

AIA Global Practice Primer

Produced by the AIA International Practice Committee



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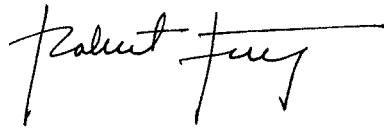
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Foreword

The *AIA Global Practice Primer* is an exciting new addition to the resources available for AIA members. Globalization has erased our borders and expanded our outreach, and unlimited international venues are now accessible to all US design professionals. Digital technology in practice has made communications and services delivery across time zones as convenient as the workstation in front of you.

This primer which you are holding provides a convenient practice resource for those who seek to reach for broader horizons. The countries of the world offer new challenges in new environments, and many aspects of the way we practice are governed and influenced in unfamiliar ways. The articles in this primer are intended to provide awareness of these cultural differences and give helpful guidance as you embark on this new path.

Keep *The AIA Global Practice Primer* close by for reference, and may your international adventures be richly fulfilling.



Robert Ivy, FAIA
EVP/Chief Executive Officer
The American Institute of Architects
Washington, D.C.

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Preface

The AIA International Practice Committee is pleased to introduce the new *AIA Global Practice Primer*. It builds on the AIA's long-established tradition of providing relevant and meaningful resources to its members. The practice of architecture today is truly international and has no boundaries, and the world is our global design studio. This resource will provide insight, guidance, and assistance to US architects as they engage in international practice venues.

The AIA is fortunate to have members with well-established international experience, and in these articles they share their knowledge and understanding of global practice so that you can be better-prepared for your endeavors. Whether you are considering international projects for the first time or have already embarked on your global adventures, this primer is intended to provide enlightenment and assistance on your world stage.

The AIA International Practice Committee is privileged to support your international practice initiatives through this primer, and we hope that you find this resource useful. We envision this primer as a living document and hope that you will share your global experiences with us and participate in the work of the AIA International Practice Committee.

Greg Yager, AIA, HKIUD
2016 Chair
AIA International Practice Committee Advisory Group

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EDITOR: JAMES B. ATKINS, FAIA, FKIA

The *AIA Global Practice Primer* is a collection of information and resources designed to assist architects who are considering the pursuit of projects abroad, or who have already received commissions and are currently engaged in international work. It addresses the full spectrum of global practice, beginning with how international practice generally differs from domestic architectural practice in the US. The benefits of international work are also addressed, followed by useful suggestions and insights on business development and marketing.

The many legal issues that potentially affect work outside the United States are comprehensively reviewed, followed by perhaps the most critical aspect of practicing in another country: understanding and adapting to the region and the culture. The chapter on project delivery stresses the importance of having an effective team assembled and provides examples of team structures and responsibilities.

The primer was produced by the AIA International Practice Committee using contributors with first-hand knowledge and expertise on international projects. It is a living document, and additional chapters will be added and chapters updated as time and necessity dictate. The strength and effectiveness of the primer is dependent upon how well it serves the user. The International Practice Committee Advisory Group invites commentary on this document's content and usefulness. Submit your feedback to Theresa Palma, Director, International Relations, at theresapalma@aia.org.

How to use the primer

The primer is maintained by the the International Practice Committee Advisory Group. Since new and updated content will be added from time to time, it is recommended that you check online for the most current content.

The chapters of the primer address specific areas of international practice and can be read as a whole or individually. Each article contains an opening paragraph that explains its purpose and intent.

Appendix B of the primer contains a glossary of terms that you may encounter in international practice. In addition to definitions and clarity, it is worth reading as a whole document for information and familiarity.

The primary purpose of the primer is to enlighten the user and provide access to more comprehensive information. Accordingly, a section entitled “For More Information” is included at the end of chapters, where relevant, as well as a section in Appendix C.

The primer and the “standard of care”

Architects are expected to perform within the legal concept of the Standard of Care, which considers what a reasonably prudent architect would do in the same community at the same time, facing the same or similar circumstances. As a result, fixed or uniform standards cannot be used to evaluate the performance of an architect. Therefore, this primer does not contain absolute rules or procedures, and it does not establish with its content a prescribed standard. Rather, it presents concepts, principles, techniques, and other fundamental information that collectively provides guidance for the usual and customary needs of architects and other building design professionals.

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The global profession of architecture

AUTHOR: GREG YAGER, AIA, HKIUD

Several influences pique an architect's interest in expanding their practice globally. It may be projects by other US architects in international venues, or it may be from friendships formed with owners, contractors, or architects from other countries. Regardless of the origin, one can agree that it is advantageous to know as much as possible about global practice before starting out. This article will, hopefully, enrich your knowledge base regarding the importance of international practice and the evolution of architecture from local to global.

Introduction

Economic, social, and political forces shape the way architects practice to create a dynamic global profession. Since the founding of our country, architects have been involved on the world stage. Whether attending university or gaining experience in training as an architect, or traveling to learn more about historical architecture or current trends in building design or construction, the boundaries of practice have always been global. Architects past and present have enhanced their expertise by traveling and working or living abroad. From Thomas Jefferson onward, our practice is rich with experiences in which the style of architecture, as well as the practice of architecture, has been influenced by work in other countries.

We can see this international influence on our lives with the architecture that has been constructed over the centuries in our nation, and this has in turn influenced US architects in their design of gleaming buildings and skylines outside our borders.



The health of the eye seems to demand a horizon.
We are never tired, so long as we can see far enough.
Ralph Waldo Emerson

Over the 200-year-plus history of our nation, architecture has played a key role in the global influence on our lives and livelihood.

United States architecture changed the typology of global architecture

United States architecture has been influenced for multiple generations by global architecture, such as Palladio on the buildings at Monticello, the University of Virginia, and the dome of the U.S. Capitol, and Japanese architecture on the works of Frank Lloyd Wright, to name a few. US architects travel abroad to attend university and study historical world architecture, and their work helps grow our profession so that small, medium, and large practices can compete and shape the practice of architecture and the skylines around the globe. Whether it be the influence of our education, training, and licensure of architects in the United States or the influence of our media and culture, US architects and culture influence the world of architecture globally.

The practice of architecture in the US and its related design fields are often viewed as the "gold standard" of design and development globally. With the challenges that are affecting both our environment and urban development, the international practice of architecture is not restricted to our neighborhood, town, or city. Today, firms from the United States and other countries are competing globally in the developed markets of Japan, Europe, and the Middle East as well as in the developing markets of Southeast Asia, Latin America, and China. There are many causes for this explosion of US architectural influence, including:

The rise of technologies that allows for global and simultaneous communication. Fax machines and cellular telephones in the early 1990s opened up the ability to transmit drawings and communications globally from anywhere to anywhere. Thus the ability to work 24/7 became the norm within our practice.

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The development of digital technology. The evolution of computer aided-design (CAD) and, ultimately, building information modeling (BIM) software allows for continuous collaboration in the creation of complex architectural and engineering projects across time zones and cultures.

Increased global employment opportunities. The global network of transportation and finance with more open trading blocs has allowed architects the ability to work in foreign countries, while the demand for skilled foreign-trained architects, coupled with economic recessions in the mature markets, offer trained professionals opportunities to work in Europe, the U.K., the Middle East, and China. Due to these employment opportunities abroad, the rise of foreign firms has increased, thus allowing more international firms to establish themselves and work in the United States and Canada as well. The global marketplace is highly competitive, with firms from across the world seeking project opportunities outside their home countries. In addition to US architects, it is not uncommon to see firms from Japan and countries in Asia and Europe collaborating on, and competing for, projects at the same time.

Global challenges. There are many global challenges that face us today. Climate change, sea-level rise, and the need to reduce carbon emissions has led to the need for international experts to address, through architecture and planning, creative solutions in markets and regions that are newly emerging. The increased global use of sustainable development through LEED, WELL, and other related programs has created a demand for trained expertise in this area along with demand for global expertise with local understanding.

Increased development opportunities. The evolving global economy also creates opportunities for investors and businesses to design, build, and operate business ventures, commercial developments, academic and research facilities, and healthcare institutions globally. These complex building types require international design expertise as the operators and investors of these undertakings demand international design and operational excellence from its international architects and consultants.

Increased market opportunities—a reverse flow

Capital flow and expertise from once-emerging markets seek investment in developed markets, thus creating opportunities for foreign architects to work in the US market and thereby creating a truly global professional ecosystem. This is being facilitated and affected by the following:

AIA globalization. AIA is transforming from a national group into a global entity that bridges cultures and geographies. A global AIA will serve as a bridge to provide knowledge and understanding of the global practice of architecture, and will build a professional level of standards through its governance, corporate and social responsibilities, and continuing education requirements. As more and more global members become involved, it will raise the practice and business standards of its members, thus creating a more level and open process for professional practice.

Accredited Professional Architectural Education. Professional architectural education is accredited or validated by quality assurance agencies not only to ensure that graduates are prepared for the next stages in their careers, but also to demonstrate quality to the public. Seven of these agencies, including the National Architectural Accrediting Board, formed the Canberra Accord in 2008 in order to increase portability of educational credentials in architecture. The objective is to provide a pathway for individuals educated abroad, provided they meet the appropriate qualifications, to accrue experience and complete the examination required for registration in a US jurisdiction.

The National Council of Architectural Registration Boards (NCARB) actively seeks opportunities to increase mobility for both US and foreign licensed architects. NCARB has established mutual recognition arrangements for architects in the US, Canada, Mexico, Australia, and New Zealand, and is engaged in similar discussions with additional countries. NCARB participates in the International Union of Architects (UIA) and serves as the administrator of the Asia-Pacific Economic Cooperation Architects (APEC) program for the United States. And, for US licensure candidates working abroad, NCARB now offers the Architects Registration Examination (ARE) in London, Abu Dhabi, and Hong Kong.

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More competitive foreign markets. The importance of international architects in their home markets, and their rise in expertise, quality, and execution, will create a more competitive market for foreign architects who are living and working in these foreign venues. It is essential that these international architecture firms acclimate to these local markets and understand the legal, professional, and economic issues of working in these markets. The international marketplace is extremely competitive, and international firms cannot rely solely on their reputations. They must acclimate into their local environment without sacrificing their international expertise and brand.

Anti-corruption and business practices. As architects licensed in the United States, we are subject to laws and regulations that restrict us from engaging in illegal or corrupt business practices. Even though we are architects, we are subject to the Foreign Corrupt Practices Act of 1977 (FCPA) and thus must abide by laws and regulations governing business practices in both the United States and overseas. We must also be aware of professional licensure and business license requirements of our international jurisdictions, as we are subject to these regulations and penalties as well.



See Article 3, Business Development and Marketing, for help on developing your national markets

Conclusion

Climate change, economic growth, and the practice of architecture in new emerging and developing-world markets are areas that will dramatically affect our future, and we must be able to address these important topics with our professional practice and the work of our professional and business organizations. The challenges the future holds offers members a chance to rethink the future of practice and maintaining our planet, quality of life, and livelihood. The goal of the *AIA Global Practice Primer* is to offer insights on the new emerging trends of our profession in this dynamic and changing global design and creative industry.

Greg Yager, AIA, is a senior vice president and global director for planning/urban design with ARCADIS/CallisonRTKL in Shanghai, China. He has been providing design services on international projects for over 35 years.

Acknowledgements

Special thanks to the National Architectural Accrediting Board (NAAB) the National Council of Architectural Registration Boards (NCARB) for their contributions to this chapter.

For more information

Information about the NAAB's efforts to advance international accreditation in architectural education is available at naab.org/international.

International practice and licensure resources from the NCARB are available at ncarb.org/Certification-and-Reciprocity/International-Programs.aspx.

Refer to Appendix C for a broader listing of information references.

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The benefits of international practice

AUTHOR: GEORGE H. MILLER, FAIA

The rewards that can be realized from doing work outside the United States go far beyond economic and practical. This article will introduce the less tangible but greatly enriching benefits that await the adventurous architect who has a desire to apply his or her design skills and services on the global landscape.

Introduction

As a young aspiring architect, I was extremely fortunate to begin my career working with the firm of Pei Cobb Freed & Partners. My first assignment was to join the team working on a 4-million-square-foot mixed-use project, Raffles International City, in Singapore. Although I had traveled abroad for 12 months, I was not at all familiar with East Asia. It was necessary for me to learn metric units quickly, and I was soon coordinating the architecture with the mechanical and structural systems for the lower portions of the project. I spent a year drawing and coordinating the documents. At that time, we were drawing with pencil on Mylar and using telexes (a precursor to telefaxes) to communicate. It seems like years ago, and indeed it was. That experience ignited a desire in me to see the world and its people and to become an architect with international skills working on global projects.

Since that time in 1975, I have had the opportunity to work in over 25 countries on diverse projects, from master planning new academic campuses in Spain, India, and Shanghai, China; high-rise headquarters office buildings in the United Kingdom, Spain, China, Taiwan, and Turkey; high-rise residential buildings in India, Taiwan, and Singapore; a new museum for Luxembourg; to nearly every type of building imaginable. The opportunity to work on these projects, and travel and work abroad, has enriched my life in uncountable ways. My work has taken me to places that I could hardly imagine as a young architect. Now, after 40 years of international practice, I can say with great conviction that practicing architecture globally is not only beneficial and rewarding but also of immeasurable importance in enriching one's life.



Travel teaches toleration.
Benjamin Disraeli

The grand tour

Most of you who have interest in this subject studied architectural history and learned of the grand tours taken by many US architectural students. You have studied remarkable buildings in every period of architecture, from the Etruscan period, Middle Ages, the Gothic period, the Renaissance, Modernism, and the complex structures of today. Seeing buildings that were described in various publications, such as Vitruvius' *The Ten Books on Architecture*, was an opportunity to sharpen my understanding of the architecture of earlier times. The grand tour not only offered the opportunity to see architecture, but also to experience other cultures and lifestyles first-hand.

Travel during the late 1800s and the early 1900s was time-consuming; it often took years to see the highlights of our architectural history. There are many informative writings of such tours, including John Ruskin's *The Stones of Venice* and others. It is impossible to obtain the in-depth knowledge and sense of building from reading and looking at photographs. As architects, we are all aware that our profession requires—indeed demands—that one see the works in the places and communities where they were built, thus informing the visitor of the place and design response to the program and site.

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Today our world has become more connected with information about places and buildings available on our laptop or mobile device. We can learn and travel while sitting still. Is that enough? The answer is clearly no. What should we keep in mind as we consider providing architectural design services for international projects while living in the United States or abroad? There will be as many answers to this question, and your response will inform you based on your goals and aspirations.

In this *AIA Global Practice Primer*, you will find practical information on how to find work, make go/no-go decisions, set up offices, find local partners, design in accordance with laws and regulations, find appropriate staff, and other practical information. The purpose of this article is to introduce other perhaps less-tangible information regarding the benefits of international practice.

The world is your oyster

The opportunity to work abroad provides access to the exploration of places, history, lifestyles, language, and observing the pure beauty of the people and culture of which we may have little knowledge. We can explore villages, cities, and countries that were previously unknown to us. And as architects we can learn of different construction techniques, building codes, and materials along the way.

Today, with advanced communications and the availability of efficient and affordable air travel, one can reach the furthest locations with ease. It is important that, as time allows, you make the effort to absorb the culture in which you are working. Visiting neighborhoods within the cities you are visiting and spending time in the local museums will better-acquaint you with the place where you are working. And don't forget the restaurants!

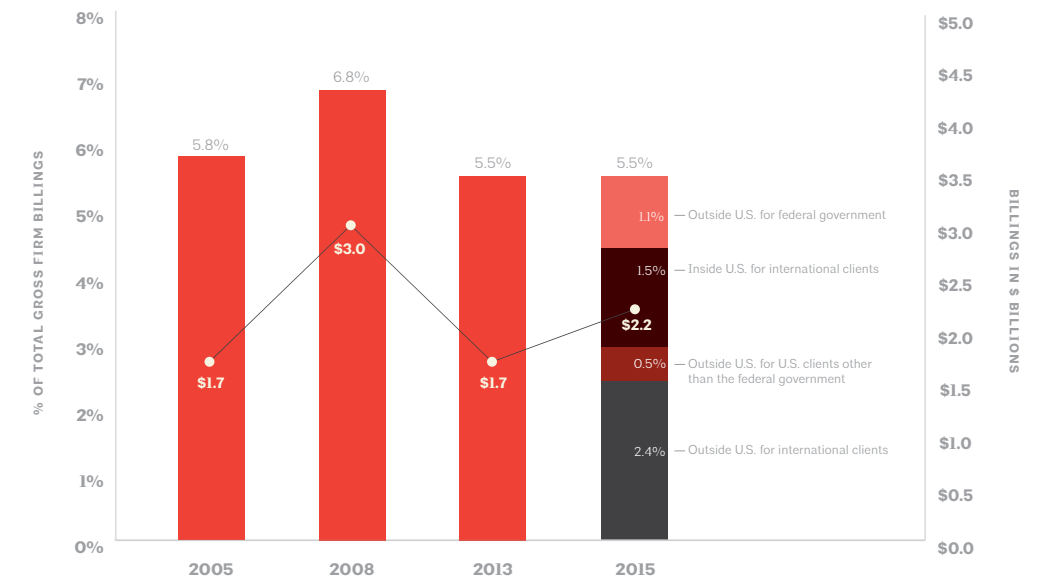
Beyond the obvious educational and cultural experiences that one would expect, there are many other benefits of working abroad that make international practice worthwhile. For architects the spectrum of opportunity is broad, and opportunities exist nearly everywhere one looks. For over 20 years, architectural firms have been exploring work opportunities in China. At first, well-established design firms began designing large-scale buildings. This was the moment that China looked

International work accounts for an average of 6.5% of architecture firm billings

% of total gross firm billings nationally derived from international projects, for given year; billings in \$ billions

Share of billings

Annual billings, billions of dollars



* FIGURE 25, 2016 AIA FIRM SURVEY

For a copy of the full 2016 AIA Firm Survey, or the international chapter only, visit aia.org/firmsurvey

to the West for design experience. Our United States-based firms then worked with Chinese local design institutes (LDIs) that would provide local knowledge and prepare construction documents and construction administration services. US firms had great advantages because of their experience in building tall and complex buildings in the United States. In China, the masterplans became larger and the opportunity to build taller buildings became more readily available. Firms were often asked by US-based clients who were expanding abroad to design offices and manufacturing facilities. It was a monumental period of growth for many architectural firms, both large and small.

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In the 1970s, most US architects did all of the work from their stateside offices and traveled to present their design proposals. Design leaders and project managers traveled frequently for all phases of the project. Today, as offshore clients are requesting more of a local presence, many US-based firms, among them Gensler, SOM, and CallisonRTKL, have established offices in China, including Hong Kong and other locations where it is possible to have more direct and frequent interface with their local clients.

This has opened several opportunities. One is for more offshore firm members to live abroad and to lead teams of architects. It has also provided the opportunity for local architects, some of them trained abroad, to work alongside US architects. This has led to more of the work being done by local architects, limiting the access to offshore opportunities. Today more and more US firms are being staffed by a majority of local talent. This provides more growth and learning opportunities to locals.



See Appendix A, International and Allied Professional Organizations, for additional resources on international practice.

Teaching while learning

One of the greatest benefits of working abroad is to explore new and innovative design ideas. In the Middle East, architects are building taller buildings and more complex mixed-use projects. They bring an international understanding of new design approaches and advanced building codes to the region. There is also the opportunity to explore the use of building materials that are available worldwide. Being part of this exploration is not often available to those who limit their client base exclusively to the United States.

Pei Cobb Freed & Partners is currently working in India, where demands for taller buildings offer exploration into new structural, mechanical, and code solutions. There is also the continuous focus that is required to maintain design quality from local builders. Close attention is paid to building systems, and visual and performance mockups are necessary to provide the guidance to achieve quality in construction. Here and in other locations, we achieve great satisfaction by helping local industry advance in their ability to achieve an elevated level of quality, while we learn from local approaches to construction and work habits.

For example, by working in certain locations such as Hong Kong and Taipei, we learn about the importance of feng shui in the layout of apartments, and avoiding the use of sharp corners that negatively impose on neighborhoods. And in places like Jerusalem, we learn the importance of the use of local materials and of restoration and adaptive reuse of buildings. Everywhere we work, we have the opportunity to both teach and learn as we design a better future.

The greater good

There is another benefit that is important to consider as we take our design skills abroad. One example is the contribution of US architects to assist those in great need. US architects have worked pro bono in faraway lands to help in recovery after deadly earthquakes, such as the tragedy in Haiti in 2010, and again in Nepal in 2015, and now in Italy in 2016. US architects are turning their attention to places where poverty and limited financial ability have led to the need for schools and affordable shelter.

Firms such as MASS Design Group have been leaders in this field. And US architects, led by Edward Mazria, FAIA, and others, are leading initiatives to design more energy efficient buildings to slow global warming and find a path towards net zero buildings. The American Institute of Architects plays an important role in these areas of design. AIA is also playing a leading role in resilient design, helping owners, public officials, and civic leaders understand more about the challenges of natural disasters.

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The opportunities of working abroad are multifaceted, including the highly rewarding opportunities for cultural and professional exchange: traveling to exotic places and eating exotic meals while stepping both back and forward in time; the great opportunity to teach and to learn while teaching; and a chance to assist in recovery for those in need. But most of all there is the opportunity to meet and enjoy others from our vast global community. It is an opportunity not to be missed.

George H. Miller, FAIA, is managing partner with Pei Cobb Freed & Partners in New York. He served as AIA President in 2010, and has extensive experience in the international marketplace.

For more information

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Business development and marketing

AUTHOR: STEVEN MILLER, FAIA, RIBA

This chapter explores the business development and marketing questions that must be asked when international practice is being considered. From fostering client relationships to defining services to winning design competitions, the answers that come forth will help fashion your approach and, hopefully, level the playing field in your quest of international practice.

Introduction

American architects have been venturing into the arena of international practice for more than 30 years. Along the way there have been many successes and a proportional number of failures. As practice on the world stage is being considered, it is necessary to first understand the essentials of the international market, the potential clients, and what is required and why. Over these years the process has changed significantly, as the architects of the world have matured and understood the vitality and knowledge that US architects have brought to the field of practice.

In interviewing senior members of architectural firms from as small as six-person operations to large firms of over 1,000 professionals, and tempering it with my 50 years of primarily international experience, consistent thoughts and ideas have emerged. It is clear that overseas clients desire personal relationships and substantial interaction with the senior professionals on their projects. And everyone wants a uniquely significant project delivered within a unique time frame.



Never talk to a client about architecture.
Talk to him about his children.

Ludwig Mies van der Rohe

The essentials

You and your entire firm must agree on the fundamental use of resources of funds, time, and patience. A “long-term view” and staying power is required to develop the relationships, trust, and understanding of the culture, people, and methodology necessary to be successful. “Clients have to be pursued more than projects,” says Gene Kohn, FAIA, RIBA, of Kohn Pederson Fox Associates, and that is the number one focus you need to have in foreign marketplaces.

Whoever takes the lead in the firm has to be as much a businessperson as an architect. In today’s world, having an MBA degree helps. This same architect should have the fundamentals of sketching and making sure the true “sense” of an architect is put forward. This “closer” in the firm will be expected to be an architect and most probably the senior professional for the project. As Bradford Perkins, FAIA, of Perkins Eastman says, “Americans are some of the best problem-solvers and programmers worldwide.”

It is best to start with high-profile clients, as you can trail along with them and their internal public relations programs. This is easy to say but successfully engaging a client goes back to establishing a relationship. You must first understand who these clients are and why they would be interested in the services of your firm.

To begin, ask yourself the following questions:

- Do you have a history of completed projects in the client’s fields of interest?
- Does your firm have brand identification that clients will be looking for when selecting an architect?
- Have you won major recognized competitions and awards?
- Do you have a reputation for delivering on time?
- Are you respectful of the demands of your clients?
- Are you familiar with the applicable codes used in-country?
- Can you prove up the content of your proposal responses?
- Are your proposals compelling, responsive, and well-defined?

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Pursuing your clients

Where can you find your clients? One of the best ways is from employees in your firm or other people you have met stateside who have contacts and relationships in the country you are pursuing. Knowing your international employees and their career aspirations can be of positive benefit towards overseas development.

Look to the senior members of your firm to identify clients and projects. As Art Gensler, FAIA, said, “Everyone in your firm is a marketer and generator of work.” This will continue once you have received commissions and can become a significant source of new commissions. Always remain at the table with the client. Even if a project pursuit is unsuccessful, ask them how you can support their future activities. Get to know firms abroad that can use your project expertise. They all have a client base, and they may have new client projects that can offer opportunities for you to join with them. Such initiatives have resulted in many new relationships.

When you are successful in obtaining a new client’s project, you will need a local in-country architect, referred to as an engineer in most countries. Your selection of a suitable partner should include acceptable answers to the following questions:

- How well are they known?
- How good is their reputation?
- Can they collaborate?
- Are their technical standards sufficient?
- Can they identify and support more work for the combined team?

Also look at stateside clients. Do any of your clients have plans to take their work overseas, and will they take you with them? Clients such as large international banks, legal and accounting firms, manufacturing firms, and educational and healthcare institutions will all likely go overseas.

What are your areas of expertise? Specialties such as hospitality, healthcare, education, commercial mixed-use, interior design, resiliency, and sustainability

offer opportunities for identifying and being identified by clients for work abroad. Other specialties such as theater design, restaurant, kitchen, laundry, laboratory, and graphics can provide opportunities for teaming up with more internationally recognized design firms as one of their team members.

Large firms are a rich source for identifying countries of interest and activity. Most of these firms have large marketing departments that can help in understanding the complexities of international delivery, fees, time of delivery, and other unique characteristics. But do not forget or abandon the baseline. The pursuit of international clients and projects is expensive in travel costs and time away from your basic practice.

Finally, you must always remember that you are an architect. As a presenter of your services and expertise, you must be an expert in the specific field of interest that you are pursuing, and not just a marketing manager.



Successfully engaging a client goes back to establishing a relationship.

Competitions

Then there are the competitions. The following ground rules are a helpful guide:

- Be selective.
- Make sure there are a limited number of participants.
- Make sure participants will be paid.
- Make sure the winner will receive an agreement for continuation with the project.
- Do not work for free.
- Make sure the prize justifies the effort. Most competitions require extensive travel, models shipped, many renderings, and expensive presentation materials. You could be the big winner of a very small prize.

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Your client has to understand that you have to be a financially strong firm to complete requirements similar to their own operation. They have to have mutual respect. You certainly can help them on small projects as long as they understand there is time and cost involved. Think like a client, a real estate developer, and an investor.

The U.S. Department of State and the Department of Commerce may help to a limited extent in identifying potential projects and assist with introductions. The U.S. Department of Defense also has many projects overseas. However, there is a difference with support from government agencies in the United States and in other European and Asian countries. Many European countries provide substantial introductory support, tax incentives, and other positive nontangible activities that are not part of our culture.

Getting on the same page

It is important to understand the client's expectations of operations and delivery when developing the client relationship. Everyone has to be on the same page.

Definitions. What is the definition of design development (DD)? Does concept design include the definition of schematic design (SD)?

Scope of services. What is the scope of construction contract administration (CCA), and how does it fit into the project delivery? What is the scope of submittal review?

Project delivery. How well can you work with a building contractor? Has design/build been discussed? More than 60 percent of the world's delivery is design/build. This could be one of your specialty items. Do you know international building contractors? How can you leverage your relationship into international work?

Local presence. Are you expected to open an office in the city/country/region? If so, are you prepared for these expenses? These can include retaining a local agent, obtaining a business license, leasing an office, leasing a home for your home office

representative, meeting visa requirements, providing an automobile, and covering related household expenses.

The comfort you develop with your future client has to be almost one of localizing your company. Think local, have a local professional as part of your original presentation. This person may be a local agent; however, he or she should be cognizant of your firm, its qualities, and what architecture is.

International billings increase from Central America and the Caribbean region, decrease from China, East Asia and Pacific regions

Change in international billings for given region from 2013 to 2015, "strong" change indicated if the difference was more than ten percentage points



* FIGURE 27, 2016 AIA FIRM SURVEY

For a copy of the full 2016 AIA Firm Survey, or the international chapter only, visit aia.org/firmsurvey

Languages

Speaking the accepted language for business provides a great advantage when working internationally, especially when an extended stay is required. The following areas of the world have specific language requirements.

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Northern hemisphere. For the most part, providing services east and west from the continental US usually means working in the English language. This has been a positive advantage for US firms. Even in China, most documentation that you are required to deliver will be in English. The same is true for the Middle East.

Central and South America. For the next new horizons for US architects, you need to think of Central and South America as well as Africa. Language skills become vital for your team. If the principal person responsible for client relationships and new business in Central and South America can speak Spanish, you will have a substantial leg up in development of clients and projects.

Africa. In Africa you have to deal with anglophone relationships of the United Kingdom as well as in many countries where French is the second language instead of English.



Many European countries provide substantial introductory support, tax incentives, and other positive non-tangible activities.

Conclusion

Effective business development and marketing for international projects requires awareness, planning, preparation, and effective execution to be successful. The answers to the questions posed herein should assist you in your initiatives for establishing and executing a meaningful business development and marketing program for international work.

Meanwhile, always reevaluate why you are going overseas. It can take a number of years to develop countries and markets and a successful program. And ask yourself this final question: Can you afford the time, costs, and resources drain on your firm?

Steven Miller, FAIA, RIBA, is an architect with his own firm, Planning and Design Consultants, LLC. He has worked with leading international architectural firms and construction companies in Europe, the Middle East, Africa, and Asia. His experience has enabled him to identify the key areas of growth across the design and construction market.

For more information

Arthur Gensler and Michael Lindenmayer, *Art's Principles: 50 years of hard-learned lessons in building a world-class professional services firm* (Wilson Lafferty, 2015)

Perkins Eastman Architects, *International Practice for Architects* (Wiley, 2007)

Refer to Appendix C for a listing of information references.

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Legal issues

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This chapter explores the legal, tax, and human resources questions that must be asked when considering the leap into International practice. Understanding which questions to ask, who to turn to, and what contract terms to look for establishes the foundation for a successful foray into international practice. The information in this chapter should not be regarded as a substitute for legal advice. Readers are strongly urged to consult an attorney for advice regarding legal matters.

Introduction

Globalization has opened up opportunities for US architects to lend their skills to projects worldwide, and clients solicit services from companies all over the globe. Opportunities abound, but the glamour of international work dims if it cannot be performed profitably and well. Specific protocols and contract terms increase the odds of a successful project. Understanding your environment and the risks it poses are key to success. Prudent risk management suggests an early meeting with legal, human resources, and tax advisors in order to map out the best path forward based on the specific facts at hand. With solid planning and advice, success is on the way.



Law is order, and good law is good order.
Aristotle

Before you go

Doing business

In order to do business in another country, you need to have an entity that can legally do business in that country. Depending on the services to be provided, a US firm may be able to use its US-based entity, but in some cases it will be more effective to establish a branch office of the US entity in the country where the project will be built, while in other cases it will be more reasonable to form a new entity altogether. Considerations that will affect this decision include whether the project is a one-time short-term effort, a single long project, or a series of ongoing endeavors; the time it will take to establish a branch office or form a new entity; the upkeep and management of a separate entity; and the tax consequences of each structure.

Tax considerations will be a significant factor in determining the path forward. If you will be performing services in-country (i.e., not from the US or another country), depending on the number of days that employees will be in-country you may be deemed to have a permanent establishment in the country, requiring your firm to pay taxes in the US as well as in the other country. In that case it may make sense to set up a branch office or a new entity.

A branch office can provide a tax benefit in that losses incurred in the foreign country may be used to offset other profits of the company. However, establishing a branch office may be more expensive than forming a new entity if the country bases its registration fees on the total assets of the company.

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A newly formed entity may provide better protection to a US firm than a branch office would, as it provides a better shielding of the US firm's assets. But, depending on local regulations, a newly formed entity may not be able to take credit for the prior project experience of the parent company or US entity.

Finally, local regulations may make it difficult to establish either a branch office or new entity, for example, by requiring that the managing director of the firm be an in-country national, or requiring that only a limited percentage of the employees can be expatriates (i.e., employees from the US or countries other than the target country).

Licensing requirements

Licensing requirements—for individuals and companies—also impact the ability of US firms to perform services in other countries. There is no consistency from country to country as to who can perform architectural services. Some countries have no regulatory program whatsoever, and anyone can perform architecture services. In some countries an architecture firm does not need a license, provided that the individuals performing services are (locally) licensed architects. Some countries permit a firm to offer or perform architecture services only if the firm itself is licensed, and in some cases licensure is granted only to firms that are wholly or partially owned by individuals licensed in-country. If your firm cannot meet those requirements, it cannot be licensed.

Individual licensing issues are also a concern. Not all countries recognize education, qualifications, or certifications of out-of-country architects. If a US firm cannot perform full architecture services in a country outside of the US, it may need to either partner with a local in-country architect or restrict its services to design consulting or other non-licensed services.

Insurance

Types of insurance

When performing work outside the US, architects need to consider the same types of insurance that they customarily carry within the US and some that they don't. A US firm working globally will want to carry professional liability, general liability, automobile liability (especially if it will have employees driving in-country), and cyber liability insurance as well as the in-country equivalent of workers' compensation. The US firm may also choose to consider coverages for international liability, decennial liability, kidnap and ransom, and political risk.

Locally admitted carriers

In certain countries professional liability insurance must be written through locally admitted carriers. As a result, even if a US firm has a global policy for professional or general liability insurance, the architect may need to purchase a specific policy in order to do work in-country.

Decennial liability insurance

Some countries, particularly those with code-based laws such as France and some countries in the Middle East, impose strict joint and several liability — known as “decennial liability” due to its duration of 10 years from project completion — for defects that affect the stability or safety of a structure on all builder participants, including the architect, engineer, contractor, and other professionals who have contracted to work on the project. It is important to note that this liability does not require any proof of fault. However, decennial liability coverage is available to mitigate this specific risk. If a single policy can be obtained to cover all of the project participants, you may choose to request that the owner require the contractor to purchase this insurance for the team as a job-cost expense.

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Kidnap and ransom insurance

Kidnapping is a threat that businesses have rarely faced in the US. When operating in certain countries abroad, however, kidnapping is a real risk. Kidnapping and ransom insurance provides coverage for expenses incurred as a result of kidnapping, extortion, wrongful detention, and hijacking. The coverage provides indemnity for money paid to kidnappers or extortionists as well as money lost, confiscated, or wrongfully appropriated during delivery of ransom. It can also cover medical care, wage and salary replacement, relocation, and other expenses related to the kidnapping.

Political risk insurance

Political risk insurance is available to cover a number of risks that are unique to doing business globally. Available policy coverage includes inability to convert currency or repatriate funds, governmental expropriation or confiscation of property, and damages due to political violence such as revolution, terrorism, or war.

Financial considerations

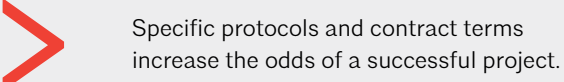
Currency

The currency in which payment will be made on the project can have a significant impact on profitability for the project and the company. Being paid in US dollars creates predictability, but many clients may not want to, or be able to, pay in US dollars. If payment in a local currency is required, determine whether the local currency is convertible to US dollars, whether the currency can be repatriated to the United States, and whether there are limits on the amount of cash that can be taken out of the country, or taxes or regulations that make repatriation of currency difficult or unprofitable.

It is also important to be aware of the stability or volatility of the local currency value. If a currency is volatile, you should review options for mitigating that risk. Currency value fluctuations can be managed through a contract clause that

provides for adjustment to the firm’s fees if the currency changes beyond defined parameters or through a formal currency hedging agreement with a third party.

When determining payment currency, you should also consider the currency that will be used to pay sub-consultants or other significant costs. Receiving payment in one currency while having to pay sub-consultants or costs in a different currency presents another dimension in currency risk.



Tax issues

There is no substitute for consulting a qualified tax professional before proceeding with a project outside the United States. Tax implications can make or break a project’s or a business’ profitability. Income taxes, withholding taxes, value added taxes (VAT), and other sales taxes can—if not properly accounted for—turn a profitable project into a loss. Some countries also have a requirement for retention taxes—anticipated taxes that must be retained by the client until the service provider produces appropriate tax clearance certificates. The level of effort required to obtain the tax clearance certificate is an administrative burden, but the process itself and the delay in payment can also have a significant impact on cash flow.

Tax treatment of income from different countries varies widely, and the ultimate impact will depend on a number of factors, including whether the country has a tax treaty with the United States and whether the US entity is registered in the host country. As a result, obtaining tax advice before proposing on a project in another country is highly recommended. It is also important to make sure that the pricing section of the proposal expressly states whether the pricing is inclusive or exclusive of taxes.

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In order for a project to be profitable, you must also consider the tax implications of individual employees who may be assigned to a project overseas. Each country has a different threshold as to how many days a foreign employee can spend in-country without becoming subject to taxes in that country. Again, the key is to understand the tax implications of employee visits to the country and factoring those costs into project services pricing.

Client payment history

One of the biggest challenges in doing work abroad is getting paid. While ensuring that a client will pay is important on any project, it is a particular concern on global projects. In certain countries delayed payments are standard, and resorting to the court system for relief is typically unproductive. In those cases extra due diligence on the client, its payment history, and its source of funding can be worthwhile.

Other safeguards to consider for managing this risk are: including contract terms such as a mobilization payment, tight payment terms with clear payment deadlines, and the ability to suspend or terminate services if payment is not received.

Moreover, clear contract terms that outline the process for resolving payment disputes will help the firm understand its options if payment is not received.

Legal compliance (anti-bribery)

For many years anti-bribery compliance focused on the U.S. Foreign Corrupt Practices Act (FCPA), and companies that engaged in business across the globe had to understand its terms and reach. Today an increasing number of countries have their own anti-bribery legislation, such as the United Kingdom Bribery Act (also known as The Bribery Act 2010), the Brazilian Clean Company Act, Canada's Corruption of Public Officials Act, Germany's Administrative Offences Act, the People's Republic of China's Anti-Unfair Competition Law, and Russia's Federal Anti-Corruption Law.

While generally referred to as anti-bribery legislation, in each case the laws go beyond efforts to criminalize and deter bribery, and strike at the broader theme of corruption in its various guises. While some laws, such as the FCPA, are directed at relationships between companies and foreign officials, others like the U.K.'s Bribery Act extend to transactions between private companies. At a minimum, one should plan to provide training for employees who are developing business abroad and for employees who will be visiting or working in a foreign country. It is also prudent to train a broader spectrum of employees in the basic tenets of global anti-corruption laws. A misstep in the compliance arena can have far-reaching consequences for a company and for its employees. In addition to civil and criminal liability and penalties, compliance violations can impact banking relationships and your ability to pursue future work, particularly with governmental and banking clients.

Due diligence

While most companies understand that they are responsible for the acts of their employees, they may not fully appreciate and understand their accountability for the acts of their agents, and in some cases their clients, joint venture partners, and sub-consultants. For this reason it is essential to have a process for performing due diligence on the individuals and companies with which you do business.

Understanding whether business partners have had prior compliance violations, whether they are associated with governmental entities, and whether they have programs in place to train their employees in anti-corruption law can help you determine the risks of working with specific business partners.

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Import/export laws

Like companies that engage in international sale of goods, companies that provide design services need to be aware of import and export laws in the countries in which they do business. While import and export regulations are commonly associated with goods, intellectual property, including design work and calculations, can also be subject to export control, particularly where the design may have a dual use (i.e., military and non-military). When evaluating import and export risk, you must also examine the import and export restrictions of the country where the work will originate and the restrictions of the receiving country where the work is being provided. In some cases, a license will be required in order to legally send work from one country to another, and the import/export of the work may incur duties and taxes.



Decennial liability is a strict construction liability adopted by many countries worldwide that cannot be excluded by contract.

Sanctions

The U.S. Treasury Department, through its Office of Foreign Assets Control (OFAC), imposes economic and trade sanctions against certain foreign countries and regimes based on US foreign policy and national security goals, including fighting terrorism. OFAC publishes country-specific lists of individuals and companies that are owned, controlled by, or acting on behalf of sanctioned countries. They also publish lists of individuals such as terrorists or narcotics traffickers who are subject to sanctions but are not tied to any particular country.

These lists are referred to as the Specially Designated Nationals List (or SDN List). Due to sanctions regulations, you must understand what work you can or cannot provide in a particular country or with particular individuals or groups. Economic sanctions may include trade barriers or other restrictions on doing business with sanctioned countries. A complete list of sanctions can be found on the OFAC website. US firms doing business abroad should know the countries that are currently subject to sanctions, and check potential clients and business partners against the SDN List. Violation of sanctions can result in civil and criminal penalties.

Anti-boycott compliance

As a matter of policy, the United States government does not support the Arab League boycott of Israel, and it has two separate anti-boycott regimes to prohibit US companies from cooperating with the boycott. There are stiff penalties for those that do. U.S. Department of Commerce (DOC) regulations require US companies to report to the DOC any request that they comply with the Arab League boycott of Israel or any other boycott in which the US does not participate. A “boycott request” may include being asked to: 1) refuse to do business with a boycotted country; 2) refuse to employ or to discriminate against a US person who is being boycotted on the basis of race, religion, sex, or national origin; 3) furnish information about a US person’s race, religion, sex, or national origin in response to a boycott request; 4) furnish information about a person’s past, if requested for a boycott-related reason; 5) furnish information about a person’s support for a charitable organization supporting a boycotted country; or 6) pay, honor, or confirm a letter of credit that includes a boycott requirement. U.S. Treasury Department (DOT) regulations penalize taxpayers for participation in a boycott.

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Boycott request language can turn up in many guises, often showing up in requests to “comply” with the laws or regulations of a boycotting country or in questionnaires which ask for information about a company’s relationships with Israel. US companies are required to report boycott requests to the DOT and DOC, even if no transaction results from the request. Companies are not prohibited from doing business with clients who request that they comply with the boycott; however, a company will need to negotiate the language requesting boycott compliance out of the final contract, and it must report the request to the DOT and DOC even if the language was successfully changed. The DOC requires reports of receipts of boycott requests to be filed quarterly. Reports to the DOT are filed annually as part of a company’s tax returns.

Staffing

In-country management

If some or all of the services will be performed in-country, you may need a trusted in-country manager. This individual will need to have the right combination of qualifications, local relationships, and competency to properly represent the firm in the country. In addition, he or she should have a good understanding of local requirements, balanced with an understanding of company requirements and policies. Depending on local law, the in-country manager may need to be a resident national of the country, and may need to be licensed in the discipline of work to be provided.

Expatriates vs. local staff

Determining the right balance of in-country staff and expatriates can also be a challenge. Bringing expatriates from the US can provide a level of confidence and familiarity to the team performing abroad, but some countries put limits on the percent of expatriates that can obtain work permits; those limits can be as low as 10 percent of the overall in-country staff. In addition, some countries will not recognize the qualifications of expatriate staff.

On the other hand, hiring local staff may also have its challenges, particularly as to availability, training, and experience. Moreover, hiring local staff may have longer-term ramifications, since many countries have social benefit laws that require a company that terminates its workers for reasons other than for cause to pay significant additional benefits. If the hiring of local talent is part of a long-term investment in-country, then the costs may be justifiable; however, if local talent is to be hired only for a short term or single project, the cost of the social benefits may be problematic.

Political and security considerations

Reliable legal system

In foreign contracting, predictability is key to understanding contract obligations and the rules that you and your employees will need to follow when working overseas. Most countries are governed by common law, civil (or code) law, or Islamic (Shariah) law. Common law, used in most of the US and Great Britain, is based on a system of laws which a court will interpret based on prior judicial decisions. Civil law, which is used in many countries, is also based on a system of laws, but the court will make its ruling based solely on the law without reference to how previous courts have ruled. Islamic law is derived from the Quran and is a legal, political, and religious system.

While there are benefits to understanding which of the three systems of law applies in each country where work will be done, it is more important to make sure that the country has a stable legal system in place. A stable legal system allows a company to understand in advance how its contracts are likely to be interpreted, enforced, and provide a mechanism for enforcement. In a country that does not have a reliable legal system, it will be difficult to predict how disputes will be resolved if, in fact, there is recourse at all. Further, an unstable legal system will make it difficult for employees to understand their obligations under local law and culture, increasing the risk of missteps.

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Political stability

Like stability in a judicial system, stability in a political system also benefits architects doing work abroad. Political instability may put the viability of projects in jeopardy as well as putting the people working on projects at risk. If there is a change in regime, it can impact the viability of the project, the ability to get paid, and the safety of employees in-country.

Crime and terrorism

Risks of crime and terrorism must be considered when working abroad, regardless of whether the work will involve only visits to another country or resident staffing. Safety of employees is, of course, paramount. Prudent travel planning includes an in-depth contemporaneous review of the security situation in the country. Where needed, the US firm must identify and obtain secure transportation and accommodations for its employees while they are in-country as well as prepare evacuation plans in the event of a terrorist act, war, conflict, or other disaster. When employees are to be resident in-country or will be working in-country for an extended period of time, secure housing may be required, and the attendant costs must be factored into the project fee.

Operations infrastructure

When doing business in remote locations, the availability of operations infrastructure must be considered. Much of the operations infrastructure that a US firm takes for granted may not be available, such as office equipment, utilities, information technology (IT) support, etc. Understanding the availability and reliability of these services will help prevent unexpected gaps in service and allow consistent, uninterrupted operations.



US citizens and US corporations are prohibited from doing business with persons listed on the Specially Designated Nationals (SDN) list.

Contract considerations

Contract scope

Project success arises out of effectively managing expectations. Contracts for services are typically a reflection of a “meeting of the minds,” and while this concept is fundamental, in practice it saves time and avoids arguments later. Accordingly, contracts to provide design services on international projects need to clearly reflect the services to be performed.

For example, most countries prohibit the use of the title “Architect” by those who are not licensed by the governing board. If the US architect is not licensed to practice architecture in the country where the project is located, the contract should indicate that the US architect is performing “design consulting services.” A clear scope description by phase should be included, and it is advisable to include a description of the services expected to be performed by the local licensed architect, along with a coordination provision to give the client an understanding of how the two firms will work together.

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Governing law

One of the factors that sets a design and construction project apart from other contract types is the project’s involvement with real property, which is tangible and cannot be relocated. In most cases, design and construction projects are governed by the laws, codes, and rules and regulations of the country where the project is located. There may be both local and national governing authorities, depending on the locale. While the project is governed by the local laws, the design consulting services contract with a US firm may be governed by a different set of laws, if the parties agree.

For example, the parties to the contract may agree that the contract will be governed by Hong Kong law, while the project is governed by Vietnamese law. The parties usually have the ability to select the law that will govern their relationship in the contract based on various factors, including the parties’ nationalities and past business dealings.

Governing language

Even though English is gaining in popularity on a global basis, it is not always the dominant language in contracts. Further, certain countries require contracts to be written in only the prevalent language of the country. For example, while English is prevalent in Mauritius and the day-to-day spoken language is Mauritian Creole, all business is conducted in French. A contract in Mauritius is typically drafted in French.

US firms may draft bilingual contracts, and in this case one of the languages will take precedence over the other in the event of a discrepancy. The governing language should be agreed upon in the contract, and not left up to the trier-of-fact after a dispute arises.

In the event of translations, US architects need to be aware of the differences in the types of native language. Conversational language that local people use every day will translate relatively easily. However, technical terms that are used to describe

design elements and phases require translation by a person familiar with the terms and their local meanings. Contract terms require translation by a person familiar with the local language of the courts. While a certified translation is usually not necessary, a legal translator is able to accurately translate the legal terms to allow interpretation as the parties intend at the time the contract is negotiated.

Payment Terms and Considerations

In the US most architects are accustomed to a monthly payment structure. However, many other countries operate on a milestone payment basis. The phases for performing the services and the corresponding payments should have a relationship to the phases that are typical in the geographic location. Payment schedules are subject to the parties’ negotiation and should clearly reflect the expectations for payments, including timing, currency, and taxes. Foreign taxes can impact a US firm’s fees, and a US firm should consider whether it has the ability to pay foreign taxes, particularly if it does not have an office in the country where the project is located. Therefore, given the consequences to the firm, whether taxes in the project location are included or excluded in the fee should be clearly stated. The payment currency and exchange rate should be agreed by the parties in the contract, to avoid confusion and delays in payments. Depending on the country where the project is located, the exchange rate may have an impact on the fees a US firm earns. Another consideration which varies widely among countries is the ability to send currency out of the country to a foreign bank account.

Limitations of liability

A limitation of liability provision is a commonly accepted contract term in many countries. This is especially important for a US firm providing only design consulting services and not providing project architect services for a project. A foreign design consultant providing limited services should have its liability limited proportionally.

Common limitations of liability may be the amount of the fee stated in the contract, the amount of the fees actually paid by the client, or the amount of insurance required under the contract. The limitation of liability provision is usually drafted

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mutually, allowing each party to enjoy the same limitation amount. However, in some countries, particularly those governed by a civil code legal system, limitations of liability are not enforceable, as they are viewed as a derogation of an individual architect's professional obligations. Accordingly, before relying on or negotiating for a limitation of liability, it is prudent to confirm whether it will be enforceable in the specific country.

Intellectual property

Intellectual property (IP) protection is one of the most important considerations for a US firm considering involvement in foreign projects. Acceptance and interpretation of intellectual property rights varies in different cultures. Some cultures value creative pursuits and recognize their worth. In others, the general population does not value intellectual property rights and does not see any negative impact in infringing those rights. In some countries, entire websites have been "hijacked" and counterfeit companies created using a name and logo. It is advisable for a US firm to consider the exposures and the ramifications of infringement on its business, as well as the steps for protection of this property, before using its name and logo or distributing documents abroad.

Trademark registration

If a US firm has filed its name and logo for registration, or actually registered its name and logo, in the US, it may be able to use that registration as a basis to file for protection overseas. The Madrid Protocol is a treaty for the international registration of marks, administered by the World Intellectual Property Organization (WIPO) in Geneva, Switzerland. As long as the foreign country is a member of the Madrid Protocol, reciprocity may be obtained through an online filing. Otherwise, an independent filing for trademark registration may be accomplished by local trademark counsel. In many countries the fees for trademark registrations, including fees for filing, are regulated and standardized by the government.



The International Federation of Consulting Engineers (FIDIC) publishes standard contract forms that are often used on international projects.

A foreign design firm's involvement in a project often adds credibility to a project, especially if the firm is publicly recognized. Therefore clients may request the right to use the US firm's name and logo in the advertising materials for the project. The firm will need to determine if this is agreeable, and whether it agrees to give the client guidelines or the artwork for the logo. In order to manage the firm's reputation globally, the firm may also want the ability to review and approve the use of its name and logo before it is published.

Copyrights

Most foreign countries grant extensive copyright protection to both the building and the documents prepared by architects and foreign design consultants. Generally, the creator of the unique design expressed in the building and the documents will own the copyrights, at law. While these rights may be assigned or transferred by contract, assignment of the moral rights is considered to be contrary to public policy and will not be upheld. If a US firm elects to assign the copyrights of its design intent and documents to a client, consideration should be given to conditioning the assignment on payment, including a carve-out for the US firm's pre-existing materials, such as typical details and schedules, and an indemnification or release, or both, for any subsequent use or modification of the documents without the US firm's involvement.

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Enforcement of intellectual property by local government

While all countries have intellectual property laws, the enforcement of these laws is not consistent and not always dependable. As the world becomes more connected, the U.S. State Department's office of Intellectual Property Enforcement (IPE) is working with other governments to increase awareness of the economic harm that results from intellectual property theft. As local awareness increases, protection of these intangible rights also increases.

Protection of intellectual property

The amount of time spent and associated costs in protecting a firm's intellectual property will vary by country. Some countries will not require any effort above the amount spent protecting intellectual property in the US. Other countries with a high rate of intellectual property theft and counterfeits, will require consistent monitoring and diligence. Not only can the theft of intellectual property affect a firm's profitability and reputation, it may affect the firm's relationship with its clients if a confidentiality obligation has been agreed upon for particular intellectual property, relationships, or projects.

Dispute resolution

An important consideration when working abroad is whether to submit by contract to the jurisdiction of a foreign court. There are several alternatives to a court proceeding in a country that is unfamiliar to a US design consultant, particularly if the US design consultant does not speak the native language.

Types of tribunals

Usually negotiation between management of the parties is the first step to resolving a dispute. Typically, if the negotiations exceed a time frame specified in the contract, then the dispute may be submitted for arbitration or resolution by a local court. While mediation is not as common abroad as in the US, it can be specified in the contract as a step in the alternative dispute resolution process. Whether an alternative forum to court is treated confidentially varies by country, and this is another factor to consider.

Rules and administration

There are two main considerations when arbitration is specified for dispute resolution. The contract should specify the rules to be applied to the dispute and which arbitration commission or council will administer the rules. Rules should be evaluated by their applicability to foreign parties and to design and construction projects. These projects are more complex than a standard commercial contract dispute; hence applying rules specific to construction projects is beneficial for both parties. The commission or council administering the arbitration should be familiar with the specified rules as well as dealing with a foreign party and a construction project. Mediation considerations are similar, although some commissions do not have rules specific to non-binding mediation and will not administer mediation.

Hearing location

Court proceedings will take place in the project location, unless a different jurisdiction is agreed and enforceable in the contract. If arbitration is selected, then the parties may specify the location where the hearing will take place. In general, arbitration is intended to employ a neutral third-party approach, and the location for the hearing should reflect this neutral methodology.

Enforceability of award

In the US, mediation is non-binding, and arbitration is final and binding on the parties, with limited ability to appeal an arbitration award. While this general rule of thumb may apply overseas, it is not always the case. The arbitration acts of some countries allow for a party to appeal an arbitration award, or require both parties to confirm the award to make it binding. If arbitration is intended to be final and binding on the parties, then the dispute resolution provision in the contract should clearly and unequivocally state this intent.

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Contract security

Clients in many foreign regions want an assurance that a foreign design consultant will perform its obligations under the contract. To this end, a bond or a letter of credit may be required by the client. Other forms of security include a parent company guarantee. The requirements for both bonds and letters of credit should be clearly stated so that they are redeemable if the US firm does indeed breach its obligations; otherwise the client may collect the security without any proof of a breach. The US firm may want assurances that the client has the ability to pay for the services performed. Advance payments and parent company guarantees alleviate some of the concerns, provided appropriate due diligence is conducted on the ownership of the client.

Bonds

There are different types of bonds applicable to designers. Bid bonds and performance bonds are the most common forms. A bid bond guarantees the terms of the proposal, for a certain timeframe. A performance bond acts as a guarantee that the performance obligations under the contract will be fulfilled. Bonds may be obtained from sureties at a cost, which the US firm will likely need to factor into the cost of the project.

Letters of credit

Letters of credit are an alternate means of securing performance to a bond. They are easier for a US design firm to obtain as they may be credited by the firm's bank or an affiliated financial institution. As it may not be possible for a US firm to replace a letter of credit with a bid bond, the practicality of the situation should be researched before making commitments in contracts. If the US firm's bank does not have a branch in-country, the firm may need to obtain a backing letter of credit from a local bank. In either event, a letter of credit will tie up the US firm's funds and impact cash flow.

US firms should be aware that a letter of credit is really an on-demand bank guarantee that is backed by a letter of credit. It is issued by the firm's bank and is an unconditional promise to pay upon demand of the client. It is virtually impossible, if not impossible, to negotiate the terms, as the bank will not be placed in the position of deciding whether or not the US firm breached its contract. The bank must honor the demand for payment whether the firm actually breached its contract or not. Thus after the bank pays the client, the firm will be required to bring an action against the client to recover funds if the demand was called unjustly.

Advance payments

Some clients may ask for an advance payment bond as security for an upfront mobilization or advance payment. If the US firm does not perform according to the contract, this type of bond allows the client to recover the upfront payment it made to the firm. Accordingly, if a client demands an advance payment in return for an advance or mobilization payment, the firm should evaluate the cost of an advance payment bond against the benefit of having cash in hand to begin its performance.

An advance payment may also act as a design consultant's form of security for payment. The requirement for an advance payment requires analysis of the laws of the project location. It is advisable to include a mobilization fee for payment of the costs of mobilizing the project, including internal resources such as accounting, information systems, and legal, that spend resources in the early stages of a project. Depending on the local law, advance payments may be refundable if the project is not started, regardless of whether internal costs have been incurred.

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Parent company guarantees

Parent company guarantees may be requested by either the client or the US firm or both. Some clients will require a guarantee for the contractual obligations from the parent company of the entity entering into the contract. The corporate decision-makers of the US firm should take this type of requirement into account when making the business decision to work on projects abroad. Exposure of the firm's assets should be analyzed by examining several varying factors, including the relationship of the entity performing the project to the entity providing the guarantee, i.e., whether the entity providing the guarantee is the ultimate parent or just an intermediate entity or holding company, the project scope of services and fee, the available assets, and whether the legal climate of the project location is amenable to foreign entities in the event of an appeal.

Depending on the results of the US firm's due diligence checks, a parent company guarantee from the client can be useful. Alternatively, in the event the client wants to assign the contract to a newly created project-specific company, a parent company guarantee will ease concerns regarding payments moving forward.

Collateral warranties

Collateral warranties are standard practice in some countries for both consultant and construction contracts. They are used to extend the right to recover under a contract to a third party who is not a party to the underlying contract. Also known as a "deed of collateral warranty," some forms are drafted to be assignable without the consent of the original parties to the underlying contract. US firms should confirm with their insurance broker if the particular provisions are covered under their standard policies, or if additional coverage is required and available, and at what cost.

Conclusion

Working around the globe presents opportunities that are dazzling and enticing, and US design firms should prudently evaluate the significant risks that can seriously affect the firm's health on different levels. There is no substitute for obtaining the

appropriate advice from professionals well-versed in the fields of law, tax, and human resources in the specific country of the project, which will assist in achieving a successful outcome for both the client and the US firm.

Robyn Miller, a senior vice president and general counsel for CallisonRTKL, is responsible for the firm's global legal activities and policies.

Robyn Baker, a senior associate vice president and associate general counsel for CallisonRTKL, has been involved in international projects since 2010.

For more information

A useful online resource to use as a starting point is the International Union of Architects (UIA) website: uia-architectes.org/en/exercer/exercer-dans-le-monde/commission-ua/#.WjqUqyO-LOR9

For guidance on the implementation on the Foreign Corrupt Practices Act (FCPA), the U.S. Department of Justice and Securities and Exchange Commission have published FCPA: A Resource Guide to the U.S. Foreign Corrupt Practices Act, available at: justice.gov/sites/default/files/criminal-fraud/legacy/2015/01/16/guide.pdf

For contract forms to use on international projects, there are two resources to use as a starting point:

The International Federation of Consulting Engineers is an international standards organization which publishes the FIDIC forms, used by many foreign clients. Visit the FIDIC website for more information: fidic.org

The American Institute of Architects (AIA) includes contract forms for international projects undertaken by US architects. Visit the AIA website for the forms available through the AIA software: aia.org/contractdocs/index.htm?gclid=CMi4scTyt88CFUiRfgod2MUAWg

Additional information regarding intellectual property on a global basis is available on the World Intellectual Property Organization (WIPO) website: wipo.int/portal/en

Refer to Appendix C for a broader listing of information references.

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Regional and cultural understanding

AUTHOR: JAMES M. WRIGHT, AIA

This chapter is designed to prepare you to think through aspects of international practice relating to physical context and culture. For those who are new to international practice, it will serve as a readiness check. To the more experienced, it is a reminder of best practices carried abroad.

Introduction

Anyone who has traveled the world or has seen movies which touch on citizens abroad cannot help but be aware of the stereotyping of tourists. You may have done it yourself if you live in a large US city that attracts tourists. It could be distinctive clothing, the incessant snapping of photos (and now selfies), a lost semi-desperate countenance and frantic scurrying about, or just the clutching of a map or guidebook. The perception of a tourist can move from mildly amusing to annoying to a feeling of contempt should the tourist display disrespect to their environs. Disrespect can be subtle and unintentional, or overt and unintentional. Tourist behavior is generally tolerated, as locals tend to respect the connection between tourism and the local economy. While tourists may be regarded as clueless, they come with money to spend.

It is one thing to be perceived as a hapless tourist if you are abroad and vacationing, but quite another to be ascribed those attributes when conducting or attempting to conduct business abroad. But regardless of nationality, the professional is expected to be more sensitized to such perceptions. Unlike the overt tourist, there is usually no immediate association with a businessperson and a benefit to the local economy. In fact, depending on the circumstances, the traveling professional may be viewed as an opportunist, someone who is there to make a quick buck and flee, essentially a one-way economic transaction. Be aware that if you are a United States citizen and you are insensitive to the local culture, your behavior could evoke the “Ugly American” backlash; it’s the one-way cultural transaction.

The Ugly American typically makes no attempt to integrate, wears Cultural Superiority on his or her sleeve, and does not bother with learning even the most basic native-language expressions.

Nationalities aside, what is the Ugly Architect? In addition to the above, the Ugly Architect exports design services across borders without regard to culture and context. He (for the purpose of this discussion) makes no effort to learn about the social, political, and economic setting of his project; he has no knowledge of the historical context; and he has no appreciation for traditional building arts.

The Ugly Architect practices his craft as if he is designing for a hypothetical greenfield site in his homeland. He imposes rather than fuses. The ramifications of not paying due attention to regional and cultural understanding can vary from missed opportunities to design in a meaningful way to a drag on profitability. In extreme cases, acting as the Ugly Architect can lead to assurances that your firm will never do work again in a particular country. This chapter of the *AIA Global Practice Primer* is designed to prepare you to think through aspects of international practice relating to physical context and culture. For those who are new at or contemplating international practice, it will serve as a readiness check; to the more experienced, it is a reminder of best practices carried abroad.



If you reject the food, ignore the customs, fear the religion and avoid the people, you might better stay at home.

James Michener

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Political/social

Political structure, power concentration, stability

Even seasoned international practitioners need to occasionally remind themselves that once they leave US shores, they leave the political and legal environments to which they are accustomed. While there are many countries where personal liberty, the rule of law, and other aspects of the political and social environments are similar to those in the US, there are many where there are substantial differences. Remaining ignorant of these differences can bear consequences that range from annoying to dire.

One need not become an expert in global, political, and social sciences, but it is advisable to gain a general awareness of these factors before pursuing and committing to an international project assignment. The U.S. Department of State, the U.S. Central Intelligence Agency, and the World Bank maintain public information databases on the world's countries, making it easy to compare and contrast political, social, and economic settings. Your standard due diligence should include an evaluation of factors contributing to a general personal freedom index, such as the concentration of political power—and in whose hands this power rests

It is also wise to become aware of the relative political stability of the country wherein you are working. While one would think twice before getting involved with an active war or state of revolution zone, civil disruption can come about suddenly and unexpectedly. For this reason, the State Department advises that you register your presence with the local US embassy, so that the consular officials are aware of where you are staying and for how long. This is a simple online process, well worth a couple of minutes as part of your pre-trip routine; start with considering the U.S. Department of State/Bureau of Consular Affairs Smart Traveler Enrollment Program (STEP) located at step.state.gov/step.

Although unpleasant to think about, as a business precaution your firm should consider kidnap and ransom insurance in light of the current political realities that defy clearly set boundaries and expectations. Depending upon the frequency

and destinations of your or your staff's international business travel, medical evacuation and other travel medical supplemental insurance policies may be worthy of consideration. You can expect your general and professional liability insurance carriers to inquire about your annual international business activities in terms of where you expect to go and for how long.

Ease of access and departure

Since many architectural design opportunities are in developing countries, you can easily find yourself swept into the orbit of a “closed” society, a despotic regime, or a police state in which civil liberties and business practices are seriously curtailed. This can manifest itself before you even board the plane. What are the visa requirements? And how difficult, in terms of time and expense, is it to get an entry visa? Certain countries will require a letter of invitation from a local business or organization, along with a statement on your company letterhead accepting full financial accountability while you are in-country. The visa application form may require you to state your religion and family information, information that you are not accustomed to providing. Some countries requiring entry visas allow certain nationalities to obtain visas on arrival; for all non-approved others, the airline will not let you board without a valid visa in your passport. If you have only a few blank pages left in your passport, or if you have less than six months until your passport expires, you may be denied a visa.

Arrival procedure can be an “interesting” experience, even with a valid visa. You may encounter a militarized immigration process or a civil service employee who is looking for a special “fee” slipped between your passport pages. Your baggage may be inspected for contraband; in some parts of the world, arriving with undeclared liquor or political or religious publications can detour you to a back office for more extensive questioning and examination. A magazine sold at any US grocery store or airport departure lounge may contain photos considered politically offensive or even pornographic so, depending upon the country, think twice about what you have in your bags.

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Departure from some countries can come with challenges. An exit visa or departure tax fee may be due, and another passport “lubrication” fee may be expected. It is wise to learn something about the airport departure procedures in advance, as long waits in multiple check-in and emigration lines could result in missed flights. Currency controls can affect you coming and going, though usually it is the latter, when you find it difficult to change the local currency back to “hard” currency. In some countries the currency may not be exported, and you can be subject to the whim of the authorities if you are found to be taking souvenir currency home with you.

Common and business language usage

It is certainly true that English is the lingua franca of a large portion of the global business community, but don’t assume that it will get you from the airport to your hotel or put food on your plate at the corner restaurant. Be prepared for both extremes. You may have little problem communicating with your client but have to resort to sign language to order your dinner. Or you may experience the reverse situation in which “tourist English” is common and effective, but you are speaking through a translator to your client. One of the many ways that a local associate can be of great value is in bridging language gaps wherever they may appear. If you know in advance that formal design presentations to your client will be translated orally, you should organize your presentations and alter your delivery style in a way to provide natural breaks for the translations. It is also helpful to use key words/concepts on your exhibits to cue the translator on the important ideas to communicate. Regardless of how well your client, or your waiter, understands and speaks English, you should master the basics of greeting, thanking, and saying goodbye. It will make a difference.

Your citizenship abroad

It is important to know the location of the closest US embassy, consular office, or—if your project or client is in a country with no diplomatic relations—what other country may have a diplomatic interests arrangement with the US government. In addition to helping you deal promptly with lost or stolen passports, consular

personnel can be instrumental in resolving any number of perplexing issues you may encounter. Your embassy’s commercial attaché is a resource to tap for basic trade-related information or in providing advice and support for pursuing new business opportunities. You should have a general awareness of the status of your country’s current diplomatic relations with the project or client host country in order to gauge expectations and results. Staying in close touch with the US embassy website can also keep you up to date on travel and health advisories.



Medical evacuation and other travel medical supplemental insurance policies may be worth consideration.

Medical care, health risks

Pre-trip research should include determining if any inoculations are required or recommended prior to travel. Take an adequate supply of prescription medicines with you, and be wary of local “substitutes.” While the local healthcare system may be of high quality, in many places in the world you should plan on being medically evacuated if something goes significantly wrong. Thus, as previously mentioned, you should consider obtaining coverage from an international healthcare network.

Take all precautions, but assume that you will eat or drink something that will temporarily make you ill and put you down. Travel with a supply of over-the-counter diarrheal treatments, as these may not be readily, or recognizably, available. Use common sense; this is not the time for sushi and other uncooked food. Avoid ice in your drinks and fresh fruit that you cannot peel. Wash your hands or use sanitizer frequently. You have spent a lot of money and taken a lot of time just to get to the point of meeting with your client; you cannot afford to let a bout of turista put you out of commission.

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Weights and measures

Unless your international project is in Liberia or Myanmar, you will not be using the Imperial system of measurement. All countries outside of the US other than these two are on the International System of Units (SI) metric system. Do not assume that you can plan in feet and inches and then convert to “soft” metric. You must acquaint yourself with whole “hard” metric units beforehand, and you should be able to convert on your feet in front of your client. Linear and area measurements are the most important to become familiar with; weight and volume is less likely to be become a stumbling block. Some cultures have introduced unique planning modules, such as the Japanese tatami. While this usually is not essential knowledge, you will impress your client if you are aware of the local culture’s traditional measurement units. It’s all part of your pre-trip research.

Environmental

Geography, geotechnical, and climate impact

AIA members who have national practices may be accustomed to a broad range of physical settings in terms of geography, geotechnical conditions, climate, and weather. Most architects, however, will experience significantly different natural site conditions on their projects abroad.

Many of these unfamiliar natural conditions will have the greatest impact on-site and building engineering systems. Consequently, the architect should take special care in selecting the project engineering team if qualified local engineers are not available or are not the preferred project delivery approach. Your international project site may be subject to severe seismic activity, typhoon-force winds, or extremes in solar heat load. While all three of these examples will influence the architectural design, your engineering consultants will be most affected. Your engineers should have suitable experience according to the severity of the prevailing natural site conditions.

The natural project site factors may influence your approach to project delivery. For example, even if your trusted MEP engineering partner has suitable experience with similar climatic conditions elsewhere in the world, he may not be familiar with readily maintainable and serviceable mechanical equipment in the project region. This can lead to the use of a split A/E team in which the engineering design intent is established by a US-based team, with final design provided by local project team partners under the review of the design intent team.

Impact of time difference

The world clock requires careful consideration as you embark upon “long-haul” architecture. First, there is the physical wear and tear: flying all night; transiting to a second long flight; arriving at your destination late at night and having a fitful first night’s sleep; struggling with the effects of jetlag as you struggle to stay awake during your client meeting the next day. The return trip will probably have similar impacts on your first couple of days back home. What you can tolerate and skim over for the annual vacation abroad becomes a real factor if you are long-haul traveling for a distant project every month or so. Your body will demand some rest, yet you may be days away from a weekend in which to get it. Will you be able to time-shift your work obligations to get the rest you need?

Time zones can have operational impacts, both positive and negative. When you are working with an international project team, the project has a 24-hour clock: While you sleep, your project partners work, and vice-versa. Depending on how many time zones separate you from your project and/or your client and consultants, you may encounter considerable difficulty in finding workday overlap time for real-time coordination and communication. As a result, your workday may occasionally grow longer at either end of your day clock as you accommodate those on the other end of the project relationship.

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Infrastructure

Ease of getting there and back

Just as time zone differences can weigh on both your practice and your personal constitution, the extent to which your project site or your client is conveniently accessible can have negative impacts on your productivity and perseverance. In addition to the annoyance of wading through multiple airport security screenings, the more travel connections required to get to your destination the more you will have to deal with large amounts of marginally useful transit time.

Notoriously unreliable air travel is prone to canceled flights and weather delays, resulting in late departures and arrivals and missed connections. Your options are to allocate more time to reach your destination by booking a “Plan B” itinerary, wherein you arrive unnecessarily early, or risk not showing up in time for that important project meeting. In the latter instance, you may find yourself cooling your heels at the hotel for several days waiting for the meeting to be rescheduled.

Minimizing total door-to-door travel time is easier to physically endure with fewer aftereffects. Even if direct-flight business class airfares are not in your project plan, you will be more apt to recover from the long-haul journey if you can minimize overall travel time. Although it may cost more to book your flight with the fewest connections, the potential benefits of direct travel are significant. If your project destination is not served by a major international air carrier, you should prepare yourself for the vagaries of regional carriers in terms of schedule reliability and personal comfort.

Ground transportation when you arrive

So you finally made it through immigration and emerged into the arrivals hall. In many instances this is a hot, noisy, chaotic environment, with you likely feeling tired and disoriented. Hopefully, you have been able to arrange to have your local project partner meet you, or your hotel has a car service and you planned ahead and requested a pickup.

If you did not or were unable to arrange to be met at the airport (or if your ride failed to show up), you should prepare ahead of time on the status of ground transportation. Prior to entering a new international work environment, it is wise to have conducted online research on the destination airport and the available modes of ground transportation. If your destination is a major world city in a developed country, options will abound and getting to the hotel is a non-issue. However, in smaller cities or any-size city in a developing country, caution is necessary. Your first exposure to the local culture may consist of struggling with language barriers as you haggle over the fare in a meter-less taxi, if it is an actual taxi at all. Personal safety and security should always be a consideration, especially if you are traveling alone.

Communication services

These days there is hardly a corner of the world where some degree of the internet is not available; however, its speed and cost of connectivity are another matter. You may face significant compromises to your daily routine regarding your ability to communicate and transmit business long distance. Public Wi-Fi may be better than what you are accustomed to in the US, although it will likely not be capable of efficiently managing uploads and downloads—and security is also a concern. Your experience on your hotel’s network internet connection may not be much better, and any hopes of using downtime to get on your home office’s virtual private network may be dashed by local firewalls that block the connection, painfully slow service, or service outages. The quality of local internet service can also negatively impact ongoing project operations when you attempt to share files from office to office.



International Practice Checklist

(9.1) A useful guide for identifying and assembling the basic information needed to provide services abroad.

Provided and maintained by the AIA International Committee

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Similar cautions apply to cellular telephone service. While availability is usually very good almost anywhere in the world (some developing countries have little landline service available, with nearly complete reliability on cellular service), your cellular telephone plan may not offer service connectability. Moreover, the data plan for your “smart” phone may rack up extreme charges as you attempt to make calls and access e-mail. It is wise to take adequate pre-trip precautions. You may need to alter your mobile telephone plan, add a subscriber identity module (SIM) card, or consider purchasing a mobile phone with a SIM card on the local market that is used solely for your international travel.

Project utility infrastructure availability

Utility infrastructure availability and service capacities can vary significantly around the world, and serious constraints can exist worthy of consideration as you pursue project opportunities and deliver design services. Although the negative impacts more often affect the site and building engineers, there may be architectural consequences that should be considered. When pursuing the project, it is important to make sure you have an adequately qualified engineering team that is knowledgeable of and can manage local infrastructure conditions. You should also make sure you have properly scoped your services to accommodate any additionally required engineering fees.

Once the project is underway, your program should include adequate site and building space cost allowances. In addition to actual equipment, the cost of conditioned building space for items such as water well pumps, water treatment, electricity cogeneration, and wastewater pre-treatment should be included.

Although the request for proposal (RFP), or “terms of reference” as it is sometimes called abroad, may assume that adequate utilities are available on-site, it is necessary to explore and confirm utility reliability and operational impacts during the programming phase. Cogeneration and interruptible power supply services are expensive, and when added after the fact can impact project costs as well as your initially quoted fee.

Short- and long-term living accommodations

Your international project logistical evaluation and planning should include research into how you will temporarily house your personnel—whether near your client, your project partner, or the project site. Just as with utility infrastructure, housing infrastructure can vary significantly from location to location.

The cost, availability, and geographic proximity of suitable lodging and food service should be factored into your fee proposal. The concept of reimbursable expenses is not practiced in many cultures, and such expenses are typically imbedded into the lump-sum fixed fee. The local project partner can often provide valuable assistance in suggesting reasonable options and negotiating more favorable hotel rates. While this may have little if any impact on short-term visits, it can be a significant factor for a group of staff in a week-long design charrette or for longer stays on-site by personnel during the construction phase.

Cultural attitudes

Prevailing attitudes toward time management and its impact

Cultural attitudes toward time management vary widely across the world. This can apply not only to nationalities, but regionally within a country. For example, many people in the US have differing perceptions from city to city. Although prone to unjust stereotyping, many perceive that time and social behavior in Boston and New York City, compared to Miami Beach or to Los Angeles, contrast with the existence of “laid back” attitudes in some cities compared to fast-paced, frenetic ways of life in others.

This perception can appear to be magnified as one leaves the US for a project abroad. It is wise to be prepared to make adjustments in your expectations of how quickly and efficiently business will be conducted. Those living and working on “native time” may present you with great frustration as you learn that the appointed time for a meeting is regarded locally as a rough approximation and not a rigid, precise commitment. Initially, the impact may be mere inconvenience, but as the

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project proceeds you may encounter local work practices that are considerably less efficient and productive than what you are accustomed to. Certain nationalities, including North Americans, are generally regarded abroad as being rigidly “on point” and schedule-driven, sometimes to the point of rudeness. Those who cannot make adjustments for more relaxed attitudes can be greatly frustrated.

It is important to note that making adjustments for local perceptions of time is but one more form of respect for the local culture. It is not wise to assume that you can (or should) impose attitudes and behavior more like your own or that of your home work environment.

Decision-making norms: attitude towards team dynamics

Generally, in the US an architect can expect some effort by the project client to arrive at decisions on a consensus basis. Recognizing that there are many exceptions, whole pre-design project programming methodologies as well as design phase approaches commonly in use are predicated on interactive engagement with the client, building users, and other project stakeholders. However, when working abroad one may encounter vastly different circumstances.

While there may be a nominal effort toward egalitarian interaction, in many cultures it is common to adhere to organizational hierarchy and only the “top boss” makes decisions. In such social environments, others are reluctant to engage until the will of the decision-maker is known. Or you may encounter an army of agreeable underlings who, due to cultural circumstances, do not allow themselves to vocalize their thoughts. Initially, every answer may be a “yes,” only to become a “no” later. Add to that the mere act of saying “no” in some cultures is difficult.

As a result, attempts to solicit programming and design input may be hampered, if not stifled entirely. Or you may go through all the normal steps of programming and designing your project, seemingly building consensus along the way, only to have it all undone when you present to a concentrated power figure who was not a part of

the preceding process. On international projects, you must be prepared to adjust from your reliance on effective team dynamics as part of your rational programming and design processes, and it is wise to detect as early as possible how decisions will be made by the client.

Information access norms (openness and transparency)

An issue that is just as important as adapting to how your client makes decisions is coping with the ease or difficulty of accessing information vital to the programming and design processes. This relates not just to your client, but also to the local authorities who will have jurisdictional influence on the project.

Again be prepared to leave your expectations at home, and you may need to depend heavily on your local project partner for assistance. In some countries, political circumstances create almost impenetrable barriers to site information; in others, particularly developing countries, the information database is thin or nonexistent. You may find yourself explaining time and time again to your client why certain issues such as staffing, operations, and strategic business planning are important to the proper programming of the building you are designing. As United States architects practicing in the US, we are accustomed to having clients understand the complex, intricate connections between a building program and its users in its physical context. Oftentimes offshore an understanding of this relationship should not be taken for granted.

Perception of space

Cultural anthropologists and social scientists have long studied how different cultures regard space, also referred to as “proxemics.” Although sometimes this can be more a matter of how a specific individual behaves, often there are cultural norms at play. You must not be put off-stride by someone who makes you uncomfortable by “invading” your intimate space bubble as he or she talks to you; and you must strive not to inadvertently offend a local with your behavior. There are differing accepted physical distances from one culture to another in terms of public

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space, social space, personal space, and intimate space. Although these nuances in communication proximity may be difficult to detect or learn about in advance, once you are in-country the way the culture regards these space zones will become evident.

Having a feel for the prevailing cultural proxemics can help in determining your project location and will benefit the design of your project. Sensitivity to how a specific society regards interpersonal space can inform not only interior space planning but even urban design.



It is not wise to assume that you can (or should) impose attitudes and behavior more like your own or that of your home work environment.

Prevailing attitude towards project phase sequencing

Cultural interpretations of time and space can also affect planning for the future as it relates to site master planning and building design. Some cultural settings, specifically those in more developed countries, are attuned to the value or necessity of thinking of a building site and program in terms of phased or future development. In other settings, a building project is regarded as a one-time event, and project clients are unaccustomed to making design decisions based on the potential for eventual or otherwise future development potential of a specific site.

Prevailing attitude toward project completion and building maintenance

There are some places in the world where buildings are intentionally left in a visually incomplete state. The project may be functionally complete in terms of the applicable building program, but structural columns or steel reinforcing are often extended above the roof slab in order to qualify the building as technically

incomplete to qualify the owner for reduced property taxes. While this generally applies only to residences, in some settings a commercial building project may be similarly affected.

Local attitudes about project completion and building maintenance can manifest themselves in other ways. Your client may accept the building long before the contractor has completed the interiors or the site work, complicating efforts to bring the project to closeout status. This laissez-faire attitude towards construction completion may also apply to the client's approach to maintenance. Such attitudes, if known in advance, should be factored in to your consideration of building systems and materials. The same goes for site landscaping, which is often considered as only a project afterthought, despite whatever site planning design you or your consultants may have previously performed.

Social and business customs

Forms of greeting, gifts, attire, avoiding social faux pas

As previously noted, it will serve you well to be able to address those at your project location in the local language and according to the local customs. It is also important to be attuned to the expected degree of formality in how you address an individual, especially if it is for the first time. North Americans tend to get to a first-name basis much more quickly than do other cultures. However, such relatively simple gestures are only a part of developing an effective sensitivity to the local culture.

Start with gaining an understanding of gift-giving in business situations.

In some cultures it is customary to present your host with a small gift; as with all gift-giving in business situations, however, this must be done very judiciously. It is not likely to be considered an affront if you choose to avoid gifts altogether, but do not be surprised if you are presented with a gift, especially if it is in appreciation for your services.

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One must be attuned to local conventions regarding attire. While in most places of the world it is becoming increasingly difficult to anticipate how your client will dress, it is always best to err on the side of formality. This is especially true if you are accustomed to the widening acceptance of “business casual” attire in US business settings.

When traveling abroad for a new international project opportunity, you may encounter more formal business attire environments as the local norm. An extra degree of discretion in the manner in which you present yourself is always advisable until such time as you gain a solid understanding of attitudes towards appropriate attire in both business and social settings. For women it is particularly important to know the line between what is considered modest and immodest dress, as you may inadvertently offend those with whom you are interacting.

You can avoid committing a social faux pas if you invest time becoming acquainted with the cultural norms of your international setting. It is advisable to research the basic social etiquette of your destination before you leave home. Social taboos unique to specific cultures are too numerous to address in this article, but they can include hand gestures, dining etiquette, public displays of affection, when and where not to wear shoes (and the baring of soles when you do), topics that should not be raised in conversation, and the use of eating utensils, just to name a few.

Approach to business interaction

North Americans are notorious for appearing to rush into business-related conversations. In many cultures abroad, it is considered polite and proper for initial conversations to be on first getting to know one another and building a relationship. In some cultures it is expected that you will spend the first hour of an initial meeting sharing something about your family, education, etc., and that you will show interest in learning about whatever your host may have to offer of a personal nature. Only after your host signals that it is time to take up the business at hand should you dispense with the social niceties.

You should also be sensitive to the importance of “connections”—who you know and in what regard. In many cultures it is expected that through conversation you will share your business and personal connections.

Gender-related attitudes

While gender-related attitudes in the business workplace are dynamically changing in many cultures, in others, sadly, the prevailing attitudes remain a barrier to full gender equality.

Many of the world’s societies place limits on the role of women outside of the domestic setting of home and family. Since many of these societies are in countries in which AIA members have exported architectural design services for decades, the impact on architects working abroad can be significant.

It is important to recognize and respect these traditional values before engaging in project pursuits. In a few countries, it may be difficult to obtain a business entry visa for a female staff member. However, in most countries with very traditional notions of women’s roles in society, there have been strides in creating a professional educated female workforce, and thus there is greater acceptance of female professional consultants; but in other parts of the world the prejudice is much less overt.

In these countries, the client decision-making body is almost exclusively male; although in these instances they will almost always respect and value the contribution of a female team member. However, the same female team member may be openly excluded at business-related social events and dealt with in a condescending, gratuitous manner.

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Conclusion

Exporting architectural design services abroad can be and should be vastly rewarding and personally enriching. The fundamental key to a comprehensively successful experience is to become appropriately educated on the region and the culture. This can be accomplished by affording respect without blindly and insensitively injecting one's customary practice standards and social values into the equation. The wise international practitioner will be both an exporter and an importer of best practices.

James M. Wright, AIA, is a senior principal with Page Architects in its Washington, D.C., office. For more than 37 years, he has built successful relationships with clients around the globe.

Acknowledgments

The following sources were utilized in the preparation of this article:

"International Practice Checklist," BP rev. October 15, 2008, AIA International Committee

Various international practice workshops and presentations by the author, 2012–16

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Refer to Appendix C for a listing of information references.

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Project delivery

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This chapter examines the different ways that projects can be delivered in international markets. It addresses considerations for scope definition, client relationships, and working with consultants and contractors, including design phases, team participation during construction, design team organization, documentation, and the role of technology in the delivery process. It also includes considerations for local issues such as construction practices, building materials and systems, and how codes and green standards can best be addressed by US-based architects practicing internationally.

Introduction

Congratulations! You have decided to expand your practice into the international market. You have thoroughly researched the needs of a particular market for your architectural expertise, established the business criteria and met the legal criteria for practicing architecture in a country or locality outside the United States, and won an exciting new project with a well-vetted and -established client! Now all you have to do is deliver the design.

Some clients may accept a project delivery based on US standards, using the AIA-established design phases, a familiar team organization, and one designed to United States-based model code standards. Perhaps this is because they have hired an architect based in the US, and they expect a project delivered to US standards. It is likely, however, that an international client hiring a US-based architect will expect their building to be designed to US and internationally accepted standards tailored to local standards of design phases, and with a team that includes local designers, engineers, and construction managers. They more likely will expect at a minimum a project that meets local codes, and is delivered on time and within budget by a local contractor.



Make no little plans; they have no magic to stir men's blood...Make big plans; aim high in hope and work.

Daniel H. Burnham, FAIA

Project phases

It is as important to understand the client's expectations for design phases as it is to understand the scope of the project and how to appropriately apply a fee structure. Just as building information modeling (BIM) and alternative project delivery methods such as integrated project delivery (IPD) impact how architects in the US consider structuring fees and teams for delivering a project, it is important that when pursuing a project in an international market you understand the requirements for each design phase and the expectations related to those phases. As a US-based architect, you need to understand the expectations for deliverables and the level of design detail associated with each phase of the project, whether or not the project phases in the international venue in which you are working align with US design phases. If you are working in an international market with a robust local architectural profession, you may find out that the project phases and expectations are well-defined either by a local professional organization, such as a counterpart to the AIA, or by the local authority having jurisdiction.

For example, for some projects in China the Ministry of Housing and Urban-Rural Development (中华人民共和国住房和城乡建设部) established "Provisions on Depth for Preparation of Design Document for Construction Work" (建筑工程设计文件编制深度规定) that describe each design phase and the associated activities, tasks, and deliverables.

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These provisions divide projects into the following phases, with detailed tasks and deliverables for each phase under a variety of disciplines:

Schematic design

- General Requirements
- General Design Description
- Design Drawing

Preliminary design

- General Requirements
- General Design Description
- General Plan
- Building
- Structure
- Electrical
- Water and Drainage Systems
- Heating, Ventilation, and Air Conditioning (HVAC)
- Thermal Power
- Budget

Construction drawings

- General Requirements
- General Plan
- Building
- Structure
- Electrical
- Water and Drainage Systems
- Heating, Ventilation, and Air Conditioning (HVAC)
- Thermal Power
- Budget

Refer to the “For more information” section at the end of this article for resources related to the Ministry of Housing and Urban–Rural Development of the People’s Republic of China, as well as specific design phases and deliverables in various international markets.

If you are working with a local architect early enough in the design process to influence the determination of the scope of work, it can be helpful to exchange and discuss example document sets for different phases to establish the agreed-upon level of detail and scope of deliverables. Of course, what is required in your contract will ultimately govern whether you have met the requirements of a particular design phase.

Regardless of whether there are clearly defined design phases and deliverables in the market in which you are working, the best approach is to work with your client and local partners to establish a detailed scope of work, including the tasks, timelines, and deliverables associated with each design phase. The more detail you can establish in your contract related to design phases and deliverables the less you will need to rely on each partner’s unwritten assumptions regarding design phases.

Roles in project delivery

In most countries, architects based in the United States who are practicing in global markets will be required to partner with a local architect. These local partners can be an invaluable resource in understanding the expectations an international client may have for each design phase, regardless of how they are organized.

The relationship you have with the local architect, and the extent to which they are involved at the start of a project, will depend on the requirements laid out in your contract, as well as your contractual relationship with your client and other

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consultants on the project—much like these relationships are defined in contracts in the US. If a local architect is engaged early in the design process, there are several things that you should understand about your relationship with a local architect as it relates to project delivery:

Who is the lead designer? Who is ultimately responsible to the client for final design decisions and communicating design intent? If you as the international consultant are lead designer, how much responsibility or liability do you have for the work executed by other international or local consultants?

At what phase does lead design responsibility shift from you, as the internationally based architect, to the local architect? Because the answer to this question is linked to the overall design phases of the project as well as your fee and delivery schedule, it is critical to know and understand this before starting a project. For example, in some cases, as the international consultant, you may transfer lead responsibility for the project over to a local architect at the end of a clearly defined project phase, such as the end of schematic design. In other cases, you may work with the local partner throughout all of the design phases, with responsibilities shifting for different deliverables depending on the stage of development. Or the local architect may play an important role early in the project developing deliverables that may be required to meet local regulatory review and code requirements. In this case you would want the local team to be involved early on so they can understand and effectively communicate the design intent to others.

Will you continue to be involved in the project after you have transferred lead design and documentation responsibility to the local architect? If you have services that continue after you have handed off lead responsibility to the local architect, it is important that you understand the scope and level of detail that is included in each design phase so that you can engage your local partners in a timely and constructive manner as the design process moves forward.



It is as important to understand the client's expectations for design phases as it is to understand the scope of the project and how to appropriately apply a fee structure.

Team Responsibilities

The chart on [page 41](#) shows example responsibility matrices for an international project. The specific circumstances of each project need to be thoroughly considered to create a clearly defined set of roles, responsibilities, and expectations for all project team members in each phase of the project.

Example responsibility matrices

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EXAMPLE 1	PLANNING / PROGRAMMING	CONCEPT DESIGN	SCHEMATIC DESIGN	REGULATORY PLANNING / CODE REVIEW	DETAILED DESIGN DEVELOPMENT	CONSTRUCTION DOCUMENTATION	CONSTRUCTION IMPLEMENTATION
International Architect	Lead design	Lead design	Lead design	Support / Review	Support / Review	Support / Review	Support / Review
International Consultant	Lead design	Lead design	Lead design	Support / Review	Support / Review	Support / Review	Support / Review
Local Architect	Information only	Information only	Support	Lead design	Lead design	Lead design	Lead design
Local Consultant	Information only	Information only	Information only	Lead design	Lead design	Lead design	Lead design
Contractor	x	x	Support / Review	Support / Review	Support / Review	Support / Review	Lead implementation

EXAMPLE 2	PLANNING / PROGRAMMING	CONCEPT DESIGN	SCHEMATIC DESIGN	REGULATORY PLANNING / CODE REVIEW	DETAILED DESIGN DEVELOPMENT	CONSTRUCTION DOCUMENTATION	CONSTRUCTION IMPLEMENTATION
International Architect	Lead design	Lead design	Lead design / handoff	x	x	x	x
International Consultant	Lead design	Lead design	Lead design / handoff	x	x	x	x
Local Architect	x	x	x	Lead design	Lead design	Lead design	Lead design
Local Consultant	x	x	x	Lead design	Lead design	Lead design	Lead design
Contractor	x	x	x	x	x	x	Lead implementation

EXAMPLE 3	PLANNING / PROGRAMMING	CONCEPT DESIGN	SCHEMATIC DESIGN	REGULATORY PLANNING / CODE REVIEW	DETAILED DESIGN DEVELOPMENT	CONSTRUCTION DOCUMENTATION	CONSTRUCTION IMPLEMENTATION
International Architect	Lead design	Lead design	Lead design	Support / Review	Support / Review	Support / Review	x
International Consultant	x	x	x	x	x	x	x
Local Architect	Support	Support	Support	Lead design	Lead design	Lead design	Lead design
Local Consultant	Lead design	Lead design	Lead design	Lead design	Lead design	Lead design	Lead design
Contractor	x	x	x	x	x	x	Lead implementation

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Roles in construction

In many international markets, the architect may take a much more active role on the construction site than in the United States. During construction contract administration, it may be expected that the architect be on-site full-time every day and have a much larger role in review of the construction implementation of the design. This greater expectation and responsibility of the architect during construction on international projects will likely have an impact on a US-based architect working internationally in multiple ways. It is important that the following is established prior to construction:

Understand, communicate, and document services expectations and work scope. Similar to design phases, it is critical that you, your client, and your partners understand each other's roles during construction. You will need to have a clear understanding with the local project architect as to how often, if at all, you will be visiting the site, and what authority and responsibilities you have during construction.

Clarify the detail required in the construction documents. Because local architects may be accustomed to more on-site involvement during construction, the level of detail and coordination included in the construction documents may vary from what is typically expected on US projects. When the architect is on-site full-time, contractors can rely on more day-to-day involvement from the architect to clarify details and make decisions on-site. This reduces the need for greater detail in the construction documents or completely resolved coordination before the start of construction. Many relationships between contractors and architects on international venues may more closely resemble design/build (D/B) or integrated project delivery (IPD) projects delivered in the United States. If your contract requires you to review construction documents before construction begins, it is important to understand the level of detail that is considered standard in the market in which the project is located. Demanding a higher level of detail in some

cases may result in your client being delivered a higher-quality building. This could result in project delays and higher costs if expectations of the level of detail are not shared among the entire design team.

Because the role of the local architect during construction may also be affected by the sophistication of the local construction market, it is important to understand local construction practices that may impact the feasibility of certain building systems, materials, and details. For example, in some markets in East Africa curtain wall or storefront window systems are often made by smaller fabricators who also install the systems. Because of the size of local fabricators, essentially all jobs are custom-made. As a result, architects are less likely to include exhaustive curtain wall details based on a particular manufacturer in construction documents, and instead work closely with the fabricator who is awarded the contract to develop details during construction. This relationship may give the US-based design lead architect more freedom to design custom curtain wall extrusions, but it also remains important to explore with local design partners the capabilities of local subcontractors in this area so that the design is feasible from a cost perspective and ultimately constructible.

Team organization

Just as relationships between design team and consultant teams are determined by contracts in the United States, your contract with your client on international projects should define contractual relationships with other consultants on international projects. Team organization on international projects can often be complicated by the following two factors:

- Since your client is hiring an internationally based architect, they may also be hiring other internationally based consultants who may or may not be US-based.
- Consultants working on an international project will often be required to engage with locally based counterparts to execute the project.

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There are a variety of ways that a design and consulting team for an international project can be set up contractually, with different relationships to the owner and to each other. Below are outlined some possible team organizational structures. In addition to the bullet points below, a series of team organization charts could be provided to show some of these options:

All consultants, international and local, have separate contracts directly with owner. Under this type of relationship, the design and engineering consultants may also have a memorandum of understanding stating their intent to cooperate to complete the design and project together.

International architect contracts with international engineer; local architect contracts with local engineer; contractor and architects have separate contracts with owner. A memorandum of understanding may be advisable between each party holding a separate contract with the owner.



In many international markets, the architect may take a much more active role on the construction site than in the United States.

The organization of the design and consulting team can be based on a number of factors which include:

- The preferences of the client.
- The preferences of the architect.
- Whether the international consultants are based in the US or in different countries.
- The client's previous experience with executing building projects using international consultants.
- The client's comfort with juggling a variety of consultants with different contractual relationships.

The more that can be clearly spelled out in an agreement, the easier it will be to navigate more complex relationships with consultants. Of particular importance is understanding who the lead designer is in each phase of the project, and who has the authority and responsibility for enforcing design decisions for the entire consulting team throughout the project.

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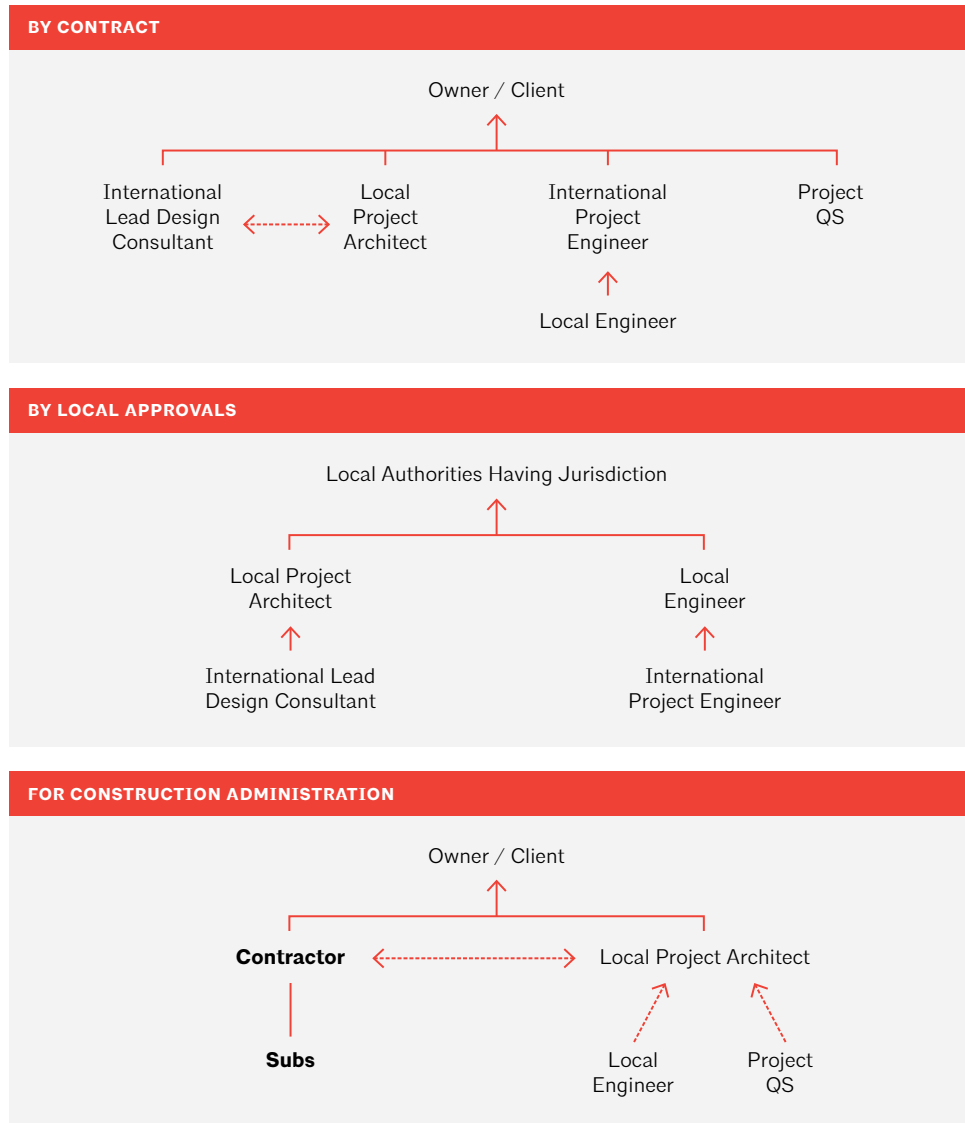
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Team structures



Communication, documentation, and technology

Working with a client and a local architect who do not speak your language can be extremely challenging. When the spoken language of a country is not English, it can be a critical factor in deciding where to expand your practice internationally. If you decide to work in an international market where you or your staff are not fluent in the spoken language of the country, the following factors should be considered:

In what language will you provide your project deliverables? If not provided in English, who has the responsibility for translating the information you provide? Who is responsible for the accuracy of the translation of any project deliverables?

In what language will you communicate on a day-to-day basis? If not provided in English, who is responsible for translating, and what types of communication are required? Who is responsible for the accuracy of the translations?

Will you engage a professional translator for oral and/or written communications? What added cost and time will translations add to your fee and schedule? If you decide to engage a translation consultant, make sure that they are familiar and proficient with the unique vocabulary specific to design, architecture, building engineering, and construction in both English and the local language.

Will you engage design team members who are fluent in the local language? Will they be hired directly by you, or will they be part of a local architecture consultant's team?

Are there members on your client's team who are fluent in both English and the local language? How much experience do they have with the design and architectural project delivery process?

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Because project communications to other countries and across time zones are supported and driven by communications technology, it is important to understand how these technological project delivery tools impact decisions about documentation and communication. While BIM is becoming a standard delivery platform for architects in the United States, architects in other countries, particularly in the developing world, may not be using the same kinds of design and documentation platforms. When establishing scope and deliverables for an international project, it is helpful to understand the technology the local team is using for documentation and project delivery. This can help you determine the best tools for you to use to develop your deliverables, and to understand the most user-friendly way to communicate with the local design team.

It is also important to note that intellectual property (IP) is often protected differently in other countries and jurisdictions than it is in the United States, and evolving technology impacts how we share documentations and design ideas. Architects who practice internationally should understand the benefits and pitfalls of sharing design information in different digital forms. If you are working with a local architect who has BIM capability, discuss with your local team the standards for sharing information, and clearly describe in your contract and scope of work the requirements for IP asset transfer and maintenance, and the form documents and design information will be delivered. Also be sure to engage qualified IP counsel at a very early stage of the project to establish effective IP requirements in your contract.

Local materials, building systems, and construction practices

The availability of local materials and building systems, as well as the dominance of particular building practices in international venues, can have a significant impact on design decisions.

Building materials and systems that we typically take for granted in the US may have to be imported, thus significantly increasing their price and the overall cost

of the project. If a material or system that is specified has to be imported, determine if your client will also have to stockpile extra material in the event repairs or maintenance is needed.

Trade barriers can also impact design, thus requiring local materials and systems to be used that are unfamiliar and untested. When surveying countries for potential market initiatives, find out if the country has a trade agreement with the United States. If there is no trade agreement, product availability, cost, and quality can be affected.

Are there local resources available for the maintenance and operation of building systems that are otherwise taken for granted in the United States, such as air-handling units and elevators? Challenges in transporting materials to the site, as well as available infrastructure at the site, can impact design decisions. This should be confirmed as early as conceptual design.

Local architects and contractors can be invaluable resources if brought in early in the design process. Early visits to the site and surrounding context can also provide insight into local construction practices and the availability of materials.

Utilizing local materials, common building systems, and understanding local construction practices can increase cost feasibility and the chances that your project will be built as designed and can be constructed on time and within budget. These are reasonable goals that should be pursued by any architect, no matter where the project is located.



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Building codes

As in BIM technology, building codes and standards have been developed to varying levels of sophistication in different parts of the world. In some places in Asia and Europe, building codes may be more restrictive than US codes, or they may have been developed based on different standards of care.

For example, in some locations in China building codes are written with the assumption that firefighting will rely more heavily on equipment placed at the exterior of the building than on interior fire sprinkler systems, as is typical in the United States. For certain building types, such as hospitals, US codes are based on assumptions that occupants will either be evacuated from the building or moved to a separate smoke compartment under the defend-in-place concept. These underlying assumptions shape code requirements that impact basic building design elements such as the number, size, and location of egress stairs. Discussing basic questions with local design partners regarding life safety codes and the concepts behind them can help in understanding how to make design decisions that will meet local code requirements.

On the other hand, other developing countries—unlike China—may not have building codes, or those codes that have been enacted into law may be decades out of date. In such cases your client may have requirements that go beyond the minimum of meeting local building codes and regulations. Clients who hire international architects may require that their buildings be designed to meet international standards, including codes. This is more often true in countries that do not have sophisticated local building codes. For all international projects, it is important to establish upfront with your client clear expectations and requirements related to building codes and other standards.

Some questions to discuss with your client and local architect partner related to building codes include:

- Who is responsible for code compliance, you as the design architect or is it the local architect?
- Who will issue documentation of code compliance to the local regulatory officials?
- Will the local architect be involved early in the project to advise on code questions early in design?
- Is it customary to hire a code consultant?
- Which codes will you be using as a basis of design?
- Will you be responsible for designing to local codes, or will you reference an internationally recognized model code such as IBC (International Building Code) or NFPA (National Fire Protection Association)?
- When referencing a model code and the local code, which governs in the event of a discrepancy?
- What is the process for compliance if you agree to an international standard and the client later wants to deviate from those requirements based on local codes?

When working on a team with international consultants who are based in different countries, familiarity and experience with model codes may vary among the consultants. Code coordination and design decisions can be complicated if the design architect and design engineer are referencing families of model codes that take differing approaches to life safety. The importance of clear communications and established expectations between the client and consultant team for design standards cannot be overemphasized.

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Green building standards

Many clients are interested in the design meeting internationally accepted green building codes, much like they are with international building code standards.

The U.S. Green Building Council (USGBC) in 2015 reported 88.4 million gross square feet of project space designed to a minimum of LEED certification outside the United States and Canada. Although LEED certification is gaining traction as an international standard for green building design, many countries have their own systems for rating and certifying green buildings. See the “For More Information” section below for a list of international green building standards.

If you have a client who is interested in achieving LEED or another green building certification, it is important that you understand the impact that the availability of materials, building systems, and local infrastructure may have on the ability of the design to meet these standards.

For example, in many countries it can be extremely costly, if not impossible, to source Forest Stewardship Council (FSC)—certified wood. Credits that rely on understanding the source of materials, or rely on larger water or power infrastructure systems, may be more challenging to achieve in certain international markets.

International clients often request to have their projects designed to United States standard building codes, although it may be impossible to meet those standards in the local market or comply with the local building code. Moreover, clients may request designs that meet green building standards where possible without actually completing the full process for certification.

Conclusion

The first step in delivering a successful project in an international market is to clearly define expectations with your client and the design and consulting partners on the project. Ideally, expectations regarding design scope, project roles, level of detail, form of deliverables, and design architect responsibilities and authority will be adequately addressed in the services contract. Local architects can be invaluable resources and partners in understanding common local practices and how they can impact your decisions regarding project delivery and design.

Alison Laas, AIA, LEED AP, is an architect and associate at Payette, in Boston. As a project manager she has delivered healthcare building projects in China, Kenya, Pakistan, and Tanzania. Her experience has provided her with insight into the importance of developing relationships with partners around the world through open communication, clearly established roles, and well-defined project scopes.

Acknowledgements

Special thanks to Stuart Baur, AIA, associate principal at Payette, and Mark Careaga, AIA, associate principal at Payette and co-chair of the Boston Society of Architects Global Practice Network, for their input, feedback, and experience in delivering complex building projects in international markets around the world.

Project Phases

French vs U.K. Design Phases:

rb-architects.com/rb-architects-a-bilingual-architectural-practice-in-paris/proposed-architectural-services/permits-declarations/different-phases-of-an-architectural-project-1320.html

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Ministry of Housing and Urban-Rural Development of the People's Republic of China:
mohurd.gov.cn, lawinfochina.com/display.aspx?lib=law&id=6771&CGid=

Construction Documents in China: SOM's Experiences (AIA Best Practices, December 2007): aia.org/aiaucmp/groups/aia/documents/pdf/aia078938.pdf

Green Standards

Top 10 Countries for LEED Outside the US:

usgbc.org/2015top10countries

"Green Building and Certification Systems," Whole Building Design Guide, October 27, 2014.

Lists and describes some international green building rating systems:

wbdg.org/resources/gbs.php

Hong Kong BEAM (Building Environmental Assessment Method):

beamsociety.org.hk/en_index.php

U.K. BREEAM (Building Research Establishment Environmental Assessment Method):

breeam.com

Japan CASBEE (Comprehensive Assessment System for Built Environment Efficiency):

ibec.or.jp/CASBEE/english/overviewE.htm

Singapore BCA (Building Construction Authority) Green Mark:

bca.gov.sg/green_mark

South Africa Green Star SA:

gbsa.org.za

UAE Pearl Building Rating System (Estidama):

estidama.upc.gov.ae/pearl-rating-system-v10/pearl-building-rating-system.aspx

Germany DGNB (German Sustainable Building Council):

dgnb-system.de/en

Australia Green Star:

new.gbca.org.au/green-star

India EDGE (Excellence in Design for Greater Efficiency):

edgebuildings.com/certify

Canada (and US) Green Globes:

greenglobes.com/home.asp

Refer to Appendix C for a listing of information references.

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Technology in International Practice

AUTHOR: GEOK-SER LEE, INTL. ASSOC. AIA, LEED AP

An architect's interest in expanding to a global market can be piqued by several influences. It may be projects by other US architects in international venues or it may be from friendships formed with owners, contractors, or architects from other countries. Regardless of the origin, it is advantageous to know as much as possible about global practice before starting out, including how new technologies are shaping the way we work. This article will enrich your knowledge about technology in international practice and why it might be the key to your success.

Introduction

Since the industrial revolution, technology has played an increasingly important role in the practice of architecture. Since computer-aided design and drafting (CADD) became mainstream in professional practice, the role of technology in architecture has become even more critical for firms of all sizes in both domestic and global markets.

Drivers of technologies in international practice

Technology can provide a competitive edge and boost firms' productivity. These advantages and a variety of market drivers affect the rate of technology adoption in mainstream practice, however.

Technology provides a competitive edge. Firms are attracted to technological tools that facilitate the design of increasingly complex building forms and spaces with irregular geometry. Technology like this not only gives them a competitive edge in the market, it can also make navigating international regulations far less cumbersome. Firms can also leverage technologies to deliver projects with fewer labor resources and in increasingly shorter time frames.



Information technology and business are becoming inextricably interwoven. I don't think anybody can talk meaningfully about one without talking about the other.

Bill Gates

If a firm based in the US sets up a satellite office abroad, that firm can use the 11- to 13-hour time difference to allow for 24-hour around-the-clock work split between the domestic office and international offices and complete deliverables in half the typical time frame. This can be a quantum leap over competitors, and it is particularly attractive to clients in emerging economies where the timeline for deliverables is compressed. Leveraging technological support is often the only option available to meet the scorching pace of project development and accelerated production demands common in the real estate market. Adopting and leveraging technologies for competitive advantage has become the essential means to both break into and survive in international markets.

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Technological breakthroughs are occurring at increasingly faster speeds.

From the days of 2D CADD technologies to the present age of BIM-enabled design, new technological breakthroughs that facilitate global architectural practice are developing and maturing more rapidly. The abundance of technological advancements that deliver global professional services is also wide ranging. Among these advancements, the following are key developments:

- Progression from the analog telephone and fax to digital voice over internet protocol (VoIP) to smartphone
- The shift from the World Wide Web to mobile, to the proliferation of social media such as WhatsApp, Facebook, Wechat, Twitter, etc.
- The evolution of simple word processing and spreadsheets to the automation of knowledge work, to the integration with CAD software and voice-activated functions and controls
- The development of artificial intelligence (AI) to the Internet of Things; big data analytics, smart building technologies, and the rise of the sharing economy all shape the practice of architecture
- The convergence of technologies such as cloud storage and cloud computing

These rapidly evolving new technologies have put increasing pressure on firms competing in the international arena to keep up with global competition. This has also spawned new players in the market, creating new companies that provide services to firms venturing into global practices.

New object-based parametric design tools have also emerged, enabling complex forms to be modeled and details to be developed with relative ease and pinpoint accuracy. Interoperability challenges between systems, however, remain as different systems rigidly defend their turf.

Even a new means of delivering information technologies has superseded the days when acquiring a software license was all that was required to get on the CADD bandwagon. Cloud-based software has entered the market and resolved the hefty cost of annual license renewal and updates.

Disruptive technologies are being adopted at an accelerated rate. With rapid advances in technology, disruptive technologies are entering the market at a much greater frequency. Their adoption or rejection is also going through an increasingly shorter cycle in which they are achieving mainstream adoption or becoming obsolete almost overnight.

Selecting the right tools and technologies amid such a fragmented market has become the key to competing successfully in international practice because new technologies often disrupt the market to replace older technologies. For example, consider the rise and fall of the 30X42 digital tablet as a CADD input device in the 1990s, when ECS's Drawbase reigned in the marketplace of CADD technology. It was then toppled by Autodesk's AutoCAD 2D as the CADD software of choice before object-based parametric design was born.

Significant financial investment is often required to access technologies that support international practice, and buying into a technology that fades shortly into oblivion can be a serious blow to a firm. A firm's IT team must be on constant lookout for technologies that are seeking to disrupt the market.

Automation of technical knowledge boosts productivity. The impact of knowledge automation and its boost to productivity is even more pronounced in international practice due to the complexities of working in different markets. Technological tools not only assist firms in putting together services proposals swiftly, but also allow quick turnaround time for revisions and provide virtual conference communication tools to sort out design details with clients and consultants.

Design solutions with seductive and sensual curvilinear external expressions are all within reach of even small practitioners. With today's technology, a small project team is now capable of producing a large project with complex geometrical forms.

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Challenges & opportunities when adopting technologies for global practice

International practice brings with it a set of challenges that are somewhat different from domestic practice. Some are more relevant than others in driving the adoption of the technologies in architecture firms. These challenges can be opportunities for enhancing competitiveness and operational efficiencies in competing in the vast global market.

Expanded time & space

Communication and collaboration across multiple time zones, national borders, and far-flung geographical locations of projects and offices is one of the greatest challenges. Although domestic firms with multiple offices often face the issue of working across multiple time zones, in international work the extent of the time difference is magnified; a 1-hour time difference can easily become as much as a 15- or 16-hour time difference.

A site visit to the project may no longer be just a few hours flight away and could involve more than a day of traveling. Communication and collaboration technologies required to support international practice have to be capable of coping with this expanded time and space difference. For firms operating local satellite offices overseas, professional service management technologies must be adopted to support global practice, such as additional modules to handle different currencies and accounting standards consistent with the target market.

Need for operational efficiency

For firms competing in the global market, cost-effective technological solutions are essential to maintain competitiveness against other global firms operating in the target market. Accordingly, professional service management technologies must provide the operational efficiency to enable the firm to have real time assessment and reporting of project status, both in terms of service delivery as well as cost accounting and invoicing control.

To mitigate the high cost of international travel for in-person meetings, it is more cost effective to leverage communication and collaboration technologies to host virtual meetings and interact with consultants scattered across the globe. This is also true with local consultants, such as China's Local Design Institutes (LDIs).

Technological innovation as unique selling point or differentiator

Technology can be used to deliver innovative solutions and unique values, balancing customization to meet local need with client aspirations and cultural context.

Foreign clients expect that the foreign firms they engage possess superior design technologies and expertise to justify the higher fee they pay compared to local firms. BIM capability is frequently expected of US consultants, particularly for high-density, high-rise, complex mixed-use projects. Clients look for the firm's ability to produce exciting, innovative design solutions.

Harnessing social media

Social media provides an opportunity to publicize a firm's niche capability and branding. Advances in social media in recent years have allowed firms to harness the reach of media technologies to market directly and instantly to key decision makers within the foreign clients' organizations and to cultivate business relationships.

This advance in technology opens a whole new way to engage customers and build brand awareness. Social media can get a firm's message across more swiftly than text messaging, which is subject to the physical limits of an end-to-end communication channel. Text messages are also vulnerable to peak period overload.

Regulatory compliance through digital submission

Just as municipal codes and bylaws for domestic markets are typically accessible online, foreign regulatory agencies are also increasingly making planning and building regulations easily accessible online. The more advanced among them have moved into the electronic/digital submission process. The result is an increasingly transparent process, which enables a more seamless cross-border service delivery in some overseas markets.

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More savvy clients often require a project to meet standards well beyond the local regulatory agencies' mandates in order to align with global best practices and meet their own global clients' needs.

Interoperability of differing technologies

When sharing information across borders, compatibility issues are typically resolved with the leading local software or hardware, which is often different from technologies used in the US.

To operate effectively internationally, it is critical to have the right software compatibility with the design, communication, and collaboration technologies that are essential to working with the local team and global consultants involved in the project. When foreign clients engage with US consultants, it is likely the client is also working with other foreign consultants. Therefore, software compatibility and access is an important issue that should be considered in early stages of a project.

Language issues

The technological capability for translating data input or output seamlessly to the local language for planning and permitting purposes by local architects-of-record as well as compatibility issues with multiple platforms and standards must be considered. This is a unique challenge that firms operating in domestic markets do not face, and this should be dealt with early in the firm's venture abroad.

All software technologies, such as graphic design software, must be capable of accommodating input and output in multiple languages to enable access by the local design team collaborating on the project. For permitting, software capabilities should include annotation and labelling in the local language, as should your firms' design, communication, and collaboration and project management technologies.



See chapter 5, Regional and cultural understanding, for information on physical context and culture.

Cybersecurity & system maintenance

With global practice transcending national borders, cybersecurity assumes a greater significance given the increased digital information exchange. This vastly increased exposure to security threats from overseas hackers and criminal organizations, in addition to similar domestic threats, means the development of an appropriate cybersecurity strategy is critically important to protect the data flow during service delivery and to ensure business continuity in the face of those threats.

Since overseas work usually spans multiple time zones, corporate IT staff resources must be on call to minimize downtime to effectively support satellite offices operating during afterhours of the home office.

Software platforms

Project delivery software is constantly evolving and firms that predominantly work in international markets are always in pursuit of cutting-edge technologies. Firms that do a significant amount of international work tend to be heavily reliant on BIM software, parametric modeling, and automation due to the size of the projects and the project teams. However, there is not one perfect software platform for every firm. Each firm must individually evaluate not only what technologies are available, but also which ones are the most efficient and effective for the types of project and regions in which they work. Below is a list of current technologies that are often used in international practice. This is not intended to be an exhaustive list but a starter for firms just beginning to venture into global practice.

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Technologies to support global practices in international project deliveries

Professional service management technologies

TYPICAL FUNCTIONAL MODULES:

- enterprise resource planning—time and expense tracking, project accounting and invoicing, and resource management
- scheduling—resource allocation and management, project management, and project budgeting
- business process management, customer relation management, business intelligence management, and business development

ADDITIONAL CONSIDERATIONS FOR INTERNATIONAL PRACTICE:

- on-premise, self-hosted vs. cloud-based vs. hybrid
- scalability across national borders and ease of customization
- multi-company, multi-currency, and multi-time zone capabilities
- options for seamless integration with other functions such as scheduling, project management, marketing, and business development
- mobile interface and sync capabilities, and global support
- real-time data analysis and the ease of providing actionable insight across all offices

IT infrastructure technologies

- IT and business telephony—capability to support global clients and satellite offices communication & collaboration technologies
- intranet—VPN connect

FUNCTIONAL MODULES

- on-premise physical phone and/or VoIP vs. cloud-based hosted business VoIP private branch exchange
- availability of support for legacy systems and access to evolving new features and capabilities
- traditional WAN dedicated data line and connections vs. secure, low-cost broadband links of software defined SD-WAN for fast intelligent connectivity
- degree of customization and features required, particularly remote workforce access; cross-border voice, video, data network integration, and WAN solution
- capability to integrate telco/carrier with third-party platforms and online apps for seamless mobile communications and collaborations
- security options and redundancy for business resiliency
- call reports and analytics for billing of reimbursable expenses
- expandability and portability as needs changes (entry and exit from different global markets) and in line with business growth

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Content management technologies

FUNCTIONAL MODULES

- digital asset management, project narrative and snapshots for project reference in RFP submittal
- customer relation management, client contact management for marketing and business development
- content management for information sharing, cross-office technical support, document storage and management
- employee portal, onboarding, and mobile intranet

Communication & collaboration technologies

FUNCTIONAL MODULES

- information sharing, coordination, and collaboration tools
- integration with resource and content management, professional service management, design management, and ultimately construction contract administration technologies
- virtual meetings:
 - allow record feature, anywhere in the world, VoIP, mute option when in noisy environment
 - allow shared screen, online
- scheduling across multiple time zones and across multiple locations
- training—staff orientation and onboarding, continuing professional development webinars

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Design management technologies

Graphic presentation software

FUNCTIONAL MODULES

- conceptualization, graphic illustration, and presentation software
- coordination among all related disciplines, increased collaboration with widening circle of related disciplines, software compatibility and interoperability issues, time and effort for conversion back and forth throughout project cycle

CAD graphic & visualization software

FUNCTIONAL MODULES

- from 2D to 3D to BIM/parametric object-based CAD
- capability to store information for 3D objects created such as material data, properties, or cost allows material take-off and cost estimating with object attributes
- integration with performance evaluation technologies, media creation technologies, and property management technologies after project close.
- BIM—soft, hard, and 4D/workflow sequence clash detection and conflict resolution module/capability—report function with element IDs for review and resolution
- interoperability with competing software to accommodate models created with multiple platforms from different disciplines to collaborate and exchange information

Immersive technologies

FUNCTIONAL MODULES

- augmented virtual reality
- 3D modeling, rendering, animation
- virtual simulation, fly-through, walk-through, VR for design optimization, enable active client participation
- blend 3D model with live camera view of reality for marketing purposes

Performance evaluation technologies

Technical performance

FUNCTIONAL MODULES

- This technology has increasingly been integrated into the CAD graphics software through aggressive acquisition by the dominant CAD players. This is driven largely by the need for early analysis to inform the development of CAD model—an attempt to shorten the time-to-market duration to gain a competitive edge.
- sustainable design analysis software, energy modeling software to predict performance, and energy management
- computational fluid dynamics (CFD) simulation

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Heat transfer calculations through building envelope components

E-permitting & e-planning

One-stop-shop process workflow by municipalities to automate entitlement review process and building plan check process.

FUNCTIONAL MODULES

- allow use of internet for users' real-time tracking of permitting process for both Authority Having Jurisdiction (AHJ) and AEC professionals
- ability to perform plan review from multiple remote locations
- compatibility with remote field inspection technologies
- ease of retrieval of building plans from archive to facilitate speedy disaster response and recovery
- interoperability with most prevalent graphic software used by both internal and external stakeholders and compatibility with municipalities' electronic seal laws
- security in file submission, transfer, tracking, review, archive, and storage
- seamless integration with municipal workflow, functions, records and information sharing, and verification with tax records

Construction contract administration technologies

Project information management

FUNCTIONAL MODULES

- real-time information sharing and status tracking such as RFI, ASD, schedule, and change order tracking
- remote read-only access by multiple collaborating parties and access for editing to own work only
- central information repository available for reference 24/7; working off outdated information will be a thing of the past

DATA CAPTURE TECHNOLOGIES

- laser scanning to capture existing condition in A&A works for blending with CAD model
- drone quadcopter for aerial photography to blend real-time site photo with digital model

RFID TECHNOLOGIES, SENSOR TECHNOLOGIES

- smart technologies for building application, building automation, intelligent technologies, focus, user comfort, and control
- security, life safety, and energy management

3D PRINTING AND OTHER EMERGING TECHNOLOGIES

- convergence of technologies—Prefabrication and CADD, cloud computing, internet of things, and big data

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Conclusion

Make no mistake, the industry in general is moving toward real-time information sharing and communication. Instant access to design information and documentation anywhere, anytime, and in any format is now a reality. With every new technology that hits the market, new skillsets are called for and demand increases for shorter time-to-market.

Based on current trends, will different technologies converge seamlessly into an integrated software that allows firms to have all the information at the tip of a finger on a letter-size tablet? With advances in cloud computing, will the centralized model give way to a distributed model to speed up processing time to alleviate congestion and bottlenecks at the “central nerve”? It is anybody’s guess.

Seamless collaboration in the digital world is the holy grail that the industry has been working on tirelessly to perfect. Closer interdisciplinary integration of information helps to ensure better project outcomes by eliminating conflicts and discrepancies. With details creeping in earlier in the design process, boundaries between phases will be blurred. The entry of augmented reality and virtual reality into mainstream adoption will be another disruption, not unlike how photorealistic renderings and fly-through visuals were not long ago. Firms venturing out to win works overseas will have to carefully weigh the risks and rewards in adopting the various technologies available.

Will newer technologies available in the near future change the way we win and deliver projects? Will the present specialization of staff function remain in design and project management? What paradigm shifts are in the technological landscape in the future? The only thing that is certain is that we should brace ourselves for ever-evolving and changing technologies.

Geok-Ser Lee, Intl. Assoc. AIA, LEED AP, represents property developers and consultancies in navigating the complex market structure and bureaucracy in high-risk and high-growth emerging market economies. Through his firm, GS Lee & Associates,

he provides services that include owner-authorized representative, project development consulting, design consulting, QAQC audit, due diligence, and market research.

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Professional service management

- Deltek Vision, Ajera deltek.com/en
- ArchiOffice archiofficeonline.com
- Clearview Infocus clearviewsoftware.net

IT Infrastructure

- ShoreTel Communicator shoretel.com
- Xtelesis xtelesis.com
- Ring Central ringcentral.com
- NEC necam.com

Content management

- KA Synthesis, Connect ka-connect.com/about.php
- Microsoft Sharepoint products.office.com/en-us/sharepoint/collaboration

Communications—virtual presentation, video conferencing, web conferencing, telepresence

- Citrix GotoMeeting gotomeeting.com
- Cisco WebEx and Cisco Spark webex.com
- Lifesize lifesize.com
- Zoom zoom.us
- Webcast (UK) workcast.com

Collaboration technologies

- Autodesk BIM 360 team autodesk.com/products/bim-360-team
- Autodesk Naviswork autodesk.com/products/navisworks
- Bluebeam bluebeam.com
- Adobe Acrobat Pro acrobat.adobe.com

Information exchange management and filesharing technologies

- Dropbox dropbox.com
- ARC Skysite Projects skysite.com/projects
- Hightail (formerly Yousendit) hightail.com
- Citrix Sharefile sharefile.com

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Social media and social networking mobile apps

Skype skype.com/en
Facebook facebook.com
WhatsApp whatsapp.com
Tencent Wechat wechat.com/en
Line line.me/en
Google Hangouts hangouts.google.com
Viber viber.com
Twitter twitter.com/?lang=en

Graphic presentation software

Prezi prezi.com
CorelDRAW coreldraw.com
Adobe Photoshop, InDesign adobe.com

CAD graphic and visualization software

Graphisoft—ARCHICAD (Hungary) graphisoft.com/archicad
Bentley System Inc—Microstation (US) bentley.com
Dassault Systemes CATIA (France) 3ds.com/products-services/catia
AutoDesk Revit, AutoCAD, Navisworks, 3D Max, Maya (USA) autodesk.com
ZWSOFT, ZWCAD (China) zsoft.com
SketchUp Pro (US) sketchup.com
Trimble Architecture, Tekla BIMsight, Prolog buildings.trimble.com/architecture
McNeel, Inc—Rhino3d, Grasshopper (US) rhino3d.com

Immersive technologies

Microsoft HoloLens microsoft.com/en-us/hololens
Autodesk 3D Studio Max, Maya, Naviswork autodesk.com
Dassault Systemes Solidworks (France) solidworks.com
Smart Reality smartreality.co
Pair (formerly Visidraft;US) pair3d.com

Technical performance

Autodesk—Ecotect (now integrated into Revit):
DesignBuilder (UK) designbuilder.co.uk
energy modeling and CFD analysis
Ladybug for Grasshopper/Rhino ladybug.tools

For early site and geometry solar analysis

DIVA for Rhino diva4rhino.com

For interior daylight and glare analysis

Tally choosetally.com

whole building life cycle assessment

NREL SAM (System Advisor Model) sam.nrel.gov

For renewable (PV) energy calculations

LBNL THERM windows.lbl.gov/software/therm

E-permitting and e-planning

idtPlans LLC idtplans.com

Sages Networks, Inc. sagesnetworks.com

Singapore's URA and BCA's Corenet e-submission for planning and building plan application corenet-ess.gov.sg/ess

Washington DC's DCRA Electronic Plan Submission OCPI 2.0

acaprod.dcr.dc.gov/dcrapublicprod1

Avolve Projectdox avolvesoftware.com

Project information management

Bentley Projectwise bentley.com/en/products/brands/projectwise

Newforma newforma.com

MS Projects microsoft.com/en-us/store/collections/project

Oracle Primavera oracle.com/applications/primavera

Procore procore.com

ArchiOffice archiofficeonline.com

Mobile apps

Sensopia's MagicPlan—survey on the fly getharvest.com/apps

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Global Sustainability

AUTHOR: ALISON LAAS, AIA, LEED AP

AIA defines leadership in sustainability as focusing on four priority areas—energy, materials, design and health, and resilience. This chapter describes how architects working in global practice can take advantage of unique opportunities in each of these areas. It includes considerations for developing sustainability goals with international clients and provides resources for sustainable and green building rating systems that are used in international markets.

Introduction

Sustainable design is a widely accepted professional guideline for architects and is mainstream for the building and construction industry in the US. In global practice, how sustainability is defined and what architects can do to take advantage of unique opportunities to design sustainably in different climates and markets can vary widely. In some regions, sustainable design standards are more widespread than in the US, such as countries like Germany and the Netherlands, where building standards are more rigorous and often mandated by the government. On the other extreme are countries in the developing world where infrastructure and passive approaches drive sustainable design agendas but where available technology and materials may limit other feasible design solutions. Given the impact the built environment has on greenhouse gas emissions and climate change, architects must be responsible leaders in sustainable design no matter the location or context.



Once destroyed, nature's beauty cannot be repurchased at any price.

Ralph Waldo Emerson

In order to address a topic as critical and far-reaching as global sustainability in the context of this primer, this chapter will focus on opportunities that are unique to international projects in the four focus areas of sustainability defined by AIA's Sustainability Leadership Opportunity Scan published in October 2013 (aia.org/resources/8246-the-future-is-now-the-aia-sustainability-lead).

The four focus areas are:

- **Energy:** Drive building energy efficiency and use of renewable energy through early, iterative analysis toward meeting AIA 2030 goals.
- **Materials:** Make material selections that are informed by full life cycle and health-related criteria that lead to healthier, sustainable environments.
- **Design & health:** Improve human health and wellness through the design of the built environment.
- **Resilience:** Design to adapt to changing conditions and to maintain or regain functionality and vitality in the face of disruption due to natural or man-made causes.

Energy

Passive building systems

Incorporating passive strategies in a project is the most effective way to decrease energy consumption and provide architectural design that is responsive to a specific location and climate. One of the most exciting aspects of global practice is the opportunity to develop design that is responsive to various climates and contexts. Local design partners and observations of local architecture can be valuable tools for quickly developing a knowledge base of architectural strategies appropriate for a specific site location. Early site visits, if possible, or local design partners engaged early in the design process are essential for establishing information on site microclimates that impact the effectiveness of passive systems. For example, the temperate climate of Nairobi, Kenya, where the elevation of the city above sea level combined with a latitude close to the equator results in a temperature range of 62 to 69 degrees Fahrenheit (17 to 21 degrees Celsius) throughout the year is

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particularly well suited to natural ventilation. However, an urban site that is subject to noise and air pollution might preclude the consideration of naturally ventilated design despite the appropriateness and energy savings that could be realized.

Resiliency, occupant comfort, and health also impact the decision to implement natural ventilation, daylighting, and other passive design solutions and should be considered holistically in a project's particular context. Firsthand site observations and analysis by the design team can also provide important opportunities to observe local design that responds to the immediate context passively, embedding design with an inherent sense of place as well as an efficient response to energy needs. In addition to local expertise, early, iterative energy analysis informs the effectiveness of proposed design strategies and can maximize energy savings with passive strategies.



Energy analysis is, by far, the most effective way to optimize passive strategies. To explore how to incorporate energy analysis into your practice, see *AIA's An Architect's Guide to Integrating Energy Modeling in the Design Process* at aiad8.prod.acquia-sites.com/sites/default/files/2016-04/Energy-Modeling-Design-Process-Guide.pdf

Considerations of comfort

The suitability of different sustainable design strategies is tied not only to climate and local context, but also to comfort for building occupants. International architects must recognize that thermal comfort is often tied to cultural norms, which may or may not be documented by local codes. In places like the US and the UK, where the temperature range for thermal comfort has been codified, it is easy to understand the implications that a different thermal comfort range can have for design of passive or active building systems that strive to reduce energy use. The International Code Comparison chart below illustrates an example of the differences in ventilation and comfort requirements that can ultimately impact the

INTERNATIONAL CODE COMPARISON: VENTILATION & COMFORT REQUIREMENTS FOR PATIENT ROOMS

	ACH	MIN. OUTDOOR ACH	RH	PRESSURE	TEMPERATURE
ASHRAE 170 Guidelines for Design and Construction of Health Care Facilities	Patient room 4 Patient corridor 2	Patient room 2 Patient corridor No requirement	Max 60	NR	70–75 F 21–24 C
CIBSE AM 10 Natural Ventilation in Non-Domestic Buildings	6	Not specified	40–60	Neutral	64–82 F 18–28 C

viability of natural ventilation or the sizing of mechanical systems for a patient room in a healthcare setting.

When a government or client has adopted a model code that was not written to reflect local norms for comfort, architects should discuss with clients and design and engineering partners how temperature set points, passive design strategies, and active building systems can be balanced to create both a comfortable environment for the occupants and optimize energy savings.

Availability & reliability of infrastructure

Optimal energy-saving building systems, including the implementation of on-site renewable energy, are also dependent on the availability and reliability of existing municipal infrastructure. In locations with unreliable or nonexistent renewable energy systems, the architecture and engineering team can easily ensure a reliable energy source for the project by recommending on-site renewable energy systems. At the same time, the cost of importing technology-intensive building systems or energy-generating systems may be prohibitive, especially in contexts where operations and maintenance support for those systems might not be available. For example, in a place like Karachi, Pakistan, municipal electrical infrastructure is often over-taxed by the quick growth of the city and its population. For a project that

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requires a reliable source of energy, such as a hospital, a client may require greater redundancy for emergency power and more building systems supported by backup generators than would typically be provided for a US hospital. At the same time, Karachi receives an average of 123 days of sunlight a year, which could balance the cost of importing solar panels for on-site renewable energy, depending on the client's desired payback period.

Often, implementing multiple strategies is the best way to achieve the most energy-efficient sustainable design solution: Passive design to reduce energy demands, on-site renewable energy systems to reduce reliance on fossil fuel-generated infrastructure, and energy-efficient and redundant energy systems as needed.

Cost-benefit and life-cycle analysis is often necessary when considering options for energy-efficient building systems that include considerations such as reliability of existing infrastructure, cost of importing systems, and support for those systems over the life of the project. The advantage of international projects is often the opportunity to implement building systems that may not be considered for US-based projects because the payback on such systems can be prohibitive for many clients. Subsidies from local governments and the cost of local municipal energy also play a role in a client's selection of energy-efficient building systems.

Code requirements

International clients often select US-based architects for their expertise in delivering buildings that exceed the requirements of local codes. When considering the design of energy-efficient building systems, whether passive or active, the building's baseline performance must meet code minimums. When working with a local code, engaging local engineering and design partners early in the

design process is critical to ensuring the selection of systems meets both code requirements and local design practices. When implementing a model code that has more restrictive baseline energy requirements, architects must still consider local requirements, local engineering and construction practices, and local operations and maintenance.

When using energy analysis and modeling, it is also important to understand which codes and baselines are being referenced. US-based building baselines for energy usage can often be higher than local benchmarks since the vast majority of US projects incorporate energy-intensive building systems like air conditioning.

Building maintenance & operations

A building is only as efficient as the staff that will operate and maintain its systems after it has been handed over by the design team and contractor. Although this is true for any project, international projects are challenged in particular by the need to import equipment and/or the availability of local engineering and maintenance support. Engaging clients in discussions about available technology and the knowledge base of their staff is critical to understanding the best options for specifying building systems. Vendors can also assist by training staff or providing information on where maintenance support services are available in different parts of the world. For example, installing a more energy-efficient heating or cooling system on a project, such as a heat recovery wheel on an HVAC system, may not ultimately save any energy or money if there is no one who can maintain or balance the installed system.

Although certain types of sophisticated, maintenance-intensive building systems may be less feasible in certain international contexts, there are often opportunities to implement other types of energy-efficient building systems on international projects that are not feasible in the US. When considering user-controlled building systems, like natural ventilation, it is important to know that users in other parts of the world may be more familiar with how to operate building facades in response to climatic conditions because they are used to interacting with these types of passive systems on a regular basis. As a result, sophisticated building envelope control systems may not be required to ensure that user comfort is maintained.



See chapter 6, Project delivery, for code selection on international projects.

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Materials

Local building materials & construction practices

Applying building materials and construction practices that are common to the local context of an international project can offer many opportunities for increasing the sustainability of a design. Local building materials and building systems often inherently respond to the climatic conditions of a specific location. For example, in Karachi, Pakistan, many buildings are built using concrete frames, concrete block, and textured plaster. These materials and construction systems respond to the heat of Karachi with increased thermal mass, and the texture of the finished plaster reduces glare from building facades in the bright sun.

Engaging local building material suppliers can reduce transportation needs to a building site, reducing the construction site's carbon footprint. Using local construction practices often engages local contractors and subcontractors, sustaining the livelihood and economy around the site. Architects should plan sufficient time early in the process to research local building materials and practices and to engage local design partners with a robust knowledge of the local market.

Transparent building materials & rating systems

US manufacturers and suppliers are increasingly responding to designers' demands for greater transparency in sustainable and healthy construction materials. This is being driven both by green building rating systems and design firms that are expanding how they think about sustainability throughout the life cycle of the buildings they design. Just as energy savings for a project must be weighed against the availability and maintenance of those systems over the life of a project, so must the cost of transporting and importing materials that have been certified by

particular rating systems be weighed against the transportation carbon savings and local economic support of locally sourced materials. In some markets, like Europe, regulations may have stricter criteria for transparency than current US markets, making it important for US-based architects to understand the global market in which they are designing. While working on international projects, architects can take a leadership role in encouraging local construction materials suppliers and local design teams to demand the same level of transparency and sustainability in their local markets.

Design & health

Public health & the built environment

Levels of pollution and the availability of healthy resources, like water, in different countries can present architects with the challenge of addressing public health issues through individual projects, as well as opportunities to implement sustainable design strategies that may not be viable in other parts of the world. Air pollution is a clear example of a public health challenge facing many architects who practice in rapidly developing countries, such as China. Similar to understanding local site and cultural conditions noted in the energy and materials sections above, it is important to be well-versed in local site conditions related to air pollution, water pollution, and other health concerns to understand the full scope required to deliver a truly sustainable design.

Sometimes environmental health challenges create opportunities to increase the scope of a project and improve the well-being of the building users and the greater community. For example, in projects in developing countries like Haiti, expanded infrastructure development—such as new wells for clean water or green space for urban agriculture—benefit not only the immediate building users, but also the larger community. These types of public health improvements expand the definition of sustainability for many architects and, often, clients, and they are necessary for many international projects.



AIA materials transparency resources are available at:
[aia.org/materialsmatter](https://www.aia.org/materialsmatter)

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Indoor environmental quality & sick building syndrome

Many health issues related to the built environment are universal. Improvements in indoor environmental quality and issues associated with sick building syndrome are relevant to designing sustainable architecture in any context. Fortunately, the implementation of many passive and sustainable building strategies, such as natural ventilation, access to daylight and views, and incorporation of outdoor green space, can all contribute to the improvement of indoor environmental quality.

Architects must take a leadership role in demanding transparency in the materials we use to create the built environment and also for demanding healthier materials. Just as designers should discuss with international clients the importance of considering more energy-efficient or on-site renewable energy building systems to increase the sustainability of projects, architects must take the lead on discussing with clients the need to understand the materials that make up environments and the specification of materials that support the health and well-being of all building occupants.

Resilience

Resilience in context

When practicing in international markets, architects must consider that the definition of resilience includes issues that go beyond what may need to be addressed in domestic projects. To design for resilience means to design for the ability of a building and community to thrive in the face of challenges to social, economic, and environmental threats. These include, but are not limited to: Weather- and climate-related hazards such as sea level rise and increased storm strength; infrastructure failures due to natural disasters, population pressures, and lack of municipal planning; and human-caused hazards impacting both environment (in the form of pollution) and social and economic pressures such as the growing wealth gap. Resiliency encompasses a large range of design solutions that address buildings and adapting to these challenges in a way that is very relevant to many international contexts, sometimes much more immediately than when designing for US projects.

The most important thing an architect can do is be part of the site selection process and choose to not build in high-risk areas. To do this, architects must have a deep understanding of the site's climate history and vulnerability to both natural and human-caused hazards. Also important is complying with, as a minimum, current model codes to ensure the highest standards of health, welfare, and safety are met. Engaging with clients, local design partners, and local governments and municipal partners early in the design process is the best way to set standards and understand the specific context for resilient design.

Learning from international practice

Many countries around the world have been dealing with climate issues for much longer than the US, and they have developed code requirements, infrastructure, and design solutions from which US-based architects can learn. For example, many coastal US cities are looking to the Netherlands for ways to implement built infrastructure and natural landscape solutions that address sea level rise. Working in a global context can provide opportunities for US-based architects to increase their expertise in resilient design, which they can then apply to design projects regardless of location.

Expanding project scope for resilience

Municipal infrastructure such as electricity or potable water is not always available, consistent, or feasible in some venues, especially when compared to resource-rich contexts like the US. As previously noted, this resource and energy scarcity may require strategies that ensure projects have a level of redundancy that goes beyond typical project scope for many US-based architects. Strategies that increase the sustainability of a project on an everyday basis will often inherently improve that building's resiliency in the event of a natural disaster. Using energy as an example, strategies can range from basic design principals such as clustering buildings to increase the efficiency of power distribution or a micro-grid approach, to providing a higher level of on-site power generation through additional emergency generators or renewable on-site power generation.

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Passive design as resilient design

Any design strategy that relies less on mechanical building systems, either for operations or controls, and more on passive or user-controlled systems is ideal, especially if it also aligns with local cultural standards for comfort and building operations. Passive design strategies are also often easier to implement in global contexts that have building users who understand how to operate buildings in response to weather and climate. For example, in many resource-scarce contexts, building users may not encounter buildings that have mechanical systems for heating and cooling and may be more accustomed to opening and closing windows to regulate their comfort. In such a context, even if a building is designed with mechanical ventilation systems, it makes sense to design a building envelope that can also be operated for natural ventilation. Incorporating passive design strategies with or without energy-efficient building systems is inherently resilient and necessary in many global contexts.

Applying opportunities in global sustainability

Global sustainability in a local context

Sustainable design is inherently linked to the particular context and climate of a site. This is both an opportunity and a challenge for architects practicing internationally, who must educate themselves on a greater variety of sustainable design practices that are appropriate for a range of locations and climates. Research into local precedents, indigenous architectural forms, and local climate and microclimate conditions should be first steps for all architects working on a project in a new location. Local design partners are often a particularly valuable resource on projects that are specific to a region or city. Having a local design partner on board early in the design process can help in understanding availability of materials, local construction practices, and how users may ultimately operate a building after it is completed. For example, in many developing countries with temperate or warm climates, building technologies that monitor and control building envelope systems may be prohibitively expensive, not easily maintained, and lower in priority compared to more impactful efficient building systems.

Client communication & implementation

The expectations and savvy of clients play a large role in the final implementation and operation of sustainably designed buildings. The need for client education, the client's definition of sustainability based on their culture and market, and how to successfully realize sustainable design strategies varies with international markets perhaps to a greater extent than in the US.

If a client requires certification in a specific green building rating system, then educating oneself or engaging experienced design partners is clearly the best approach for a successful project. There may be a greater learning curve for the design team and international clients who don't subscribe to a specific rating or certification system. In these instances, it is important to understand what is motivating (or not motivating) your client to request a sustainable building. In some cases, financial benefits through energy savings or government subsidies may prove to be a greater motivator for an international client than certification in a US-based rating system.

US-based architects often have the advantage of being able to market themselves as experts in sustainable design and may need to demonstrate to their international clients why certain sustainable practices or features will ultimately benefit them. Energy modeling and metrics like EUI (energy use intensity) can be most useful for discussions with international clients as they rely on baselines and units that can be converted to metrics to which the client can relate.

The following section outlines a few examples of green building evaluation systems and the benefits of using each for international projects. See a helpful list of additional green building evaluations systems used in different countries at the end of this chapter.

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Green building rating systems

AIA 2030 Commitment

The AIA 2030 Commitment is a framework, including metrics and a reporting system initiated in 2009, to assist architecture firms in meeting the 2030 Challenge, which has a goal of making all new buildings, developments, and major renovations carbon neutral by 2030 (aia.org/2030commitment). Since 2010, AIA and participating firms have been tracking progress towards the 2030 goals by submitting annual reports on design project portfolios.

In 2016, 1,411 international projects representing 1.1 billion gross square feet (104 million gross square meters) and 42% of all project area submitted were reported as part of the 2030 Commitment. Ninety-four countries were represented in the 2016 reporting of the 2030 Commitment (aia.org/AIA2030BytheNumbers2016).

EVALUATION SYSTEM	METRICS	ADVANTAGES FOR INTERNATIONAL PROJECTS
AIA 2030 Commitment	<p>Predicted Energy Use Intensity (pEUI)</p> <p>Lighting Power Density (LPD) interiors- only projects</p>	<ul style="list-style-type: none"> • Metrics are easily quantifiable and can be converted and compared to engineering metrics in any units, making education and discussion of design benefits with clients and local engineers straightforward. • Incorporating energy modeling into the design process of sustainable projects provides measurable data to evaluate a variety of design options to optimize for a variety of factors. Data and graphics produced through energy modeling software can facilitate discussions with clients and make the case for more energy-efficient designs. • International projects that report to the AIA 2030 Commitment increase the anonymized data available to other firms through the DDX database (aia.org/pages/5041-report-your-data-with-the-ddx) to compare outcomes and sustainable design strategies that are effective in different countries and regions. • Architecture firms drive the 2030 Commitment—there is no need to “sell” the system to a client; energy modeling and reporting become part of the design process for all projects regardless of scale or location.

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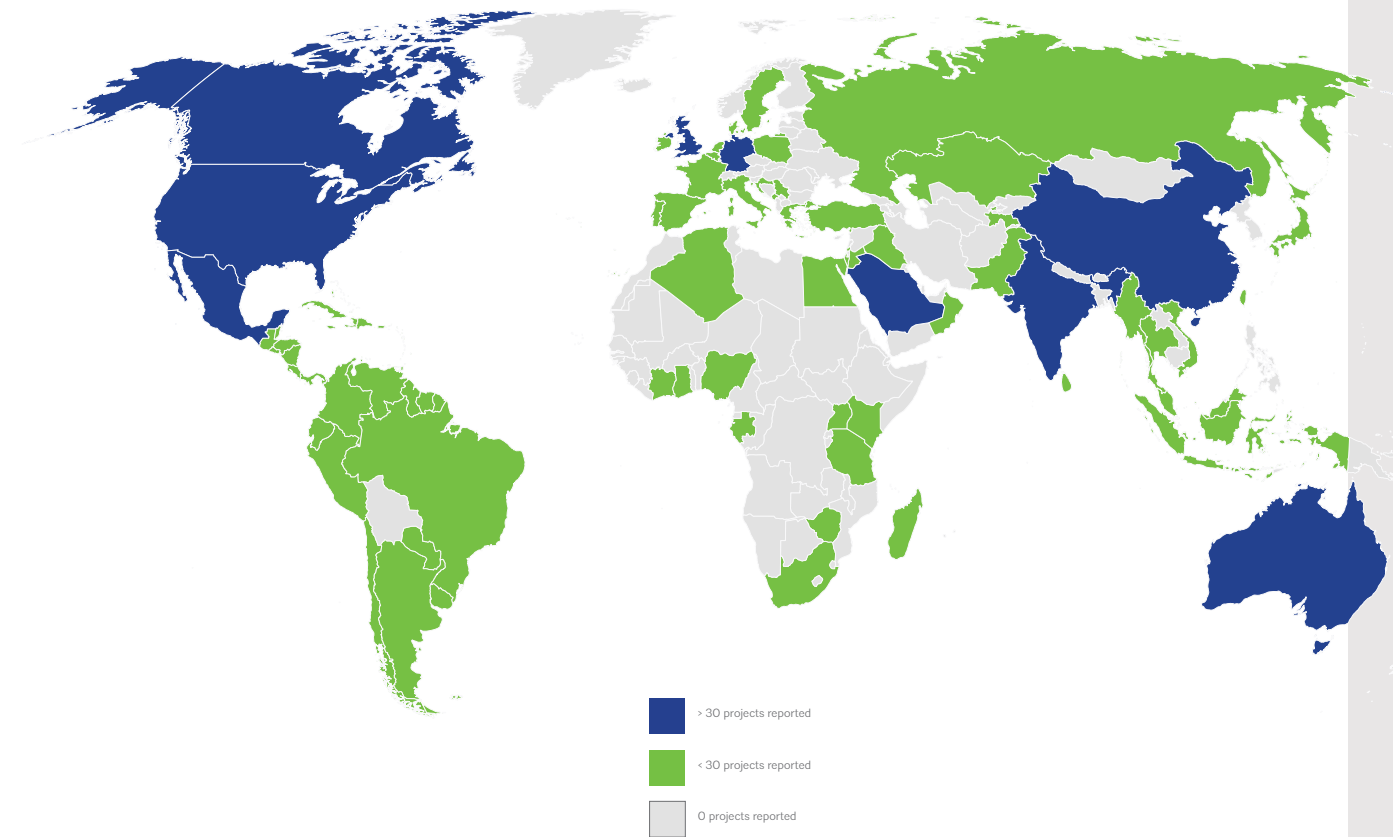
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Growth in number of countries



24%

growth in number of countries
represented, with projects
representing 94 countries
reported in 2016

International projects tend to be much larger than domestic projects. While only 10% of all reported projects were international, these projects represent 42% of the overall GSF.

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USGBC LEED certification

One of the first and most widely used green building evaluation systems in the US is the LEED system (usgbc.org/leed), and it is familiar to most US-based architects and many international clients. International clients often look to US-based firms specifically for their expertise in sustainable design, which includes familiarity with completing LEED certification. This is proven through the fact that 88.5 million gross square meters (952.6 million gross square feet) of built space have been LEED certified outside of North America as of 2015 (usgbc.org/2015top10countries).

The challenge of gaining LEED certification for international projects, as with any rating system developed in a particular country, is the availability of documentation from contractors, materials manufacturers, and other suppliers in international markets.

EVALUATION SYSTEM	EVALUATION CATEGORIES	ADVANTAGES FOR INTERNATIONAL PROJECTS
LEED (Leadership in Energy and Environmental Design) Certification	<ul style="list-style-type: none"> Location & transportation Sustainable sites Water efficiency Energy & atmosphere Materials & resources Indoor environmental quality Innovation Regional priority 	<ul style="list-style-type: none"> • Rating systems that are specific to building types, including existing structures and ongoing operations: <ul style="list-style-type: none"> • building design & construction • interior design & construction • building operations & maintenance • neighborhood development • homes • Familiarity by US-based architects and consultants, as well as many international clients and consultants. • A large database of existing international projects that have incorporated sustainable design features and gained LEED certification available for reference.

International WELL Building Institute

Focused on human health and wellness, the WELL Building Standard (wellcertified.com) focuses on design outcomes rather than specific sustainable design strategies, making it flexible and adaptable to projects around the world. The standard combines scientific and medical research and literature on environmental health, behavioral factors, and health outcomes, and references existing standards and best practice guidelines related to the building design and management.

EVALUATION SYSTEM	EVALUATION CATEGORIES	ADVANTAGES FOR INTERNATIONAL PROJECTS
WELL Building Standard	<ul style="list-style-type: none"> Air Light Mind Water Fitness Innovation Nourishment Comfort 	<ul style="list-style-type: none"> • Because the standard focuses on outcomes rather than more restrictive paths to compliance, designers can adapt the rating system to the global context of their project. • Health and well-being of occupants, and the positive outcomes in productivity and satisfaction, are increasingly important considerations for clients across many different building types. These outcomes that have an impact on environmental sustainability are often easier to encourage clients to implement. • It's administered by GBCI (Green Business Certification Inc.), which also administers the LEED system, so the process is familiar to many US-based architects.

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Excellence in Design for Greater Efficiencies (EDGE)

Administered by the International Finance Corporation of the World Bank Group, this rating system focuses on sustainability in developing countries and provides designers with regionally specific tools and baselines for energy, water, and carbon usage. As of the writing of this article, 3.1 million gross square meters (33.3 million gross square feet) of building space has been certified using the EDGE system, and it is available in more than 130 countries (edgebuildings.com).

EVALUATION SYSTEM	EVALUATION CATEGORIES	ADVANTAGES FOR INTERNATIONAL PROJECTS
EDGE (Excellence in Design for Greater Efficiencies)	Energy Water Materials	<ul style="list-style-type: none">• Provides designers with region-specific tools and resources as well as a certification process for buildings in the developing world• Focuses not only on energy, water, and carbon savings, but also on the financial benefits of sustainable design practices, which can assist designers in educating clients on the benefits of sustainable design

Conclusion

International practice provides many opportunities for architects to make a significant impact on the environment by designing for sustainability. In some cases, international clients and global contexts are more amenable to sustainable strategies and practices such as passive design strategies and on-site renewable energy systems. Architects must be prepared to engage clients and local design partners very early in the design process to understand the availability of sustainable building systems, materials, and strategies that are appropriate for a specific site and context. Sustainable design strategies are often holistic and systematic, integrating issues of energy efficiency, engaging building materials and systems, and addressing issues of resiliency and health at the same time. This complexity and efficiency of design makes the case for a better understanding of site-specific context essential to the implementation of sustainable buildings, especially in international markets. In all cases, US-based architects have the expertise and responsibility to ensure their international projects engage sustainability in every way possible.

Alison Laas, AIA, LEED AP, is an architect and associate at Payette, in Boston. As a project manager, she has delivered healthcare building projects in China, Kenya, Pakistan, and Tanzania. Her experience has provided her with insight into the importance of developing relationships with partners around the world through open communication, clearly established roles, and well-defined project scopes.

Acknowledgements

Special thanks to Andrea Love, AIA, LEED Fellow, director of Building Science at Payette, and Julia Siple, AIA, LEED AP, manager, Sustainable Practice & Knowledge at AIA, for their knowledge and data related to the AIA 2030 Commitment and international projects. Thank you to Yael Kinsky, FAIA, IAIA, IAUA, member of the International Practice Committee Advisory Group, for her indepth knowledge of sick building syndrome and interior environmental quality.

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AIA 2030 Commitment

The 2030 Commitment

aia.org/resources/6616-the-2030-commitment

2030 By the Numbers: The 2016 Summary of the AIA 2030 Commitment, July 2017

aia.org/AIA2030BytheNumbers2016

International Green standards

Top 10 Countries for LEED

usgbc.org/2015top10countries

Excellence in Design for Greater Efficiencies EDGE

(administered by the International Finance Corporation of the World Bank Group)

edgebuildings.com

List and description of several international green building rating systems

wbdg.org/resources/gbs.php

Hong Kong BEAM

beamsociety.org.hk/en_index.php

UK BREEAM

breeam.com

Japan CASBEE

ibec.or.jp/CASBEE/english/overviewE.htm

Singapore BCA Green Mark

bca.gov.sg/green_mark

South Africa Green Star SA

gbsa.org.za

UAE Pearl Building Rating System Estidama

estidama.upc.gov.ae/pearl-rating-system-v10/pearl-building-rating-system.aspx

Germany DGNB

dgnb-system.de/en

Australia Green Star

new.gbca.org.au/green-star

India EDGE

edgebuildings.com/certify

Canada (and US) Green Globes

greenglobes.com/home.asp

Passive House Institute (PassivHaus)

passivehouse.com

China GBES—Green Building Evaluation Standard—3-star Rating System

codeofchina.com and chinesestandard.net

Malaysia Green Building Index

new.greenbuildingindex.org

Vietnam Lotus Rating System

vgbc.org.vn

Additional US-Based Green Building Standards

WELL Building Standard

wellcertified.com

Cradle to Cradle Certification

c2ccertified.org

Sickbuilding syndrome & indoor environmental quality

Indoor Environmental Quality, Environmental Protection Agency

epa.gov/indoor-air-quality-iaq

Centers for Disease Control and Prevention, The National Institute for Occupational Health and Safety (NIOSH), Indoor Environmental Quality

cdc.gov/niosh/topics/indoorenv/default.html

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A brief guide to international human resource development

AUTHORS: SANDRA WHIPP, SPHR-CA, MHRM, AND GREG YAGER, AIA, HKIUD

Global business grows more complex, intertwined, and challenging every day. Geo-economics, world trade and local licensing laws, politics, and even culture all combine to make doing business across borders complicated. This chapter will help prepare international architecture practices or those that want to go global navigate an intricate landscape with agility and wisdom if they are to make a lasting and successful imprint outside their home geographies.

Introduction

People are at the core of the international journey. Finance, legal, marketing, and sales all come in to play, but finding and retaining the talent and expertise to make it all happen is the foundation of success. Far from exhaustive, this report will provide a few key points to consider before a practice decides to step onto the global stage.

Aligning your human resources & business strategies

Like all corporate infrastructure (legal, marketing and sales, finance, and IT), human resources (HR) is a support function that must advance and align with a practice's business goals. Once the decision to go global is made, it is essential that the HR strategy supports the aims and targets of that decision. There are many approaches to practicing internationally—from establishing a representative office with limited staff to building a full-service office with a mix of nationalities—but they all involve identifying, positioning, and growing those professionals best suited for the job.

No matter how ambitious or modest your goals may be, it is essential that you “do the reading” before anyone hops on a plane for a meeting, however informal that meeting may be. Although international travel has, in many ways, become easier in the last few decades (think how convenient it is to travel today within the European Union), the rules for US passport holders conducting business abroad

remain complex, local, and sometimes fluid. Lengths of stay (often measured on an aggregate, per annum basis), possible individual and corporate tax liabilities, visa requirements (even temporary ones), and other travel restrictions can wreak havoc on a strategy, especially one based on a “fly in/fly out” approach to serving a client.



Do not hire a man who does your work for money, but him who does it for the love of it.

Henry David Thoreau

Beyond the basics of travel, it is essential to understand the jurisdictional requirements of practicing outside the US and/or establishing a business presence within a country, and this is usually the moment when outside consultants are brought on board. Most countries are rightfully protectionist about their employment base and place restrictions on visiting professionals. Legal, tax, and registration implications abound, and no sound strategy would ignore consultation with experienced, knowledgeable advisors in each of these areas. Simply saying you are an architect in some countries may be problematic, as it is a designation that suggests a duly licensed, registered professional within that jurisdiction. For example, in China, foreign architects are limited to providing “consulting design services,” as only Local Design Institutes (LDIs) can offer full design and documentation services.

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Creating a strategy

Many practices begin the move to global with a simple “fly in/fly out” strategy.

An opportunity presents itself, an enterprising individual (or small team) flies in to conduct a series of work sessions and presentations, and the individual or team flies out to handle the work at home. The costs of travel and time away are bundled into the math of the contract. Although this approach comes with considerable wear and tear on staff and typically takes somewhat intrepid professionals to endure, it is a very common way to test the international waters. The complications often come down to travel, lengths of stay, local partnerships, and staff wear and tear.



International Human Resource Management (IHRM) is the process of procuring, allocating, and effectively utilizing human resources in an international business.

Once a practice decides to establish a presence abroad, HR implications become more complex and acute. To begin with, it is no small challenge to identify the right individual (or team) to lead an office abroad, even when such issues as family and commitment are clarified. He or she will be the “seed” in the market from which all will grow, so they must possess the skills of both a pioneer and a settler, a fearless explorer who knows how to grow a business, nurture staff, and harvest clients. Suffice it to say, these are not easy people to identify.

Expatriate packages and assignment details must be negotiated with care and well-tested precision. Here, too, it is often good practice to rely on an outside advisor, as the HR implications are onerous and comprehensive.

A partial list of issues includes:

- work visas and residency permits
- tax equalization
- insurance and benefits
- cost of living adjustments
- relocation and housing assistance
- banking and currency exchange
- children’s schooling
- home leave
- professional affiliations

While many ambitious professionals will see an assignment abroad as an excellent opportunity for growth and advancement, all will come to understand the financial implications and risks of the move as well as the complexities of the repatriation process. It is best to approach the endeavor with the transparency, clarity, and objectivity that comes with sound HR advice, as the first assignment sets the precedent for all that will follow.

Creating a sustainable platform

Ultimately a practice will need to decide whether it is committed to international work or just dabbling in projects abroad. A strategy focused on a full-service office, with a blend of nationalities and skill sets, suggests a robust commitment. A “fly in/fly out” approach suggests a more flexible strategy that may be more appropriate for a developing market and today’s more nimble approach to business. Both carry strengths and weaknesses, and both require an HR approach that aligns with business goals and long-term strategies.

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The success or failure of any enterprise abroad will depend on the strength and quality of the people behind it. Creating thoughtful career paths and succession plans extends the life and influence of a practice within a market, and the appropriate handling of the expatriation as well as the repatriation of foreign assignments sends a strong message to staff that this is a place to grow and succeed. This is integral to engagement, retention, and employee loyalty and important to creating a sustainable model to advance strategy and reinforce the company's long-term position in the market.

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The top 5 global HR articles of 2016 are available at:

shrm.org/resourcesandtools/hr-topics/global-hr/pages/top-global-hr-stories.aspx

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INTERNATIONAL AND ALLIED PROFESSIONAL ORGANIZATIONS

International Union of Architects (UIA)

uia-architectes.org

UIA Member Sections

uia-architectes.org/en/qui-sommes-nous/un-reseau#.WjL3n1WnHIU

UIA Architectural Practice Around the World Database

uia-architectes.org/en/exercer/exercer-dans-le-monde/commission-uia#.WjL3v1WnHIU

Africa Union of Architects (AUA)

m.auaarchitects.org

Architects' Council of Europe (ACE)

ace-cae.eu

Architects' Regional Council of Asia (ARCASIA)

arcasia.org/home

Pan-American Federation of Associations of Architects (FPAA)

fpaa-arquitectos.org

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AIA International Region (IR): The 19th region of the American Institute of Architects, it encompasses all areas outside the United States. All offshore AIA chapters in other countries are part of the IR.

Ambassador: A diplomatic agent of the highest rank accredited to a foreign government or sovereign as the resident representative of his or her own government or sovereign, or appointed for a special and often temporary diplomatic assignment.

ASTM International (formerly American Society for Testing and Materials, ASTM): An international standards organization with members from more than 140 countries that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

Berne Convention: An international agreement governing copyright, which was first accepted in Berne, Switzerland, in 1886. It provides creators such as authors, musicians, poets, and painters with the means to control how their works are used, by whom, and on what terms.

Biometrics: Biologically unique information such as fingerprints, facial recognition, and iris scans used to identify individuals.

Bribery Act 2010: An act of the Parliament of the United Kingdom that covers the criminal law relating to bribery. It has near-universal jurisdiction, allowing for the prosecution of an individual or company with links to the United Kingdom.

British Imperial System: The traditional system of weights and measures used officially in Great Britain from 1824 until the adoption of the metric system in 1965. The United States Customary System is derived from it.

Common market: A free trade area with relatively free movement of capital and services. It is usually referred to as the first stage toward the creation of a single market. See single market.

Consul: A government official whose job is to live in a foreign country and protect and help the citizens of his or her own country who are traveling, living, or doing business there.

Consulate: The building where a consul lives and works.

Culture: The customary beliefs, social forms, and material traits of a racial, religious, or social group.

Customs: An authority or agency in a country responsible for collecting tariffs and controlling the flow of goods, including animals, transports, personal effects, and hazardous items, into and out of a country.

Customs duty: A tariff or tax imposed on goods when transported across international borders.

Decennial liability (responsabilité décennale): A form of strict construction liability arising from the French Civil Code under which no proof of negligence is required. It affects architects as well as contractors, has been adopted by many countries worldwide, lasts for 10 years, and cannot be excluded by contract.

Departure tax: A fee charged under various names by a country when a person is leaving that country.

Economic union: A type of trade bloc which is composed of a common market with a customs union. The participant countries have both common policies on product regulation; freedom of movement of goods, services, and the factors of production (capital and labor); and a common external trade policy. When an economic union involves unifying currency, it becomes an economic and monetary union.

Embassy: A permanent diplomatic mission composed of an ambassador and his or her staff who function as representatives of their nation in a foreign country. Embassy can also refer to the building in which the ambassador and his or her staff work, and sometimes live.

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Exchange rate (also foreign-exchange rate and FX rate): The rate as determined in the foreign exchange market at which one currency will be exchanged for another.

Exit visa: A government-issued document granting an individual permission to leave a country. Often used to determine that all taxes were paid on income earned in the country.

Expatriate (also expat): A person temporarily or permanently residing as an immigrant in a country other than that of their citizenship.

FIDIC: See International Federation of Consulting Engineers.

Foreign Corrupt Practices Act of 1977 (FCPA): A United States federal law that requires accounting transparency and prohibits the bribery of foreign officials. See International Anti-Bribery Act of 1998.

Globalization: The extension of social relations across world-space, defining that world-space in terms of the historically variable ways that it has been practiced and socially understood through changing world-time.

Gross domestic product (GDP): The monetary value of all the finished goods and services produced within a country's borders in a specific time period.

Host Nation (UIA definition): A country wherein an individual architect or corporate entity of architects either seeks a commission or has been commissioned to design a project or offer a service other than the individual's or entity's own country.

ICC International Court of Arbitration (the Court): One of the world's most experienced and renowned international arbitration institutions, the Court's primary role is to administer ICC arbitrations. See also International Chamber of Commerce.

ICC Mediation Rules (the Rules): The Mediation Rules of the International Chamber of Commerce. See also International Centre for ADR.

Intellectual property: A work or invention that is the result of creativity, such as a manuscript or a design, to which one has rights and for which one may apply for a patent, copyright, or trademark.

International Anti-Bribery Act of 1998: A United States federal law that amends the Foreign Corrupt Practices Act by making it illegal for a US citizen or corporation or a person or corporation acting within the United States to influence, bribe, or seek an advantage from a public official of another country.

International Center for ADR (the Centre): A separate entity from the ICC Court of Arbitration and its Secretariat, which exclusively manages ICC Arbitration proceedings. See also International Chamber of Commerce.

International Center for Dispute Resolution (ICDR): The international branch of the American Arbitration Association, which administers international arbitration proceedings initiated under the institution's rules.

International Chamber of Commerce (ICC): The largest, most representative business organization in the world, with thousands of member in 180 countries. Its three main activities include rule setting, dispute resolution, and policy advocacy. See also ICC International Court of Arbitration.

International Federation of Consulting Engineers (Fédération Internationale des Ingénieurs-Conseils, or FIDIC): An international standards organization for the consulting engineering industry best known for the FIDIC family of contract templates. The United States member organization is the American Council of Engineering Companies, or ACEC.

International Organization for Standardization (ISO): An international standard-setting body composed of representatives from various national standards organizations. Almost 80 percent of the countries of the world are ISO members, and its main products are international standards. ISO also publishes technical reports, technical specifications, publicly available specifications, technical corrigenda, and guides.

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International Union of Architects (Union Internationale des Architectes, or UIA): An international nongovernmental organization that represents over a million architects in 124 countries. The UIA was founded in Lausanne, Switzerland, in 1948.

Kidnap and ransom insurance (or K&R insurance): Insurance designed to protect individuals and corporations operating in high-risk areas around the world. It typically covers the perils of kidnap, extortion, wrongful detention, and hijacking.

Lingua franca (also bridge, common, or trade language): A language or dialect systematically used to make communication possible between people who do not share a native language or dialect, particularly when it is a third language that is distinct from both native languages.

London Court of International Arbitration (LCIA): One of the world's leading international institutions for commercial dispute resolution. It has a membership of over 2,000 members from over 80 countries.

Madrid Protocol: One of two treaties comprising the Madrid System for international registration of trademarks, it provides an efficient way to ensure protection for marks in multiple countries through the filing of one application from a single office.

Metric System (International System of Units, or SI): An internationally agreed decimal system of measurement. The official system of measurement in every world country with the exception of Liberia, Myanmar, and the United States.

Office of Foreign Assets Control (OFAC): An office of the U.S. Treasury Department that administers and enforces economic and trade sanctions based on US foreign policy and national security goals.

Office of Intellectual Property Enforcement (IPE): An office of the U.S. State Department that advocates for the effective protection and enforcement of intellectual property rights around the world.

Organization for Economic Cooperation and Development (OECD): An intergovernmental economic organization with 35 member countries, founded in 1961 to stimulate economic progress and world trade.

Passport: A formal document issued by an authorized official of a country to one of its citizens that is usually necessary for exit from and reentry into the country. It allows the citizen to travel in a foreign country in accordance with visa requirements, and requests protection for the citizen while abroad.

Permanent Court of Arbitration (PCA): An intergovernmental organization that provides services of arbitral tribunal to resolve disputes between member states, international organizations, or private parties arising out of international agreements.

Proxemics: The study of the nature, degree, and effect of the spatial separation individuals naturally maintain (as in various social and interpersonal situations) and how this separation relates to environmental and cultural factors.

Single market: A type of trade bloc in which most trade barriers have been removed (for goods) with some common policies on product regulation. It allows freedom of movement of the factors of production (capital and labor) and of enterprise and services.

Smart Traveler Enrollment Program (STEP): A free service provided by the U.S. State Department's Bureau of Consular Affairs that allows US citizens traveling or living abroad to enroll with the nearest US embassy or consulate.

Specialty Designated National List (SDN List, Blocked Persons List): A list maintained by the U.S. Office of Foreign Assets Control of persons who are reasonably believed to pose a threat to the US economy, foreign policy, or national security. US citizens and US-based businesses and corporations are prohibited from doing business with SDNs.

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Tariff: A schedule of duties imposed by a government on imported or, in some countries, exported goods.

Trade agreement (also trade pact): A wide-ranging tax, tariff, and trade treaty that often includes investment guarantees. The most common trade agreements are of the preferential and free trade types, and are concluded in order to reduce or eliminate tariffs, quotas, and other trade restrictions on items traded between the signatories.

Trade barrier: Government-induced restrictions on international trade, usually applied by imposing a cost on trade that raises the price of the traded products. This can adversely impact product availability in the imposing country, forcing the use of domestically produced products.

United Nations Commission on International Trade Law (UNCITRAL): The core legal body of the United Nations system in the field of international trade law.

UNCITRAL Arbitration Rules: A comprehensive set of procedural rules upon which parties may agree for the conduct of arbitral proceedings arising out of their commercial relationship. The most widely accepted international guidelines to dispute resolution

United States Council for International Business (USCIB): An independent business advocacy group founded to promote free trade and help represent US businesses by expanding market access for products and services abroad. It is the US affiliate to the International Chamber of Commerce.

United States Customary System (USCS or USC): A system of measurements commonly used in the United States which was developed from English Units, which were in use in the British Empire prior to American independence. In 1988 the United States made the metric system “the preferred system of weights and measures for US trade and commerce.”

Value-added tax (VAT, also goods and services tax, GST): A popular way of implementing a consumption tax on goods and services. All OECD member countries except the United States have a value-added tax.

Visa: A conditional authorization granted by a country (typically to a foreigner) to enter and temporarily remain within, or to leave, that country. A visa is subject to entry permission by an immigration official at the time of actual entry and can be revoked at any time.

Work permit: The permission to take a job within a foreign country.

World Intellectual Property Organization (WIPO): One of the 17 specialized agencies of the United Nations that promotes the protection of intellectual property throughout the world.

The World Factbook: A reference resource produced by the Central Intelligence Agency with almanac-style information about the countries of the world. It is updated weekly and can be downloaded from the web. Also available in printed version.

World Trade Organization (WTO): An intergovernmental organization which regulates international trade between participating countries by providing a framework for negotiating trade agreements.

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Acknowledgements

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