IBM Smarter Public Transportation Demo

Information is growing at an exponential rate… and as more information becomes available, city leaders can leverage it to improve their communities and enhance public services for their citizens.

Rather than hinder a city's infrastructure, information can be key to developing a smarter city, empowering it to be more efficient and effective.

For example, information can aid cities in developing smarter public transportation.

As populations grow, pressure on the existing road infrastructure also increases—so more individuals are choosing public transportation to avoid traffic, tolls, gridlock and frustration.

Smarter public transportation systems take maximum advantage of information to help achieve more active and satisfied participation in public transportation. They ensure trains are on time, reliable and available during peak hours, that stations are clean, and that systems within them are working well.

So how do cities harness information to create smarter public transportation systems?

IBM Cognos software and IBM Maximo software provide analytics and asset management capabilities that work hand in hand to ensure the short- and long-term health of transportation system equipment and infrastructure.

IBM software provides leading Enterprise Asset Management to make sure all elements of public transportation are operational, in compliance, and maintained. Reliability is increased and costs are reduced by extending the life of equipment, optimizing parts management, and streamlining all maintenance and repairs with shared data about all assets.

IBM software also provides the analytics needed to take transportation systems from reactive emergency maintenance to more proactive planned maintenance, with a single view of information that can help planners anticipate fleet-wide equipment issues based on failures and historical data.
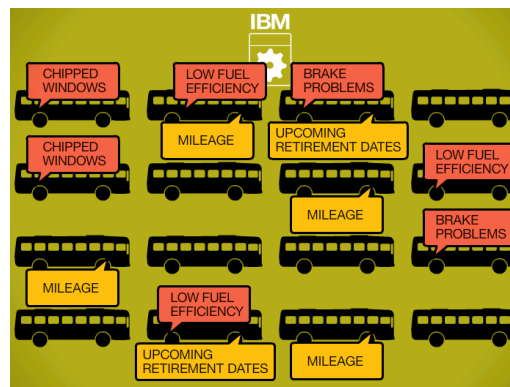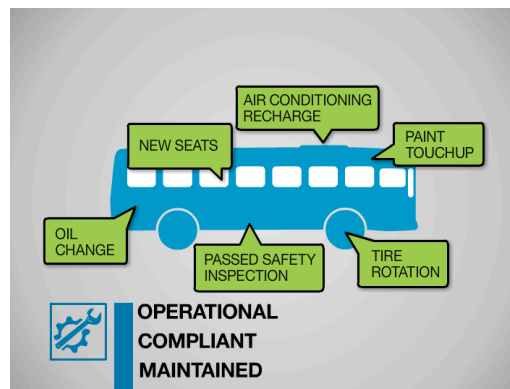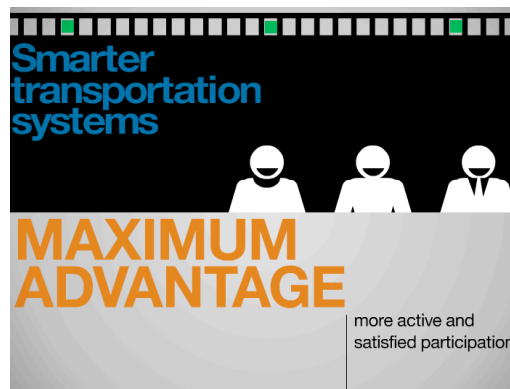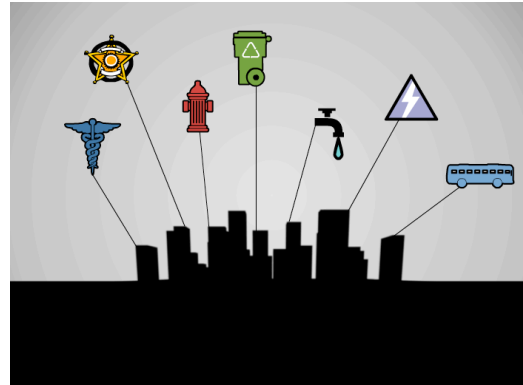
This means that customers are on time and happy, leading to more regular public transportation use, decreasing road traffic and environmental impact, and helping cities meet strategic goals.

Let's take a look at how one citizen's commute stays on track with Smarter Public Transportation.

Meet George. Until today, George used public transportation only occasionally.

But a recent surge in population growth in his city has compelled government leaders to put a new road charging system in place—and forced George to look at the train as his daily commuting standard.

His previous experience has been less than ideal, so George left for work early today, expecting delays.

And in fact, George's train *could* have been late had it not been for the Smarter Transportation solutions from IBM that his city put in place to improve the reliability and availability of transportation equipment.

What George doesn't know, but the transportation maintenance planner is well aware of, is that the asset management system was alerted the prior evening about two potential issues that could affect train schedules.

First, sensors alerted the asset management system at 9 p.m. to a potential problem with a switch on the A-train track.

Next, a set of meters on the train station escalators triggered an alert that a repair would be needed now, a full week ahead of planned preventive maintenance—likely the result of a steady increase in new transportation riders placing heavier demands on equipment.

But with IBM Smarter Transportation solutions, the maintenance planner was able to tackle these problems before they impacted commuter schedules.

The planner was able to gather all available data on the track switch—like age, usage, spare parts, warranty, last maintenance
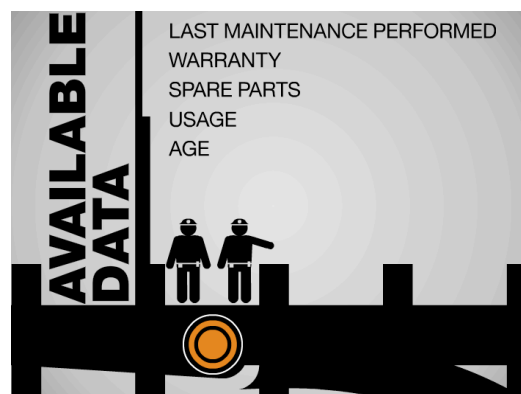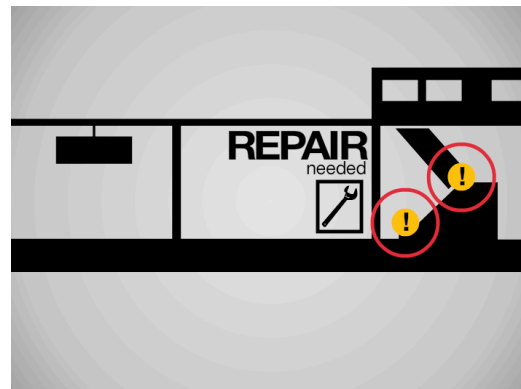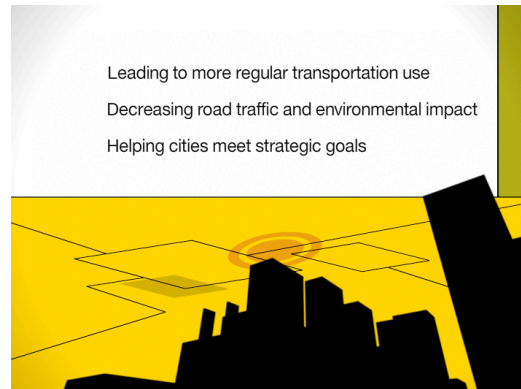
performed, etc.—in one place, and determined that the switch would need to be repaired prior to the morning peak service.

As George was watching the evening news, the planner had his eye on a maintenance crew—using the asset management solution to determine exactly when A-train service would begin for the day and which work crews could be assigned to perform the work.

As George was setting his alarm, the planner was ordering replacement parts, automatically adding them to a work order along with information about the assigned crew, work timeframe and necessary tools.

Before George took his morning shower, separate crews completed track and escalator repairs, feeding data back into the asset management system.

The escalator inspection team also entered data about other parts needing replacement and repair, and the asset management system automatically generated a work order and reserved parts for follow-on maintenance.

The planner also found a crew available to finish repairing the station escalators that evening.

And while George enjoyed a latte at the transit station awaiting his train, the planner performed historical analysis on both the track switch and the escalators.

This gave the planner the data he needed to replace switches of similar usage and age for the track, and prompted a change to the recommended preventive maintenance schedule for escalators due to increased ridership.

With the track switch replaced during off-hours, George's train is on time today, much to his pleasant surprise.

And with preventive maintenance scheduled, George's commute is likely to be smooth tomorrow and for weeks to come.

With Enterprise Asset Management from IBM Maximo and Business Anayltics from IBM Cognos, the maintenance planner was able to address imminent maintenance needs—so that
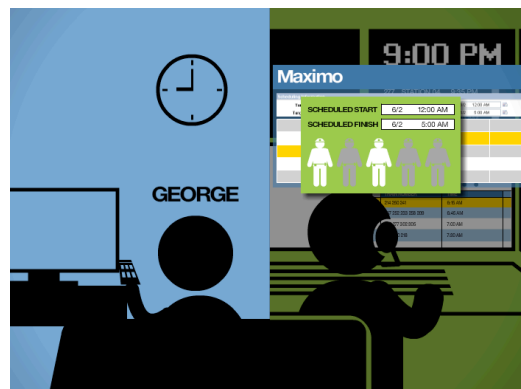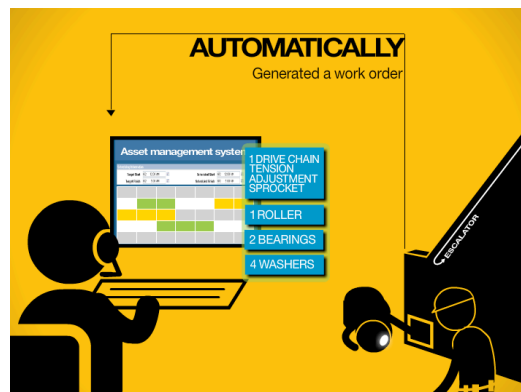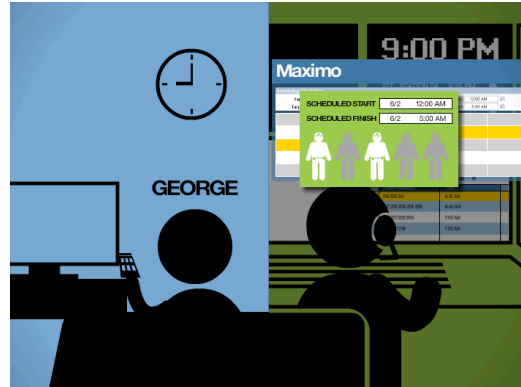
issues don't become emergencies. IBM software helps public transportation become smarter, getting George and his fellow commuters to work on time today, and encouraging them to get back on the train tomorrow.

Transportation systems