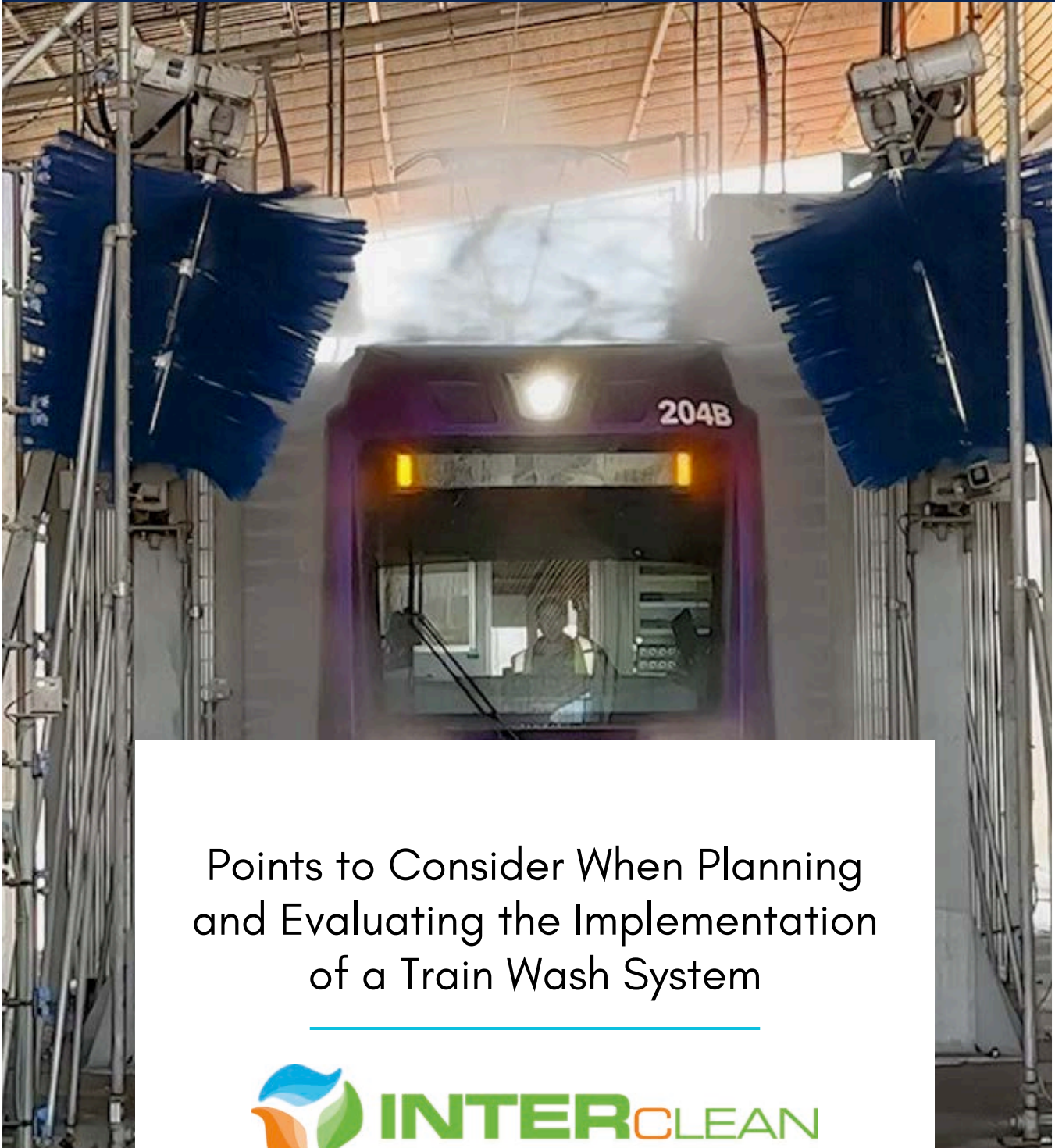


TRAIN WASH SYSTEMS

COMMUTER RAIL LINES



Points to Consider When Planning
and Evaluating the Implementation
of a Train Wash System



what you should know

It can be challenging to find the right wash system to maintain the cleanliness and appearance of the rail cars for public transit systems.

During the evaluation phase, it can be helpful to know what to look for, who to talk with, and how to avoid certain pitfalls.

In this guide, we outline key factors that public transit agencies should consider when purchasing a train wash system including:

- rail car profiles and operating conditions
- wash system cleaning methods and performance
- custom engineering and design
- constraints
- environmental sustainability
- recommendations and references

Addressing these will help you acquire a system that delivers efficient cleaning, reduces downtime, and extends the lifespan of the trains that both your transit system and its passengers rely on.



infrastructure

EXISTING LAYOUT

Space available for new equipment, location of any current water and electrical systems.

sustainability

WATER RECYCLING

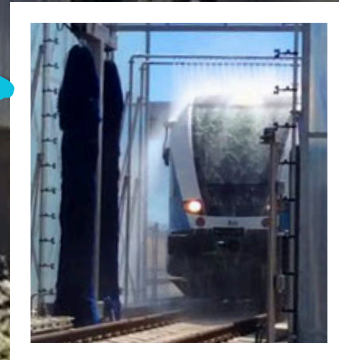
Reclaim and recycle up to 90% of wash water used for cleaning the rail cars.

cleaning options

FRICITION AND TOUCHLESS

A combination of slanted, vertical, and eaves brushes are used to clean the sides of the train from top to bottom .

The front, rear, and top of the cars are washed with touchless cleaning using high-pressure spray and high-volumes of water.



PROCURING A TRAIN WASH SYSTEM?

a sample set of the factors to consider when evaluating options



rail line operating conditions and profiles

Start by identifying the specific cleaning needs of your rail cars. Take into consideration factors such as the rail car profile, roof mounted components, frequency of use, the type and amount of dirt buildup, and the climate in which your train lines operate.

This will help you and the manufacturer identify the key features and capabilities needed to clean the exterior of your commuter trains effectively.

wash system cleaning methods and performance

Once information about your train lines' profiles and operating conditions is shared with the manufacturer, they will evaluate different train wash systems and cleaning methods to ensure they will effectively remove dirt, rail dust, and contaminants from your trains. You should receive recommendations for a wash system where the cleaning methods are fitted to your specifications.

When exploring wash systems, keep in mind the abundance of available add-ons. Make sure to ask about and understand key features like a RO rinse or additional vertical brush sets. This is essential for managing costs and fully understanding the functionalities and capabilities of the wash system your transit line will be using.





identify purchasing constraints

factor in short- and long-term budgets

Compare your budget constraints with the costs of different train wash systems. Consider both initial system costs and **long-term expenses**, such as yearly operational costs (water and sewer), **preventive maintenance, servicing, and detergent selection**. Explore options for annual chemical maintenance checks and preventive maintenance packages.

space and infrastructure

Evaluate the infrastructure and space at the site earmarked for your rail wash system. Consider the **layout of existing structures, as well as the power supply and plumbing**. Having current structural, electrical, and plumbing schematics on hand for contractors, engineering firms, and manufacturers is crucial. This will guarantee that the new system aligns well with the available space.



custom engineering

The manufacturer will design each component of your wash system around the rail cars used in your transit system according to your requirements. They will consider layout, structural, budgetary, and other constraints provided when creating the schematics. For example, based on the profile of your train cars they will assess whether friction cleaning is feasible and identify the most suitable brush types to remove residue from your trains. The following examples illustrate how brush shape can be influenced by the profiles of the rail cars.

InterClean customizes each wash system design to meet the individual transit lines' needs.



vertical brushes
ideal for cleaning flat surfaces
and square corners

1.

eaves brushes
supplement vertical brush
cleaning for rounded or non-
square corners

2.

custom contouring
vertical brushes tailored to fit
the profile of the rail car for a
precise clean

3.

environmental sustainability

If your public transit system aims for more sustainable practices, ensure your specifications document includes requirements for the train wash system to integrate one or more of the following sustainability measures:

- wash water recycling
- biodegradable detergents
- rain water harvesting and storage
- effluent monitoring
- enhanced water treatment with bioremediation
- pH neutralization



wastewater management

Choosing sustainable features like these not only reduces the impact on local ecosystems but also aids in operating efficiently in dry climates and regions with strict regulations on freshwater usage.

references and recommendations

Ask the manufacturer to provide references. Leverage experiences of other transit agencies. Talk with them to gain insights beyond what you can find in brochures, or from individuals directly involved in the current project.

system performance

Transit agencies that have already installed and used a train wash system can offer firsthand insights into its performance under real-world conditions. Ask for feedback on cleaning efficiency, durability, and any operational challenges they have encountered.

manufacturer post-installation support

A train wash system is a complex piece of equipment that requires regular maintenance for optimal performance. Post-installation support ensures that the system continues to operate efficiently and effectively over its lifespan. Ask other agencies about their experiences with the manufacturer's support services, response times, spare parts availability, and effectiveness of troubleshooting and repairs.



Post-installation support and maintenance services from a manufacturer are key areas often overlooked. Take these into account as you evaluate proposals and upfront costs.