What's Driving Automotive Assembly Plant Locations?

Our expert reveals what to look for—and what to bring to the table—when expanding your automotive operations.

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The most recent siting of the Toyota automotive assembly facility in San Antonio, TX puzzled the so-called pundits of site selection. Until then, it was felt that the Southeast was the primary region for the next automotive assembly plant. In fact, the general consensus among site selection professionals was that the Midwest and Southwest were very unlikely candidates. Well, the pundits (including this author) were wrong. Both the industry and the market have changed in fundamental ways that will affect site selection from this point forward. Toyota publicly stated that a competitive advantage in the Texas truck market was one of the key decision criteria; any automotive company heretofore has not articulated a criteria. Logistics, human resources, schedule, business climate and operating costs are all still important, but they now support a much greater issue—competition. The competitive environment is becoming increasingly market driven with the ability to change product lines and react quickly of paramount concern.

One need only look at the market to understand the current competitive environment. For example, in the past there were only two SUVs on the market, with little color or accessory options to choose from. Now, almost every automotive company has at least two models (or even more) for customers choose from. The companies who have been successful have reacted to the competition and consumer demand. The implications to the states and communities interested in recruiting automotive assembly plants should be clear: A state or community's ability to successfully recruit will depend, to a large extent, on its ability to accommodate schedule and speed to market.

The following is a review of items every automotive site selector should take stock of if they are seriously interested in locating an assembly plant.

UNDERSTAND RELATIVE STRENGTHS AND WEAKNESSES

We all know that there is no such thing as a perfect location. Every location has a mix of attributes—some very strong, others not. The winning location is usually the one that seems optimal when evaluated as a whole. This means that the weaknesses, on balance, are either negated via some form of action to mitigate their impact, or are deemed inconsequential in light of the other relative strengths. In addition, any and all risks are addressed without a shadow of a doubt as to their solution and the consequences if no solution is reached. Strengths by their very nature need no further action because they are either an inherent quality of location or a created value set by the state and community to differentiate among the competition.

Having said this, do not ignore a location's strengths, particularly as it pertains to
matters concerning permitting, environmental issues, and workforce training. It may help you to realize the weaknesses of competing locations as a consequence. You can tell if a state and community is serious about recruiting an auto assembly plant if they have taken a serious accounting of their site and community inventory. This accounting should realistically evaluate site status categorically and without bias. It will be helpful to know whether an internal review of sites was performed without bias, and whether site assessment was done in isolation of political pressures.

FIND A READY SITE

What constitutes a "ready site" is probably the most misunderstood concept being batted around in the economic development community. Simply having identified a large tract of land with the necessary infrastructure in place (or planned) is not adequate. A ready site is one where the property identified is under control in such a way that property ownership by a certain date has been identified. Whether this is outright property ownership, purchase options, or some other legal instrument to control and acquire the property, the fundamental concept is that property access and control must be defined by a certain date. Obviously, title searches and rights to fee simple transfer of title are issues that must be included in the formula.

Property ownership guarantees are not the only consideration for site readiness. Information about the constructability of the site is information that will have to be acquired at some point. Subsurface conditions, wetland delineation, detailed site topographic characteristics and Phase I environmental assessments should all have been completed in advance. Logically, the Phase I assessment and wetlands delineation are "go" versus "no-go" threshold criteria used to determine whether the site is even workable.

By far, obtaining an air permit is probably the most crucial bottleneck in your project schedule due to the emissions associated with a paint shop. Most auto companies prefer an "Attainment" air quality control region and are very wary of being within 100 miles of a Class I environmentally sensitive area. Compromising on either of these general practices could double the amount of time required to obtain your air permit, as well as increase the cost for addition control technology. At a minimum, and under the very best of circumstances (assuming that historical data is available and modeling is not required), a "major source" permit can be obtained in four months—but this is the exception, not the norm.

You should expect the state to have the capability to administer and approve Federal EPA air permits and be able to expedite the pre-application process. In addition, you should demand a maximum amount of flexibility from the community and state (that is not in violation of any local, state, or federal laws) which allows concurrent activities for site preparation, construction, and equipment installation to proceed (at risk) in the event of an unexpected problem. Other environmental issues associated with the site should already be resolved or have an absolute rock-solid mitigation plan in place for corrective action provided in advance of you being shown the site.

Finally, the infrastructure necessary to accommodate the site should be fully evaluated. This means the infrastructure is either already in place or designed, funded, and planned to meet a typical construction schedule. While this sounds simple, it is fact an arduous and time-consuming task for the state or community. The process requires the participation and coordination of a multitude of agencies. Typically the players include the utility companies (water, sewer, natural gas, telephone, and power), state and county highway departments, local planning agencies, and various government-permitting agencies at the state and local levels. It is not enough for the community to have merely designed and funded an infrastructure improvement. In addition, the applicable permits to accomplish these improvements must be taken into account. The worst-case scenario is having an Environmental Impact Study required at the last minute to bring in a transmission line or build a bridge for a highway.
PAY ATTENTION TO SCHEDULE

The market is relentless and unforgiving. Failure to bring a product to market on time could not only cost you millions—it could ultimately result in total failure of your entire product line. As mentioned in the beginning paragraphs, the market is beginning to play a more important role the location decision. It is likely that you will not accept uncertainty regarding when a specific deliverable will be achieved. The most volatile and uncertain bottlenecks in the site selection process typically revolve around permitting. Ironically, permitting issues are items that can and should be addressed early on, well before you began your inquiry to a specific location. Equally important is the availability of information regarding constructability and infrastructure improvements. A community that defers investigations regarding site suitability until after a you show an interest in the property risks eliminating itself immediately because it threatens your schedule.

CONCENTRATE ON THE WORKFORCE

Generally speaking, most automotive companies are not so concerned with the experience level of employees in an assembly operation as they are with their basic skills in reading comprehension, math, and ability to work in a team environment. You should expect that the state and community will perform the initial screening. This includes identifying a pool of acceptable candidates and training them in basic manufacturing skills—with no cost to your company. On-site training facilities are now expected to be a part of the incentive package. In addition, an ongoing commitment for training of new hires as well as existing workforce retraining/upgrading of skills is expected. Finally, you can and should demand that training is provided on an exclusivity basis to protect proprietary product knowledge and manufacturing processes. Evaluate the state and community's program and delivery infrastructure for capability, capacity, and cost.

Only a few states do a very good job of explaining the process of recruiting, screening, pre-employment training, post-employment training, staffing, and funding. The states that do a good job not only discuss the funding for the program and the value it provides for the company, but they also lay out the entire process starting with advertising and recruiting all the way through to delivery of a trained employee—including post-employment training. Staffing, schedule, action items, and the entire process should be laid out in a manner that is easily understood.

Most automotive companies desire to have a workforce that operates in a highly flexible and multi-task oriented environment based upon teamwork. Take great care in the screening and selection process to assure that employees are capable of thriving in this environment. A considerable amount of care and due diligence is necessary to assure that previous work practices in the region of interest do not run contrary to this type of operation. A locale that has a history of labor-management strife, a culture ingrained with inflexible work rules, and constant turmoil should probably be avoided.

Contrary to popular opinion, the cost per hour for a fully trained employee in the automotive industry is rather consistent throughout the United States. In the first months and years of an automotive facility's existence, hourly rates are lower; however, as the employees progress with skills achievement, they (and the community) will strive to achieve a competitive wage and benefit package comparable to the industry as a whole. Average manufacturing wage geographic disparities do in fact exist, but the variance in costs from a productivity benchmarking perspective, aside from the initial start-up years, is a result of inflexible work rules that foster inefficiency and redundant operations, and not from geographic disparities from region to region. There is very little difference in benefit packages too, with the exception of legacy burdens that may have carried over from incumbent or pre-existing labor agreements.

Your training program should include a multitude of agencies such as the state's Employment Services Commission, community vocational and technical educational institutions, and the dedicated resources of the state's workforce.
development program. Those regions that rely on federally funded programs or on income tax credit schemes without the entire gamut of worker training infrastructure described in the previous sentences should hold little appeal for you.

EVALUATE THE BUSINESS CLIMATE

Taxes are usually considered the major bellwether of a region’s business climate. You’ll evaluate tax burdens as part of the site selection process, although the impact of the tax burden is sometimes overrated. Tax burden is typically evaluated as either a one-time, non-recurring capital cost or an ongoing operating expense. Taxes considered one-time, non-recurring capital expenses include sales tax on construction labor and materials, machinery and equipment, and property tax treatment during construction. Usually, these are already incorporated into existing statutes, although it is not unusual for special legislation to be enacted, which addresses any one of these on a case-by-case basis.

Recurring taxes include income, franchise, sales, property, and in some states and localities a business and occupation tax. Tax liability is usually subject to a variety of existing statutory exemptions and/or abatements that reduce the total tax burden; however, these are usually enhanced considerably for automotive projects. Workmen’s compensation and unemployment insurance rates should be investigated and considered not only as a cost element, but also as one indicator of the overall business climate in the state. These two costs are a topic of considerable debate and concern in both the public and private sectors these days.

Income taxes are usually not a huge tax burden in the automotive industry, depending on the profitability of the company and the allocation and apportionment formulas allowed in the state of interest. Various income tax credits available in most states minimize the impact of this tax as a result of either capital investment, job creation, or both.

Automotive facilities are capital-intensive investments and have the potential for very high tax liabilities on a recurring basis. Many states either restructure rates, allocation, or apportionment formulas, or simply place a cap on the total tax liability.

Major automotive firms with large purchasing budgets should seek either exemptions or caps on their sales tax liability from both a one-time non-recurring basis and an ongoing recurring one as well. One time non-recurring sales taxes include tax on machinery and equipment, construction labor, and construction materials. Recurring purchases include purchases of raw material, equipment replacement, repairs, and services. Each new model change results in a new investment in equipment and tooling. Seek tax relief not only for initial investment when the assembly plan is established, but on an ongoing basis as well.
Taxes are considered concrete and measurable indications of a location's business climate. A more difficult to measure, but nevertheless important consideration is the leadership and commitment of the state and region and the support of the business community. It is impossible in this article to describe exactly what this looks like, except to say that when it is there, there is no mistaking its presence.

FOCUS ON LOGISTICS CONCERNS

Transportation infrastructure is crucial to an automotive facility for both just-in-time component delivery as well as vehicle distribution. Logistics costs are the single largest variable cost of production. Inefficiency in any one aspect of the logistics supply chain ripples throughout the entire manufacturing process, which adds delays and increased cost. Transportation cost, reliability, access, and north/south and east/west connectivity go hand in hand.

An interstate-quality highway with dual access to your future site is highly desirable. For the site itself, redundant access on high quality secondary roads is important in the event the interstate is temporarily blocked. Appropriate controls for truck access and employee access are important.

A rail-served site is a must if you are in automotive assembly, with a strong preference for competing carrier access. There should be some preference for a connection to a main-line carrier; however, with the proper operation and improvements, a short line rail system is acceptable. A rail yard and vehicle-processing center is preferred on site, or at least in very close proximity. The same considerations regarding schedule and site readiness apply in equal measure to rail.

Air transport is important for your suppliers, vendors, and executives. Usually, proximity to a hub is desired, although it is not an absolute requirement. Most automotive companies have common key domestic destinations such as Detroit; Washington, DC; and New York—but will include others, according to the company. International destination access requirements are entirely dependent upon your company. Smaller airports are usually not at a disadvantage when taking into account the amount of travel from the office or home to the airport and ultimately to a large national hub. Increased security concerns due to terrorism, and quite frankly congestion due to large cities that are typically home to these hubs, has virtually equalized airport convenience for many communities.

The need for water borne transportation will vary with each project depending on where your components are sourced. In some cases, power train components may be coming from either Asia or Europe. A link to a deepwater port via rail and interstate highways is important if this is the case. For international vehicle product distribution, the port must be reliable and efficient and well served for the product market. Adequate storage capability and roll on/roll off (RO/RO) containerized truck trailers capability are required as well.

DO NOT DISCOUNT THE IMPORTANCE OF INCENTIVES

Are incentives important? We would be less than honest by stating that they are not. Recent experience by our firm has shown that states are as aggressive as ever, if not more so. Most automotive companies concentrate on the value of incentives from a Net Present Value perspective; however, each company places different value and importance on certain incentives compared to others. In
general, this does not vary significantly. Abatements, credits, and exemptions used to offset or correct an already high-cost business environment should be scrutinized very closely. Incentives include everything from capital contributions to ongoing subsidies against annual recurring cost. In short, you should normalize the value of incentives and apply the result to a base-case scenario according to your company's own internal financial models. Economic development agencies spend a considerable amount of time demonstrating cost savings and incentive values (as they should) and not nearly enough time concentrating on the underlying mechanics of eligibility and applicability.

We have also seen definitive incentive values assigned to items such as expedited scheduling, increase cost escalation risk, productivity assessments, and many other factors that heretofore were assumed to be non-quantifiable, so ask for these as well.

Some of the major incentives to look for include:

- **Job Screening, Hiring and Recruitment.** Initial screening and testing of prospective employees as well as the provision of facilities, staffing, and administration of the process is considered a must. An on-going training program over a defined number of years is essential as well.

- **Finance—Overall project finance is something unique to each and every firm.** Most economic development finance programs tend to focus on improved access to capital with the benefit to the company based on either tax benefits that accrue to the company or exempt status on property tax. In contrast, as an automotive company you should be more focused on improved rates with limited recourse.

- **Tax Abatements, Credits, and Exemptions—Every state has an entire arsenal of tools intended to provide relief in some form from taxes.** Many states have a program whereby a portion of the personal income tax paid by the employee is captured and diverted back to the company. This incentive potentially can have a high value and high impact to the project.

- **Contributions—Land and the associated due diligence and site preparation required are now typically provided at no cost to the company, including all infrastructure connections and upgrades required.** In addition, significant transportation infrastructure (rail and highway) improvements that are required are usually borne by the state and/or the community. It is not unusual for grants and various subsidies to logistics operations to be included in an aggressive incentive package.

- **Other—Permitting assistance and the commitment to providing a liaison to coordinate activities is common and very important.** Because of volume and load characteristics, automotive assembly plants are considered attractive customers for utilities. Utility rates are often subject to considerable negotiation with connection and service fees usually waived. Communications and marketing assistance in the form of announcement coordination and groundbreaking ceremonies is not uncommon as well as a commitment to ongoing marketing assistance. There is a considerable spectrum of creativity exhibited in this category of incentives.

Incentives will only be important to you if they are realizable and have a demonstrable impact on the bottom line. One of the most common mistakes we have seen many states and communities do is to count items that make no appreciable difference to the bottom line and then compare them to a competing location that offers incentives that do. This is a recipe for disaster, so be on the lookout for this.

**TRIANGULATE AND COORDINATE: HAVE AN EXECUTION PLAN**

Ultimately, when all is said and done, it comes down to a development agreement that delineates the terms and conditions for all parties involved. A clear understanding of the deliverables that includes content, timing, and responsibilities is the primary objective. From a negotiating strategy standpoint, discussing major deal points at the very end is a huge mistake. If you have made
it this far into the site selection process, the crux of negotiations is based on the execution plan, schedule, and performance guarantees. This would be a bad time to have the community scurrying for answers to your questions. Instead, this is the time to discuss the finer points of the deal.

As stated in the introduction to this article, your decision will be driven to a large degree by market demand. The best communities will be able to focus you on a site (or sites) that is ready. This requires their time, money, and commitment, but without these actions on the part of the economic developers, you will find it hard to consider them a serious contender for your project. Once a site (or sites) has been identified, make sure that all parties know their responsibilities. This is true not only for site preparation and readiness, but the marketing aspects as well.

In the end, you'll find that your choice comes down to the state and community that can best convince you that what they are promising (assuming what they promise is what you are looking for) can actually be delivered. The old adage, "the devil is in the details," is never more true than in the last moments of the decision-making process for an automotive assembly plant.

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Which Locations Lead the Auto Sector?

In the U.S., each state with a significant automotive presence has unique benefits; in the last decade, we've seen a lot of big projects open up across the Southeast, and more recently, in Texas. Right-to-work labor laws and lower prevailing wages make these states excellent places to build a car or truck.

Still, as Ed McCallum points out, wages are only one part of the equation. Efficiency and the ability to meet deadlines and avoid production delays are just as crucial to the bottom line, if not more. To that end, an experienced and capable automotive workforce is a tremendous asset, which helps explain why states like Michigan, although hard hit by restructuring and layoffs in the automotive industry over the years, still are home to an incredible amount of automotive companies. In 2002 in Michigan for example, 22% of residents depended on the automotive industry directly or indirectly for their livelihood.

In the charts on this page and following pages, we present a thoughtful look at where power is concentrated today in the global automotive industry. For the U.S., we took a present-day snapshot of the automotive sector. For each state, we looked at automotive employment as a percentage of the total workforce; direct automotive industry employment; auto-related and auto-dependent employment; wages paid to automotive workers; and the number of automotive production and assembly facilities (including suppliers) in the state. Wages and number of facilities were each given a double weight for the purposes of making a final ranking, while direct and auto-related employment figures were each half-weighted. Auto-dependent employment, which includes everything from assembly line operators to mechanics and car detailers, was given a one-tenth weight.

http://www.facilitycity.com/bf_04_07_cover.asp
We think you'll find these U.S. results informative and even surprising. Following the U.S. results, you'll find useful charts showing vehicle production in Asia and Europe, plus a look at where automotive companies in the UK have chosen to locate. – Karim Khan

Recent U.S. Automotive Expansions

Exedy Expands in Tennessee Yet Again

Exedy America Corporation, formerly Daikin Drivetrain Components Corporation, based in Mascot, TN, announced in April that it will add 86,000 square feet to its existing facility in Eastbridge Business Park in Knoxville. The company, which expects to produce more than one million units this year, will begin initial additions with completion expected in early 2005. The manufacturing company's $56 million expansion will create 196 new jobs in the area and an additional $5.5 million in wages.

Exedy is a supplier of torque converters to major automotive companies such as Nissan, Ford Motor Company, and GM. With this expansion, the company will add 350 pieces of new equipment to add two to three new production lines, upgrade transmission technology, and pursue other opportunities for their transmission components business. The expansion will further improve the facility's manufacturing capacity to produce nearly 1.43 million units annually.

"We appreciate very much the support of the State of Tennessee, Knox County, the Tennessee Valley Authority, and the Knoxville Utilities Board in assisting Exedy to expand in East Tennessee," said Koji Akita, Exedy's President & CEO.

Tennessee Department of Economic & Community Development Commissioner Matthew Kisber says Exedy's expansion represents an important investment, and makes it one of three Japanese companies making major investment announcements in the state this year.

Exedy moved to Tennessee in 1994, under its former name, acquiring 138 acres with an initial 237,000 square feet in Knoxville's Eastbridge Business Park. Just two years ago, the company underwent yet another expansion effort adding 96,000 square feet to its existing facility. The company currently employs 340 people.

Alabama Gets Topre's First U.S. Plant

Dedication of the new Topre Corporation automotive parts stamping facility in Cullman County, AL was held in June. The project, originally announced in 2002, is a new 700,000-square-foot facility, representing a $132 million investment on the part of Topre, a Japanese first-tier supplier to automotive companies including Honda, Toyota, Nissan, and Mercedes-Benz.

The ceremony marked not only the opening of the first Topre manufacturing facility in the U.S., but Cullman County's first relationship with a Japanese company. Up to 300 jobs are expected to be created. Topre received a loan from the Tennessee Valley Authority's Economic Development Loan Fund to help purchase necessary equipment.

"The situation surrounding the automotive industry grows more competitive day by day, which makes it important that we find the right base," says Mitsuo Kawasoko, president of Topre. "At first, there were many possible locations, but in the end, we selected Cullman, AL as the base for us to compete and succeed in the tough car industry."

Topre Corporation, founded in 1935, has more than 1,200 employees worldwide, generates $60 million in annual sales. One of the specialties of Topre's
automotive branch is the manufacturing automotive parts constructed of high-tensile steel, which is far stronger and lighter than parts made from conventional steel. The Cullman plant will produce such parts (including metal insulators, metal center pillars designed to protect passengers from side impacts, oil pans, and seat pans) for the Tokyo-based company.

Michigan Remains Tops for GEMA

In February of this year, Michigan Governor Jennifer M. Granholm announced the decision by Global Engine Manufacturing Alliance (GEMA), to bring a second automotive engine manufacturing facility to Dundee, MI. Assistance from the state of Michigan's Economic Development Corporation (MEDC) helped convince the company to choose Dundee for the expansion, which is expected to create 842 jobs directly and indirectly over the next 20 years and generate $323 million in private investment.

"GEMA has chosen Dundee, and Michigan, not once, but twice," Granholm says. "This project is proof that Michigan remains competitive in the challenging global fight to keep manufacturing investment and jobs.

GEMA is a joint venture between DaimlerChrysler, Hyundai, and Mitsubishi. The new facility will provide 450,000 square feet of additional manufacturing space for production of a new family of four-cylinder aluminum engines to be used in a variety of future vehicles.

According to an economic analysis conducted by the University of Michigan, the second facility is expected to create 300 new jobs over a five-year period. The analysis also indicates that another 542 jobs could be created indirectly as a result of the increased economic activity the plant will generate.

GEMA had considered locating the plant at competing sites in other states. The MEDC awarded Single Business Tax credits worth up to approximately $21.6 million over a 20-year period and up to $400,000 in Economic Development Job Training (EDJT) grants to make a Michigan decision cost-competitive. Additional assistance offered to bring the project in the state included a 50% abatement of the company's new real and personal property taxes by the village of Dundee worth an estimated $19.7 million over the next 12 years; a $5 million federal Community Development Block Grant to the village of Dundee to help with wastewater facility improvements and pre-employment training assessment activities; a worker training grant from the Southeast Michigan Community Alliance MichiganWorks! office valued at more than $2.6 million; and the MEDC's support of Dundee's application for a $800,000 Transportation Economic Development grant through the Michigan Department of Transportation for roadway improvements.

During 2003, Michigan saw more than $2 billion in automotive investment.