

Evaluating Options for Large-Scale Capital Projects

To grow and prosper, a business must continually change and strive for improvement. Standing still is not an option.

Sometimes, that change can take place within the “four walls” of an existing plant through the introduction of new equipment and technologies. Other times, the existing “four walls” are not enough. They may be too small, too old to be sanitary, or in the wrong location, and a new facility is needed.

When facility change is needed, a decision must be made from four main options:

- 1. Renovate the existing plant** – This may be the least-cost option and eliminates the concern of new staffing, but may not allow for an ideal, long-term result.
- 2. Renovate and expand the existing plant** – Likely the least-cost option for a larger plant, but also may not allow for ideal result due to site limitations.
- 3. Renovate a brownfield facility**- Provides the option of a more suitable facility, but with a higher cost.
- 4. Build a new plant** – Likely the highest cost option, but also the only option that allows for an ideal, optimum, long-term result.

In order to make the optimum facility decision, below are some of the questions to consider:

Location Considerations

- Based on logistics, is the existing plant or new site well-located?
- Does the community workforce have an adequate and suitable mix of skills available to operate the plant for the foreseeable future?
- Is the plant located in a Right-To-Work State? If not, how significant is that issue?
- Are the required utilities adequate and are they reasonably priced?
- Will utility capacity be adequate for future needs?
- Is the utility infrastructure reliable?
- Is electric serviced from multiple sources? How far is it to the substation?
- Is the site served by public transportation?
- Is the local community positive towards the plant and its operations?
- Are there residences close-by that may object to increased traffic and noise?
- Is the site rail-served? If so, is the rail service reliable?

- What level of environmental attainment for air emissions applies?
- What are the wastewater disposal restrictions and issues?

Condition of Existing Building

- If the existing building is to be renovated during operations, what are the resulting challenges?
- Is the building's clear height high enough?
- Can the wall, floor and ceiling surfaces be made sanitary, with low future maintenance?
- Is the existing roof structure strong enough to support utilities and conveyors?
- Is the floor smooth and level? If not, what will it cost to make it so?
- Does the facility have design details appropriate for elevated humidity levels to prevent condensation?
- Are utility surfaces laid out for easy sanitation? Are the surfaces smooth for easy sanitizing?
- Are there roof deck screws that are hard to clean and pose a safety hazard for sanitiers?

- Are there explosion hazards that require significant building modifications?
- Is there safe and easy access to the roof for maintenance?
- Can oil, sugar and yeast tanks be located inside the building for temperature control and ease of maintenance?

Food Safety

- Can the current facility meet food safety standards?
- Is there controlled access to the property?
- Is there controlled access to building?
- Is there controlled access to ingredient delivery points?
- Is there isolation of truck drivers from production space?

Personnel Safety

- Are exterior entrances locked at all times and only accessible to employees?
- Are there any low clearance locations?
- Is access to all equipment simple and safe?

Security Considerations

- Is the facility in a safe neighborhood?
- Is the property, or can the property be, fully fenced?
- Are the exterior walls and doors solid and not easily penetrated?

Operating Costs

- Is there loss of productivity due to current line layout?
- Is there product waste due to inconsistent quality of utilities?
- Can maintenance easily access all equipment?
- Are all plant components and surfaces easily cleaned and accessible for maintenance?
- Is there efficient people flow within facility?

- Is there efficient ingredient and product flow from receiving to shipping?

Sustainability

- Is LEED® certification desired? If so, what level?
- Can reusing an existing building be considered?
- Can the current facility be modified to use non-CFC refrigerants?
- Can public transportation to the plant be arranged?
- Do you have a LEED® checklist developed so that each building can be measured for attainable points and related costs?

Once all of the questions on this list have been considered, along with any other questions relevant to the capital project, a means of comparing each option is required. By establishing a matrix, similar to the one below, each criteria can be evaluated and ranked according to their relative importance and the viability of the various options under consideration. Summing the total for each column then provides a guide to comparing the options. Most importantly, the chart allows for both subjective and objective evaluation of factors impacting this major capital expenditure, so that an informed decision can be made.

In the next issue of Bakery Insights, we will present additional information relative to this decision matrix tool and provide a sample evaluation.

	OPTION	RENOVATE	RENOVATE AND EXPAND	RENOVATE BROWNFIELD	GREENFIELD
WEIGHTING	PROJECT ITEM UNDER CONSIDERATION	Relative Importance x Weighting = Influence			
	ITEM 1				
	ITEM 2				
	ITEM 3				
	ITEM 4				
	Weighted value totals = Relative project value				