

‘Establishing a Manufacturing Presence in Asia: Site Selection’

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The Challenge

Your company has decided to establish a manufacturing presence in Asia. (Reference this Series’ white paper: *Establishing a Manufacturing Presence in Asia: The Decision Process.*) This first major decision has been made and now its time to “rally the troops” for the many remaining considerations that must be addressed. Where to locate the facility is a major consideration typically at the top of the “Go-To- Asia To Do” list. This decision is really intertwined with your company’s business objectives and can be viewed as either wide open in terms of locale, or restricted to a certain country, region, city or specific industrial park based on some external influences. So, the first question to be answered is: why are you going to Asia? Most likely that answer will fall into one or all of the following categories:

- To support a current customer that requests (or requires) an Asian presence
- Market access / penetration
- To lower manufacturing costs

If your rationale is based on customer requests / requirements and if the customer wants your presence in close proximity to his facility (for supply chain or other reasons), then the site location will be somewhat geographically limited to a relatively small area. At this point facility requirements will be the prime consideration.

If you are looking for entry into new markets, your market survey and input from potential customers may limit your focus to one country, but still leave a wider range of choices based on a number of criteria.

If the prime reason is lower manufacturing cost, then a study of labor, facilities, utilities, and shipping costs is in order - considering, as well, tax and other financial implications. In this case, you can really locate anywhere, as long as the total cost of manufacturing is contained within your Business Case assumptions. That will depend on a number of considerations very much dependent on your business objectives and product characteristics.

How to maneuver through this complex decision matrix and find the new Asian home for your company is the subject of this White Paper. Specifically, we identify a method for you to develop, prioritize and quantify a list of *Site Selection* criteria and then evaluate any number of candidate sites by “scoring” each site against the *Site Selection* criteria. This analysis will result in 2-3 top candidate sites for you to consider in the final selection process. Subsequent to this, negotiations with landlords, construction companies, transportation providers, caterers, translation services and other local companies whose services will be necessary in the conduct of business in the chosen location will also be necessary.

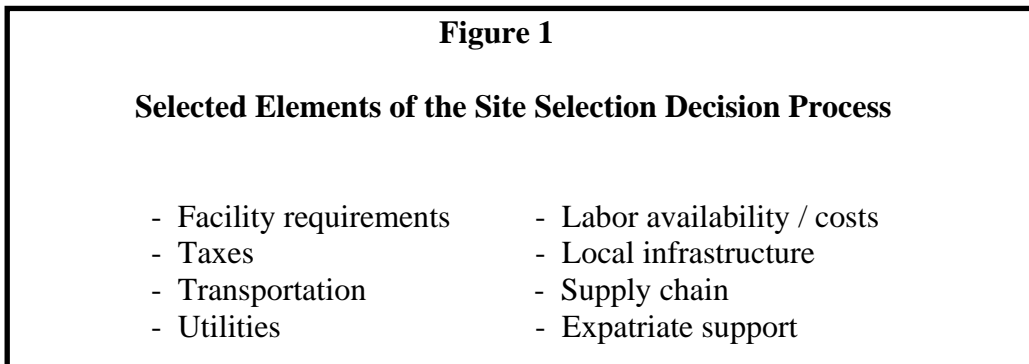
Site Selection

The *Site Selection* Process can be summarized as follows:

1. Develop key selection elements
2. Develop criteria for each selection element
3. Give each criterion a relative weight
4. Develop a list of candidate sites to be evaluated
5. Develop a scoring system that quantitatively compares sites
6. Visit and score each site
7. Reduce candidate list to 2-3 best candidates
8. Conduct “Deep Dive” analysis of each site
9. Conduct initial negotiations
10. Select best site
11. Finalize negotiations

Site Selection - Identifying Key Selection Elements

Employing a rigorous, comprehensive list of critical planning elements is key to a thorough review and final *Site Selection*. Some of the elements will be “must haves” while others will have a lower priority based on financial, company business objectives and other considerations. Figure 1 illustrates some of these elements. The first step in the process is to determine the company’s requirements and trade-off possibilities and to make sure that all elements of the *Site Selection* decision process have been identified, and prioritized. Once this is complete we move on to the process of finding the right site at the right location and pursue negotiations.



As Figure 1 shows, the criteria are extensive - from operational to human resources. On the operational side, the actual facility requirements are a prime consideration. (See Series White Paper: *Establishing a Manufacturing Presence in Asia: Facilities Considerations*). Determining utility and space requirements are key, as is identifying any trade-offs on facility configuration, such as the ability to split the facility into separate manufacturing areas, rearrange for lean manufacturing considerations, or provide controlled access to certain areas

of the facility. Facilities requirements can often be the limiting factor in a *Site Selection*. In some cases (such as those above) a significant rearrangement or fit-up effort must be initiated, and can be a lengthy and expensive undertaking. Finding the proper location and then constructing to specification always gives the best end results. In some cases (mostly in Vietnam) there will be no pre-existing facilities available regardless of the simplicity of the facility specifications. In this case, a building must be constructed - and that has implications on timing and, possibly, expense and time to revenue / profit. In China, many pre-existing facilities can be found.

Local infrastructure requirements can include those items that influence shipping of your finished product and receipt of incoming raw materials (such as airport accessibility, quality of roads, customs procedures and freight carriers) to the quality of local technical support - including laboratories and universities. Human resource requirements focus on the availability and costs of labor, trends on employee retention, the expatriate environment and several other considerations. All these site-specific elements must be included in a total cost of doing business that need to be addressed in your *Business Case*. Finding the ideal facility, but having to contend with a high cost for shipping and materials inventory, combined with an unattractive location to attract labor, will probably not provide the optimal site location solution.

Site Selection Process - Developing Criteria and Evaluating Candidate Sites

Once you have defined the key elements of the site selection process, the next step is to develop criteria within each element, assign each criterion a numerical weighting from 1 (not so critical) to 5 (very critical) and begin to schedule site visits to ‘score’ each site. This is best set-up in a matrix format, as the number of elements, criteria and sites visited can become quite large. The site scoring system can follow any algorithm; for example: a basis of ‘1’ (poor) to ‘5’ (highly compliant). This is demonstrated in Figure 2

Figure 2: SCORING

Element	Criteria	Weight	Site #1	Total Site#1
Taxes	a. Length of ‘Tax Holiday’	5	3	15
	b. Length of ‘reduced tax’ period	5	3	15
	c. Level of ‘reduced tax’	5	3	15
	d. Level of city /provincial / city taxes	5	1	5
Facility	a. Minimum floor space > xxxx mt ²	4	1	4
	b. Minimum space available for expansion > xxxx mt ²	5	5	25
	c. 1 st floor ceiling to floor height > xx mt	5	5	25
	d. Elevator size > yyy mt ² / capacity > xxx kg	5	1	5
	e. Double lane access / egress for 40’ trucks & busses	5	1	5
	f. Meet minimum vibration spec of xxx mm / sec	5	1	5
	g. Parking space for xx cars and xxx bicycles ...	4	1	4
	h. Lease rate	5	4	20

Utilities	a. Total initial power available > xxx KVA	4	1	4
	b. Ability to upgrade to xxx KVA	5	5	25
Others	x	y	zz
TOTAL		-	-	yyy

As seen above, the total score for a given site is the sum of the product (weight x score). Applying this algorithm to all candidate sites gives a fairly accurate first-pass indication of the more suitable candidates. While this process might not directly yield the best site, it has been shown to eliminate the less preferable sites, making the final selection process a bit less complex.

Site Selection - Selecting Candidate Sites

How to go about identifying candidate sites in the first place would be a logical question at this point. A list of potential candidate sites can contain 10-15 locations, depending on how “open” the selection process is. As previously stated, if the company plans to locate near an existing customer, the selection will be restricted to a few locations. After initial development of candidate sites, the list typically is reduced to 5-10 sites. Whatever the situation, the list of candidates becomes the basis for site visits. The visits are carefully planned to begin the vetting process using the algorithm demonstrated in Figure #2. During the trip, results of each site visit need to be fully documented, photos taken, the site scored against the criteria. Small differences may be important to the decision process, but easily forgotten unless rigorous daily updates (including photos) are made throughout the site visit process. Also, initial rankings must be updated as new information and updated data is integrated into the search. The comparisons have a high degree of relativity about them and a newly-scored site could result in a re-review of a previously scored site.

Site Selection - Choosing the Finalists

Typically 2-3 leading contenders have been identified at this point in the process. After the visit, the reviewer will develop a report identifying the leading contenders and fold the information from the visits into the *Business Case* to insure consistency with the financial assumptions; also to validate the vetted candidates meet the company’s requirements. The results of the *Business Case* validation typically point to a few key areas of expense concern and identify what adjustments must be made to achieve the best possible scenario. At this point, it is wise to “take a breather” after the initial site selection visits - to reflect on the observations made and allow the company time to digest the report. This break in the process is also wise in terms of setting the stage for a final negotiating strategy. We must recognize that Asians tend to use time to their advantage, and are prepared to deploy a “quid pro quo” scenario in negotiation sessions. They also typically show great respect to a thoughtful, tough-but-fair negotiator. The negotiation strategy should clearly identify “no-compromise” and “can compromise” items such that you can negotiate on a “quid pro quo” basis, and not needlessly sacrifice or take an impossibly intractable position.

Site Selection - Conducting Deep Dive Visits

The next step is to initiate a “Deep Dive” visit to each of the leading candidate sites. The purpose of these visits is to:

- conduct a detailed analysis of each site based upon very specific criteria
- obtain definitive answers to any missing information
- define the contractual terms in detail
- and evaluate the ability to meet schedules

Another purpose of the “Deep Dive” is to develop a key element of the negotiation strategy - to demonstrate to the sites involved that at least one other candidate is being considered. This engenders a more competitive attitude on the part of all candidate sites. A detailed agenda should be established and agreed to beforehand with the Asian counterparts before each visit, including a list of tasks to be completed with assigned responsibilities. These visits can take up to one week per site and will include visits with government officials, university contacts, potential suppliers translation services, caterers, accounting companys, local lawyers, construction companys, utility companies, local AmCham, etc. Round table” discussions with senior executives of other companies operating in the area can also be included as part of such site visits.

The preliminary negotiations carried out at this time are critically important. The “no-compromise” list agreed to prior to the meeting, as well as financial and other business objectives that have been established, will serve as a guide in the decision to continue or curtail the negotiations.

Site Selection -Final Selection / Negotiations

After returning to the home location, company can make the final *Site Selection*. Preparations for the final contract negotiations will also begin. The *Business Case* is again updated with any new information learned during the “Deep Dive” and schedules are revalidated. With the previously defined negotiation work on-site, the final negotiation should be fairly straightforward. However, any points of “irritation” discerned during the “Deep Dive” negotiation process should be addressed and a final negotiation strategy developed. Finally, a communication strategy must be developed for use within the company, as well as with the non-selected finalists. In the conduct of business in Asia, the company may have future occasions to deal with the sites not selected. With this in mind, it is always best to maintain professional businesslike relationships.

Summary

This process for selecting and negotiating for a site for the company's new home in Asia is based on years of experience and local knowledge of both the business and cultural environment. The process is carefully crafted to:

- identify and understand the company's requirements
- identify and vet potential locations, and
- insure the most optimal solution is obtained.

Having selected the best location and secured the best possible terms and conditions will put the company on the right path and will enable them to focus on the myriad of additional critical planning factors with confidence in the choice of location.

Rich joined EWA in 2006 where he is currently 'Section Leader, Manufacturing Operations, Product Development and Delivery'. Dr Levine retired from IBM after more than 35 years of service involving high technology manufacturing operations. Dr Levine has held numerous management positions in all facets of high technology manufacturing and support. He has been personally involved in plant start-ups / product transfers to manufacturing facilities in Canada, France, Germany, Japan, Singapore and China. Dr Levine has been called upon to lead various task force activities on manufacturing operations and quality improvement. He holds a PhD in Ceramic Technology from Rutgers University. Dr Levine and his wife, Sue, are the parents of 4 children and are proud grandparents of 4. They make their home in Poughkeepsie, NY.

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