Design-Build-Operate (DBO). A private partner designs, builds and operates a water and/or wastewater facility, while ownership remains with the public partner who finances the project and retains rate setting authority.

**A DBO partnership transfers responsibility and risks from the public partner to the private partners.**

**Public Partner**
- Initial capital project
- Staffing and labor costs
- Utilities
- Chemicals
- Maintenance and repair
- Vehicles and rolling stock
- Compliance risk
- Capital improvements
- Rate setting
- Asset ownership

**Private Partner**
- Initial capital project
- Staffing and labor costs
- Utilities
- Chemicals
- Maintenance and repair
- Vehicles and rolling stock
- Compliance risk
- Capital improvements

The scope of the partnership could include: treatment plants, collection and distribution systems, pump stations, meter reading, customer service and billing.

A typical DBO partnership has the following attributes:
- 10 to 20 year contract term
- Fixed fee for design, construction and long-term O&M
- Transfer construction risk to private partner
- Guarantee schedule
- All existing employees can be offered employment
In 2013, Inframar partnered with Inima Construction, USA, to design, build, and operate the Hialeah Brackish Water Reverse Osmosis treatment facility in Hialeah, Florida.

Inframar assisted Inima in the startup and commissioning of this plant, and now operates the 10 million gallons per day (MGD) brackish water treatment plant (WTP), six raw water wells, and two brine injection wells. The plant uses groundwater drawn from the Floridian Aquifer and treats it using a reverse osmosis (RO) membrane filtration processes to produce potable drinking water.

Inframar is responsible for all of the operations and maintenance (O&M) services, including the management and staffing required for 24/7 operations of the facilities. Inframar ensures that the plant meets certain water quantity performance guarantees and conducts the necessary monitoring of electrical usage associated with the RO trains. Inframar also implemented a data management system (DMS) designed to facilitate an optimized process and regulatory reporting. In addition, Inframar developed an asset management program designed to extend asset lifecycles, including implementing a cloud-based computerized maintenance management system (CMMS). Since 2013, Inframar has continued its partnership with Inima to optimize treatment processes while reducing operating costs.

This partnership allows Inframar to work closely with Inima to ensure that the system is well run, properly maintained and operated in a cost-effective manner.

**PRIVATE PARTNER RESPONSIBILITIES**
- Overseeing the startup and commissioning of the plant
- Operating, maintaining, and managing the plant
- Designing and constructing of major capital projects
- Permitting for any new or upgraded facilities
- Regulatory compliance and reporting
- Developing and executing an asset management plan
- Recruiting and staffing

**BENEFITS**
- The development and implementation of process control and a cloud-based data management system (DMS)
- Ongoing process optimization
- Best-in-class asset management program, which will extend the life of the asset
- Reduced operating costs

**DETAILS**
- Population Served: 230,000 (the city of Hialeah)
- Type of Facility: Water treatment plant
- Flow: 10 million gallons per day
- Other: Six raw water wells and two brine injection wells

**Testimonial**

"Inframark has been a trusted partner on our Brackish Water RO Water Treatment DBO project. From the beginning, they supported our efforts in the startup, commissioning, and shaking the bugs out of the initial operations. Over the past seven years, they have been very professional and worked seamlessly with the Inima organization, setting up the critical asset management, and operational and safety programs for the facility."

- Ramon Diaz
  Managing Director, Inima, USA
Jacobs partnered with the Seattle Public Utilities to design, build and operate the Cedar Water Treatment Plant, which is the largest and most sophisticated water treatment and supply operations in the western United States.

By entering into this partnership, Seattle Public Utilities saved about 30 percent, or $50 million, over a conventional design/bid/build procurement process. Partnering with Jacobs to design and build the facility enabled Seattle Public Utilities to establish expectations and clarify contract terms during project negotiations, which shortened the project schedule considerably.

Upon completing design and construction, Jacobs began a long-term contract with Seattle Public Utilities in 2004 to deliver comprehensive operations management. The LEED Gold-certified Cedar facility delivers 70 percent of the drinking water used by Seattle and surrounding communities.

With a treatment capacity of 180 million gallons per day, expandable to 240 million gallons per day, the Cedar Water facility is the first to use ultraviolet technology on a large scale for drinking water treatment.

The Cedar Water Facility has received broad recognition throughout its operations, including numerous safety awards, a Washington State Operator of the Year award, and the National Council for Public-Private Partnership Infrastructure Award.

**Testimonial**

“Seattle Public Utilities is very pleased with the technical innovation offered by Jacobs, the LEED GOLD certification, the effective team integration which has resulted in operations optimization, the excellent safety record, and reliable high quality performance of the facility. The Jacobs team met the very aggressive schedule associated with [our] DBO project, ensured good community relations, and to date has continued to successfully operate this facility under the operations phase of the DBO contract...It has been our pleasure to work with this team, and we enjoy the benefits of our continued relationship on this project.”

- Fred Aigbe
Manager of Seattle Public Utilities

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<tr>
<th>PRIVATE PARTNER RESPONSIBILITIES</th>
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<tr>
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<tr>
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<tr>
<td>• Transfer of compliance and performance risk to private sector partner through design/build/operate delivery model</td>
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<td>• Public sector partner retains system ownership and decision-making input</td>
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<tr>
<td>• High-quality water for large customer base</td>
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<tr>
<td>• $50 million savings relative to traditional design/bid/build delivery</td>
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<td>• Long term cost and energy savings</td>
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<tr>
<td>• Expedited design and construction schedule brought asset into service much faster than traditional delivery</td>
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<th>HIGHLIGHTS</th>
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**About NAWC:** The National Associations of Water Companies (NAWC) represents regulated water and wastewater companies, as well as ones engaging in partnerships with municipal utilities. Partnerships with NAWC member companies can come in many forms. The benefit of a contract operations approach is that these agreements can be scaled and customized to meet a community’s unique water and wastewater needs -- there is no one size fits all approach. NAWC members provide 73 million Americans with safe and reliable water service every day. Learn more about NAWC and the benefits of working with our members by visiting, [www.nawc.org](http://www.nawc.org).