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# INTERNATIONAL CONSTRUCTION BUSINESS MANAGEMENT

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A GUIDE FOR ARCHITECTS,  
ENGINEERS, AND CONTRACTORS

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CHESTER L. LUCAS, P.E.

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**Chester L. Lucas, P.E.**

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# **PREFACE**

One's first assignment as a project manager abroad provides unusual challenges. In my experience, the main concerns were not Quito's high altitude, the Spanish language, the metric system, or the Andes' rugged topography. Rather, the difficult tests were related to client communications, understanding a new culture, avoiding local politics, and supervising a diverse group of senior professionals. Less difficult, but still challenging, were the tasks of collecting invoices, supervising international contractors, and satisfying the client's staff.

The professional rewards were gratifying, however. The project was completed, trust and confidence were established, and friendships were founded. My next assignment, in Panama as project manager for a farm-to-market road program, produced a few of the old challenges and many new ones. At that point, I became addicted to international consulting. There were then no available reference books dealing with management of consultants' operations. Very little hands-on advice for survival was forthcoming from any quarter. Later on, when offered an opportunity to work in Nicaragua as construction management advisor on the country's first hydroelectric project, I looked to a World Bank officer for some sage advice. His terse comment

was "Equip yourself with a new attache case and a tightly rolled umbrella, and tackle the job with confidence."

Literature about the management of domestic operations for architects, engineers, construction managers, and related professionals still remains scarce. Overseas offices and foreign projects are covered, if at all, by discouraging horror stories of the "tried-it-once-and-didn't-like-it" sort.

Without reference books, it seemed wise to keep diaries and to preserve detailed trip logs as well as copies of my reports—all filed away for future reference. Each assignment brought new experiences—Panama, Nicaragua, Italy, France, Spain, Germany, Libya, Lebanon, Greece, Saudi Arabia, the Middle East, and Africa—and wove the fabric of a long engineering career. Throughout these experiences I frequently promised myself, "This one will be a chapter in the book." And finally with the encouragement of several friends, including Jim Webber of *Engineering News-Record* and *International Construction Week* and the late Dick Lurie of *Worldwide Projects* this book took form in print.

My goal is to provide positive and enthusiastic guidance—candidly and pragmatically—to professionals entering the export market. The basic premise is that the reader will be interested in international practice and, after reading this book, will be better equipped to decide whether he or she can cope with the challenges that will inevitably confront the new entrant.

The reader will find sound practical approaches for planning and executing fact-finding studies, selecting associates, marketing, presenting proposals, and negotiating contracts. Once the contract is firmly in hand, chapters on organization, project management, logistics, personnel, and financial management will provide positive guidance. In later chapters such sophisticated challenges as extras and claims, politics, bribery, and unstable conditions are discussed.

Although the primary audience is assumed to be professionals with an interest in foreign work, the material is structured for exporters, bankers, lawyers, accountants, contractors, suppliers, graduate students, and, in fact, anyone who intends to operate in another culture. In offering the reader guidance for coping successfully with the many new and challenging aspects of foreign business, I stress attitudes of awareness and understanding that will equip and encourage competent professionals

to enter the market, meet the competition, and successfully complete foreign assignments.

It is my premise that an understanding of the client's problems, careful planning, and delivery of a quality product will lead to success in the overseas arena. A conscious effort has been made to refrain from pedantic solutions. Rather, I attempt to stimulate original thinking based on proven principles of operation. A rational approach to the export market coupled with enthusiastic and strong leadership will certainly bring professional and personal satisfaction to those attracted to this exciting and rewarding field.

Those who work in international engineering and construction gain long and intensive exposure to new cultures, customs, cuisines, and environments. A good knowledge of languages, history, and people is acquired, almost without conscious effort. Successful internationalists reflect enthusiasm, professional satisfaction, and pride. So, take time to appreciate the history, culture, and the great people encountered along the way. Enjoy the satisfaction of being part of the construction team, and accept gracefully the role of teacher and unofficial ambassador.

Good luck in your foreign endeavors!

### **Acknowledgments**

Without the wisdom, help, and patience of the many capable engineers, architects, planners, construction people, and devoted staff with whom I worked during a long career, there would have been nothing worth writing about. My grateful thanks to all of them.

Several chapters deal with topics that were the subject of articles written by the author and published in *Worldwide Projects*, whose publisher, Paul R. Green, and editorial director, Virginia Fairweather, have graciously given permission for the reuse of the ideas contained therein.

C. W. Gilliam and John F. Moller, friends and former associates with lengthy foreign service, have reviewed certain chapters and provided valuable comments which have added to the book's validity.

Special thanks go to Susan Schultz and Denise Roth of Larsen Associates Inc. for their support and skill in converting the

handwritten pages into processed text with efficiency and understanding.

### ***A Note about This Book***

The role of women in the design and management professions has increased dramatically in the period covered by this book. At engineering schools such as Duke University, enrollment of women has reached 30 percent and is increasing steadily. In design and construction management organizations, women are in positions at all levels. However, in the international market, and particularly in developing countries, assignments for women as resident representatives and project managers are not as common as for men for the following reasons:

1. *Experience requirements.* The usual requirement for assignment as a resident representative or project manager on a foreign contract is ten to fifteen years of relevant experience in design, management, and client relations. A professional seeking a position of the type described in Chapters 8 and 13 will have paid these "dues." Most young professionals are not willing to take this career path.
2. *Mobility concerns.* Candidates for foreign assignment are generally selected because of ease of mobility and willingness to accept the challenge of hostile environments. Two-career families and those with children in lower school grades or members who require special medical or educational support are not attracted to assignments in developing countries.
3. *Cultural differences.* In the Middle East and other developing areas, closed cultures unfortunately prescribe limited roles for women in professional life. For this reason a firm often finds obstacles to obtaining a work permit and resident visa for a manager who happens to be female.

Professional and technical positions described in this book are assumed to be open to women or men. The words "she" or "he" are meant to be interchangeable—given the required training and experience. In Chapter 8, "Your Man on the Scene," and Chapter 13, "Project Organization and the Project Manager," however, the assignments are challenging ones in

any cultural environment much different from our own. It would be naive to suggest that a woman could necessarily expect to succeed as well as a man in representing a design or construction management firm in this fragile and competitive market. For this reason, these chapters are intended to indicate that the assignment is more suitable for male professionals.

I look forward to the day when women will be represented in equal numbers in international management and operations, as they have largely been on the national scene. But for the foreseeable future I believe that a prudent adviser will counsel firms entering the foreign market to be sensitive to the cultural values of the host country.

**CHESTER LUCAS**



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## CHAPTER 1

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# THE DECISION TO EXPORT

There is a broad international market for consulting engineers, architects, planners, and construction managers. The risks are at least as great as those encountered in domestic operations. Moreover, new cultures and environments will challenge patience, understanding, and ingenuity. Why should an established organization venture into the international market? What good can come from this corporate risk?

On a routine trip home from Italy in 1966, I made a presentation of a planning, design, and construction management project for a new town in Libya to a Virginia state meeting of civil engineers. The project was an ambitious one, and my pride and sense of accomplishment were obvious. Few in the audience were internationally experienced, and so there was a lively question period. I was totally unprepared, then, for the rather emotional question: "With all of the engineering needs of our country, why would any competent American engineer want to leave home and put up with all of those unfamiliar problems?"

I was taken aback. The necessity for confronting my peers on the subject had never occurred to me. Certainly when struggling with some of the least attractive conditions peculiar to for-

eign work—and momentarily frustrated by them—I had asked myself the same question. Yet the period of uncertainty had usually passed without aftermath, and I would seek new problems. I offered a poorly organized reply, touching on the thrill of winning an international design competition against a field of prestigious firms, the satisfaction of providing housing for earthquake victims, and the challenge of the environment and the cultural problems that arise when working, for example, with Arab clients and Polish contractors. I added that there had also been an opportunity for a profitable contract as well as for professional development. Finally—and with some mischievous intent—I pointed out that this international effort was not an alternate source of business but an addition to our domestic practice; if the questioner knew of domestic opportunities, our firm would be pleased to share his workload.

Indeed, why seek foreign contracts? The answer becomes obvious during periods of high interest rates, energy shortages, and stagnant domestic markets. Although the economies of other countries are affected by the state of the industrialized economies, the demand for design and construction services in certain international markets can be high when it is low at home. For example, oil-exporting countries are still spending huge amounts on industrial, social, and infrastructure projects. Certain other countries whose economies are based on agriculture (such as Cameroon) or minerals (such as Indonesia, Malaysia, or Colombia) have been large buyers of construction services. The fact remains that export markets can provide good opportunities when domestic markets do not offer new sources of income. Earning hard currency which can be converted into dollars, sterling, francs, or other hard currencies and brought home with taxes paid on profit is very respectable. In addition, this trade contributes to righting the balance of payments and helps put the domestic economy in the black. There is also another, perhaps less obvious benefit from exports of professional services: the export sales of construction equipment materials and installed machinery. Such sales have a direct effect on the domestic labor market which may be sorely needed. President Reagan stated in a nationally televised press conference (January 5, 1983) that for every billion dollars of export sales, forty thousand American jobs would be supported. Such benefits are a substantial part of the U.S. economy and are very significant to the Korean, Dutch, British, and French economies.

The international market, particularly in infrastructure projects for developing countries, requires large doses of very simple and basic design. Because public works in such countries are not generally maintained properly, the designer must address this problem. Otherwise, as the histories of many developing countries will bear out, dams and bridges have washed away and long stretches of a recently built highway have vanished from existence. The cause of these failures relates more to poor maintenance than to faulty design or construction. This very fact heightens the engineer's challenge and makes foreign contracts even more professionally rewarding. It is often said that the type of design most successful is simple and straightforward—similar to that which might have been in vogue at home thirty or forty years ago and with a lack of features that are hard to maintain in hostile environments.

Developing countries also present a fast-growing market for services in training, operation, and management of infrastructure projects. International airports, ports, and water and waste water treatment plants are being operated and maintained by international contractors in the oil-producing Middle East. Frequently, engineering firms join with industry to manage and staff these projects. Opportunities exist because of the lack of skilled and professional workers, as well as cultural differences which make service trades unacceptable to certain ethnic groups.

My goal is to provide practical procedures for establishing, organizing, and operating foreign design and construction management offices. The market offers opportunities on all sides, but international competition is fierce. The path to success is lined with pitfalls and monuments to fallen contenders. How can you determine if your firm is suited professionally and financially to enter this arena? How can ineptness be identified? Care must be taken to avoid making a poor exporter out of a great domestic organization.

The first phase is one of inventory, soul-searching, and self-analysis. If these hurdles are negotiated with enthusiasm, the next step will include market study and homework. Following the homework phase comes preparation of an operations plan and a budget for a fact-finding trip. The third phase consists of the fact-finding trip, summarizing its conclusions, making recommendations, and arriving at a budget and an operations plan for the first year of foreign activities. If the report is negative, the foreign market idea can be aborted or postponed with no

great loss. If the report is positive, it can be presented to management for approval and the operation launched for a trial period. Using this rational approach avoids wasting large amounts of money and keeps management from making its commitment based on anything except hard logic. Our goal during this period is to take the "gee whiz" out of international operation by simulating an engineering problem with several unknowns and variables.

The inventory must be conducted by an individual who understands the organization from top to bottom and who has some knowledge of international operations. It would be helpful if the person chosen were a partner, shareholder, or officer. Since this phase is staff work, it would be well to keep the senior partner or president out of the picture, except in a general way, until decision-making time. (If the CEO were a great internationalist, there would be no need for this study.)

One purpose of the inventory is to identify your organization's strengths and basic resources and to determine how they relate to the needs of the international market. It is important to stress existing capabilities that can be well documented when presented to potential clients. Technocrats in rapidly developing countries want to study your track record over the past five years. Pertinent overseas experience should be researched and carefully described. Your project managers and department heads are prone to be impressed by their past efforts, so they often tend to make extravagant portrayals of the firm's experience which will not hold up under close scrutiny. For example, if a contract scope covered a feasibility study, one should not claim final design responsibility. Such pretenses are unethical, to say the least, and presentations based on dubious experience will collapse like a house of cards.

It is not necessary during "inventorying" to spend money on final preparation of resumes. Devote the time to gathering facts for an appraisal of the firm's international potential. Periods of foreign residence, ability with languages, professional registration, and education obtained abroad are typical of the facts that will be useful in the evaluation.

A frank investigation of the organization's strengths and weaknesses will complement the review of personnel and product. Now is not the time to belabor past mistakes. Honest appraisal of capability must be stated. If the firm has never designed a twenty-four-story reinforced concrete building, it

may be a waste of time to try to convince a prospective client that the project should be entrusted to you. Indeed, there may be a need to strengthen the organization by the addition of specialists or associates in certain fields. It can readily be imagined that planners, economists, agronomists, educational consultants, and other talented professionals might be welcome additions to a basic engineering staff when operating in rapidly developing countries.

Another element for the inventory is to get the senior management's thoughts about prospective international markets. This survey of "first impressions" may be quite useful when the homework starts. One partner may have strong professional and family ties to a potential market area. There may be some exceptional language skills and cultural backgrounds that would be of value in Latin America, China, Africa, or the Middle East. A department head may have managed an engineering office in Europe or have been an instructor in a Kuwait university. The thoughts and preferences of the movers and shapers of your firm should be incorporated in the conclusions of the inventory. Inclusion may well heighten the interest of these individuals and their commitment to the international program. Commitment of the principals is an ingredient vital to the success of an international program, but like many other things, it is difficult to obtain and easy to lose. Take care to get the input of all the top management and directors, even if the task becomes tedious. Once involved, no individual can say he or she was not consulted. From these suggestions about inventory and self-analysis, a custom-designed list of questions can be developed for your organization. As questions are answered, new areas to be probed will be uncovered. At this stage, the intent is only to get clues to interest your firm in the potential of exporting services. The inventory should be conducted on a confidential basis by a dedicated professional. Care should be taken not to expose the idea as a target to be shot down early on. Frivolous objections should be screened out of the analysis. The fact that the senior partner picked up dysentery in Cairo should not be sufficient grounds to keep the firm out of the Middle East.

With the results in hand, conclusions can be made. The inventory should be carefully tabulated, checked for accuracy in critical areas, and digested into a short report to management. Assuming that the results show the firm to be a potential contender in the export market, you should make a proposal to

enter the homework phase. No airplane tickets should be purchased yet, or European tours contemplated. During the homework period the fact-finding trip will be planned and budgeted. Now the search and struggle for corporate commitment will begin.



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## CHAPTER 2

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# HOMework— THE MARKET STUDY

The results of the inventory will probably not be surprising, although new perspectives have been discovered in the glaring light of the international market's demands. Assuming that management decides there are enough positive conclusions to study the export market in detail, where and how should one begin? The inventory may have turned up some successful contracts overseas that provided designs and services needed in the developing countries. Perhaps one of the partners was born in a Latin country and has strong cultural ties, good language capability, and professional credibility. Such a person is ready to lead a mission south of the border. A word of caution: It may be a challenge to hold this individual in check until the foreign marketing plan is approved.

A task force should be organized, headed by an engineer with enough status to insist on the priorities and support for the study and with ability to organize research and resources. An assistant, probably a young professional with either a background of foreign residence and travel or a desire to learn international business, would be another excellent team member. Finally, a support person capable of dealing with the public