

CASE STUDY



Determining Capital Funding Requirements to Support Strategic Asset Management at the Port of Seattle

The Client

The Port of Seattle's services and facilities accommodate the transportation of cargo and passengers by air, water and land; provide a home for the fishing industry; and foster regional economic vitality and a quality life for King County citizens. Its vision is "to be the most effective and respected provider of transportation facilities and services to promote international trade and commerce."

The Port is made up of three operating divisions — Aviation, Seaport, and Real Estate. The Aviation Division operates Seattle-Tacoma Airport — the 17th busiest in the US — serving more than 31.5 million passengers a year and moving more than 364,000 metric tons of air cargo annually. The Seaport Division operates the marine cargo terminals, handles related maintenance and serves as a major US gateway to Asia. The Port's newest operating division, the Real Estate Division, strives to improve the use of selected Port assets to promote regional economic vitality and job creation and enhance the built and natural environment.

With a total asset replacement value of \$8.5 billion, Port of Seattle transportation facilities support nearly 200,000 jobs in the Puget Sound region and generate more than \$12 billion in business revenue.

The Challenge

Like many organizations, the Port of Seattle is an owner, builder, operator, maintainer, and lessor for over a thousand buildings and non-building assets. Until recently, there had been a strong focus on new construction rather than renewal in the Port's 10-Year Capital Program. In the past, the program was largely driven by capacity — making new construction the priority. But in 2005,

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*Dave Tomber
Manager, Strategic Facility
Planning at the Port of Seattle*

for the first time, the Port of Seattle made an allocation of funding specifically for renewal. This was followed by a decision in 2007 to develop a refined approach to managing the Port's facilities. They wanted to be able to answer five key questions:

- What capital assets do we own?
- What are they worth?
- What is the age and condition?
- What should we spend to maintain and renew?
- If renewal and maintenance funding are not at optimum levels, what is the reduced life and deterioration, and are there economic benefits to total cost of ownership?

"Traditionally, funds were less constrained and we would basically rebuild our way out of renewal problems through facilities for new capacity or program," said Dave Tomber, Manager, Strategic Facility Planning at the Port of Seattle. "However, financial pressures from a variety of sources forced us to drive down costs and be more efficient with our existing facilities and assets."

With renewal as a larger part of the capital program, the Port of Seattle started to take a closer look at their facility portfolio as part of an overall effort to operate more strategically. They realized that they did not have the answers to many of their initial questions, including which facilities or assets they owned, who holds responsibility for maintaining those facilities or assets, and also key details about those facilities or assets including the age, condition, and replacement cost.

"We're so large that a major challenge was actually understanding what we owned," notes Tomber.

In addition to the basic data, the Port of Seattle wanted to understand the impact of varying funding on their facilities and develop an effective and efficient renewal strategy that would help answer questions such as: What is the expected lifecycle of this facility or system based on varying levels of renewal funding? And how do we make decisions about funding based on our strategic priorities and optimize total cost of ownership?

After some planning and research, Tomber discovered that legacy costs were actually very significant over time. He estimated that for every \$1 spent on construction, the Port would have to spend \$3 for maintenance over time,

which can translate into “big money.” And with capital facility assets making up 83% of the Port’s owned assets, the organization started viewing its existing capital facilities as a core strategic resource with a significant impact on revenue generation.

“As with most organizations, we knew we would never get 100% of the funding our facilities require, so we needed help in deciding how to appropriate our funds intelligently. In other words, where can we spend the dollars we do have to get the most ‘bang for our buck?’” adds Tomber.

The Solution

The Port of Seattle decided to take a strategic portfolio approach with VFA.facility® capital planning and management software and the VFA consulting team. To first understand the scope of their portfolio, the VFA consulting team gathered all relevant facility information through Port records, interviews with individual site facility managers, and aerial and satellite imagery. Once all of the assets were determined and the team identified owned versus leased properties, the data was input into VFA.facility and an asset detail record was established for each facility.

The Port took an age-based condition modeling approach. The VFA consulting team took data and observations from a recently completed terminal as well as templates in VFA.facility and built models of expected systems within each building type and the costs and lifetimes associated with each. The models were applied to each building based on type and adjusted according to square footage and age. VFA.facility was then able to simulate current condition and project future funding. This can be done at the building level — with the understanding that specific conditions at each building may vary somewhat from the model — and, more importantly, as a high-level rollup across facilities to determine overall spending needs and the impact of current funding levels on long-term condition.

“The modeling allowed us to initially put together a broad and scalable database of the assets in our entire portfolio and provides the Port with a baseline for adding greater asset detail over time,” said Tomber.

VFA.facility also enables the Port to look at different funding scenarios by targeting a specific Facility Condition Index for an asset or group of assets and considering the impact on condition by varying the funding. The Facility Condition Index (FCI) is an industry-standard parametric tool used to compare relative building conditions. The FCI is the ratio of deferred maintenance or

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problem dollars to replacement dollars. The lower the FCI, the lower the need for renewal funding relative to the facility's value.

The Port also worked with the VFA consulting team to develop a strategic planning tool unique within the industry, which analyzes the effect of preventative maintenance funding on lifecycle. Using data extracted from VFA.facility, total cost of ownership can be optimized by understanding the balance between funding for capital renewal versus operational maintenance. It quantifies the effect of reduced maintenance funding on accelerated deterioration and life reduction.

The Results

The Port of Seattle and the VFA consulting team completed the modeling for the entire portfolio. The Port now has the answers to their original five key questions — they know what capital assets they own, the worth, age, and condition of those assets, what should be spent in order to maintain and renew the assets, and what impact a lack of funding will have on those assets. They also have insights into total cost of ownership.

VFA.facility provided the Port with a centralized database for standardized information about their facilities, as well as the ability to analyze the data, compare facility conditions across the portfolio, and determine funding levels and their impact.

The organization is also using the database for determining the condition in lease agreements. "We have a number of facilities that are leased out to concessionaires, rental car companies, airlines, etc.," adds Tomber. "It's helpful in our leasing agreements to be able to filter a single database for key condition information."

"We really wanted to determine how we could 'spend smart' on our portfolio," adds Tomber. "We wanted to put a defined strategy behind every decision we make going forward. VFA.facility and the VFA consulting team has helped position us to do that by developing a better understanding of our facility assets and creating strategic planning tools to support operating and capital funding decisions."

About VFA, Inc.

VFA helps organizations strategically manage their facility portfolios with Capital Planning and Management Solutions (CPMS™) that combine software, assessment services and business process consulting. Organizations in government, education, healthcare and corporate markets employ VFA solutions to manage over four billion square feet of real estate.

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