.

HOUSING DEVELOPMENT + FINANCE

One billion people in the world lack housing, and the UN predicts that by 2030, two out of every five people will not have access to a safe home. As cities grow, hundreds of millions move to informal or inadequate housing – often self-built without lifesaving engineering. Although housing represents over 60% of building stock, each house has unique construction, ownership and financing characteristics making large-scale housing programs and policies highly complex.

Effective programs require multi-disciplinary expertise in engineering, urban planning and finance. Miyamoto continuously invests in tools to identify and address vulnerabilities and strengthen existing structures to keep families in their homes.



Miyamoto's specialists are renowned for building well-connected, cost-effective, culturally appropriate new developments using local labor, innovative funding mechanisms and international, disaster-resilient standards.

A house is not just a structure - it's a home.

Miyamoto offers services to support all aspects of housing resilience: health, gender, disaster, affordability and more. Miyamoto's experts are trusted policy advisors for agencies like the World Bank and provide key recommendations on affordable, efficient housing programs in formal and informal sectors – even during the COVID-19 pandemic.

SOLUTIONS

- Damage assessments and identification of at-risk buildings
- Prioritization for investment based on probabilistic analysis
- Cutting-edge construction technology
- Innovative, cost-effective retrofit technologies
- Mobile training apps for safe construction
- Inclusive financial and policy advisory services (land titling, resource allocation, taxation)
- Structural engineering
- Retrofit assessments
- Technical advice for public-private partnerships
- EDGE green certification and green design
- Resilience assessments

STRUCTURAL + GEOTECHNICAL ENGINEERING

Miyamoto uses knowledge gained by evaluating structural and geotechnical conditions in post-disaster environments, along with the firm's vast library of building performance data, to advance the structural safety of buildings and infrastructure. Miyamoto's recommendations protect lives, reduce risk, maximize the long-term value of investments, bring families back into safe homes and business all while achieving cost-effective solutions.

Miyamoto's engineers are experts in performance-based engineering that centers community needs by protecting lives, livelihoods, and assets. Whether its rural healthcare facilities, urban multi-story schools, or critical utility infrastructure, Miyamoto finds cost-efficient ways to protect structural elements from hazards.

The firm uses assessments, prioritization, and retrofitting to address and remedy the shortcomings of outdated engineering and construction methods. These methods are improved by combining local methods and priorities with global best practices.

SOLUTIONS

- Rapid + detailed damage assessments
- Cost-benefit assessments
- Vulnerability assessments
- Site + laboratory testing of soils + rocks
- Bearing capacity of shallow + deep foundations
- Settlement analysis
- Geotechnical foundation design
- Soil liquefaction assessment + risk analysis
- Probabilistic seismic analysis
- Soil-Foundation-Structure Interaction
- Ground treatment
- Land stability monitoring
- Peer reviews
- Advanced stress-strain numerical modeling
- Reinforced embankments + mechanically stabilized earth qualls
- Slope stability analysis + design
- Settlement analysis
- Earthworks + retaining structures
- Rock-fall assessment and rock mechanics

miyamoto. RELIEF
nonprofit engineering experts

MIYAMOTO RELIEF

PROTECT HERITAGE + WATER

A culture's history can be lost in mere seconds of an earthquake when heritage buildings come crashing down. Miyamoto Relief protects historic structures, including retrofitting UNESCO World Heritage buildings. The nonprofit also improves lifesaving irrigation technology to safeguard access to water for health, and livelihoods.

SAFEGUARD SCHOOLS

In an earthquake, school structures are disproportionally affected, putting thousands of children's lives at risk. For the cost of building one school, we can seismically strengthen three or more. From Haiti to Nepal, Miyamoto Relief has helped rebuild earthquake-damaged schools in disaster-prone communities to provide safe learning spaces for children.

A solar-powered irrigation system returns life-sustaining water to remote tribes in Ethiopia.

A retrofit of Nepal's Gaddi Baithak, a UNESCO World Heritage palace, used traditional materials + practices.

A retrofit of an earthquake-damaged Shree Janavikash in Nepal provides a safe learning space.

Haiti's rehabilitated Lycée Nationale school now serves as a model for seismic-resilient school retrofits in the Caribbean.

NONPROFIT ENGINEERING EXPERTS

At Miyamoto Global Disaster Relief, our mission is to apply state-of-the-art engineering expertise to return hope to and sustain life in the most marginalized and at-risk communities around the world. Miyamoto Relief works with local partners to co-design and implement technical solutions before, during and after a disaster.

We repair and seismically strengthen vulnerable schools, cultural heritage sites and design other life sustaining infrastructure.

- **US-based 501(c)3 nonprofit**
- **At-cost or pro-bono engineering from Miyamoto International, student engineers + technical partners**
- **Project-specific fundraising through donations, fundraisers, and grants.**

NIGHT OF 1,000 DRAWINGS

Miyamoto Relief hosts a fundraiser where volunteers 'doodle for a difference' – drawing anything, with anything, on anything 5.5 x 8.5. All donated doodles are exhibited at an exhibition and sale where attendees enjoy food and drinks, and are entertained by award-winning musicians. All proceeds go to U.S. nonprofits.

nightof1000drawings.com

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save lives, impact economies

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