



Next Generation IT Solutions for Rail

# Leveraging Predictive Analytics in the Rail Industry



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## Predictive analytics uses historical data to make predictions about events in the future...

The Rail Industry is gathering actionable data at an unprecedented rate. As an example, consider the evolution of Positive Train Control systems that leverage devices and systems across a diverse network (truly a functioning Internet of Things (IoT)). PTC not only generates real-time data, but ultimately, this information is stored as valuable historical data enabling better insights and more informed business decisions for the future.

Added to the information generated from deployed PTC systems is the considerably large historical data stores already maintained in railroad industry databases. These data stores can be accessed through effective data mining, data modeling and statistical software tools to significantly impact operational efficiencies.

A thumbnail survey of areas in the Rail Industry where predictive analytics can help include:

- Safety and inspection processes
- Railcar, locomotive and rail maintenance cycles
- Fuel and labor cost management
- Traffic, scheduling (e.g. bad stops) and rail network
- management
- Environmental and health management actions

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The challenge with managing big data and in using data analytics effectively, according to many IT executives, is complex. In particular, the multitude of available data sources calls for an IT analytics architecture that supports a more agile “presentation side” system backstopped by a robust, service oriented middle layer. This, many feel, is key to building an analytics platform that is integrated (fully) and flexible, and at the same time, technologically agnostic.

In the end, the goal is worthy for predictive analytics – to provide Rail Industry managers with the information needed to make proactive rather than reactive decisions.

## About RailcarRx

Our software and systems development experience in providing the Rail Industry with leading software solutions combined with our development of custom solutions for Rail Industry clients directly, means that we have a broad range of Rail Industry experienced resources and pre-developed software components on-staff, and at-hand. **Leveraging our team can help you reduce overall project costs, reduce risk and accelerate your project development timelines.**

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### More information:

Rob Lyon  
COO at RailcarRx - Primus  
(972) 753-6500 x117  
[rlyon@railcarrx.com](mailto:rlyon@railcarrx.com)

