

BENEFITS OF AN INTEGRATED LIFE CYCLE DESIGN APPROACH

By Jeremy Rocha, PE

It's just a garage. Most parking consultants have heard that statement too many times to count. As members of the parking industry, we know parking shouldn't be an afterthought or mere code requirement. We also understand that the parking experience offers the first and last impression of a city, campus, or property.

So how do we move parking up the pecking order in relation to other project elements? How do we transform parking from a necessity to an asset? From an operational burden to a revenue stream? In other words, how do we deliver a great garage that meets all user, owner, and stakeholder expectations? To do all of that, we must start implementing an integrated life cycle approach to parking design and thinking.

Traditional parking consulting services consist mostly of programming and schematic design, with little involvement in the construction and operational phases of the project. Parking professionals need to be involved in all phases because we understand that most capital is spent during the operational phase of the parking facility's life.

Cost Breakdown

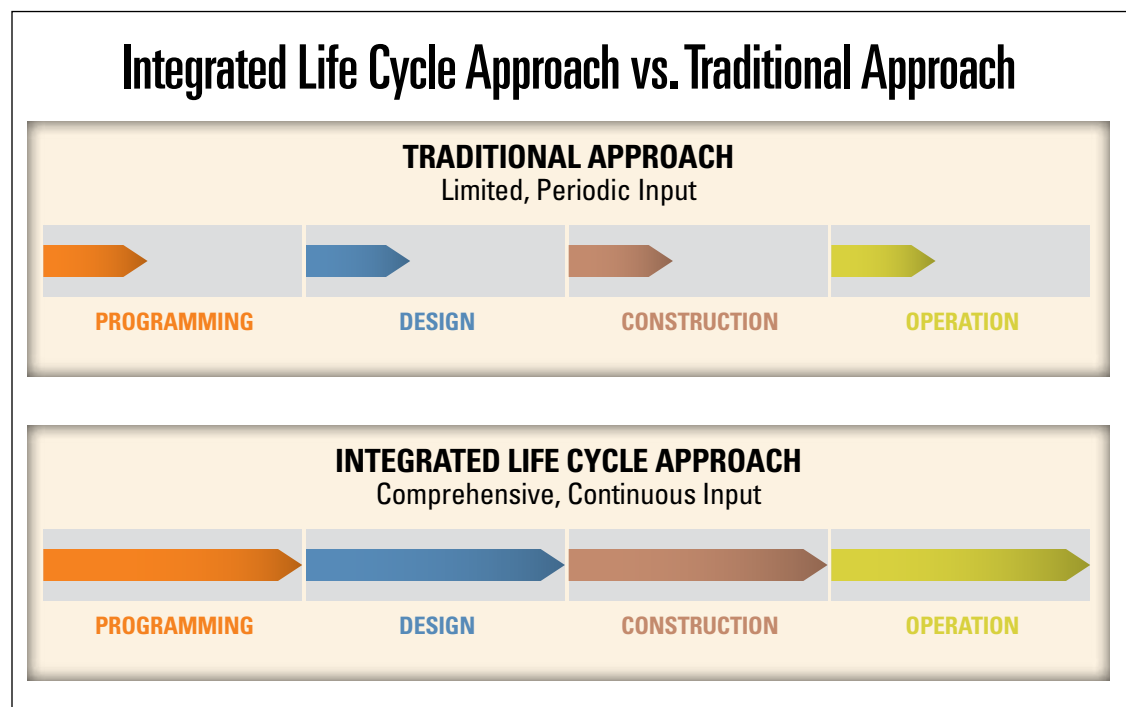
In simple and very broad terms, a parking facility's first expenses (planning, design and construction) typically account for around 10 percent of the total project cost, while the remaining 90 percent goes to operating costs (maintenance, equipment, energy). What this means is that these first-cost decisions have a tremendous effect on the garage's bottom line and the owner's return on investment (ROI).

Understanding the specific design and construction measures that will produce the safest, most efficient, and highest-performing structures is critical to maximizing ROI. Traditional parking consulting services can't address all of those factors.

The integrated life cycle approach relies on the diversity and strengths of the parking consulting



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partner—a partner with experience in all design and operational aspects of parking consulting. Some of the tangible advantages can include:

- Customized parking design specific to the behaviors and trends of users.
- Optimized structural grids for the garage.
- Durability-focused design that increases facility longevity and ROI.
- Optimal circulation within and around the parking facility that accommodates multiple modes of transportation and integrates appropriate technology.

Building a Team


What we need to explain to all project stakeholders is that it takes a comprehensive team to deliver an integrated life cycle approach and can yield:

- Increased revenue.
- Decreased operating costs.
- Improved safety, functionality, and convenience.
- Extended service life.

A recently opened U.S. parking structure is a prime example of how the integrated life cycle approach can directly affect the delivery and design of garage. Early involvement allowed the understanding of owner, operator, and user needs. As a result, spatial efficiencies in the design (eliminating a basement level) and logistical efficiencies in the sequencing of construction (to help minimize construction delays due to harsh weather conditions) were made. A life cycle cost analysis identified design elements that would yield low maintenance and high performance. Implementing the approach reduced upfront costs by \$3 million, reduced operating costs through \$3.6 million in energy savings, and extended the garage's service life by 37 years.

This isn't to say that all projects will be perfect examples of this approach. However, owners generally appreciate and welcome the benefits of an integrated life cycle approach that focuses on each project design element as seen through the eyes of the users and operators.

As parking consultants, we know parking is often the first and last impression of the facility and is instrumental in spurring development. To us, it's not just a garage.

It's an investment. The integrated life cycle approach meets the challenge of transforming parking to an asset and not an afterthought. 



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