WE USED TO SCHEDULE REPAIRS.

Faced with ever-shrinking budgets and constant streamlining, governments, utility agencies and businesses around the world are struggling to keep their operations running smoothly. That's why leaders and their teams are fixing the way they fix things.

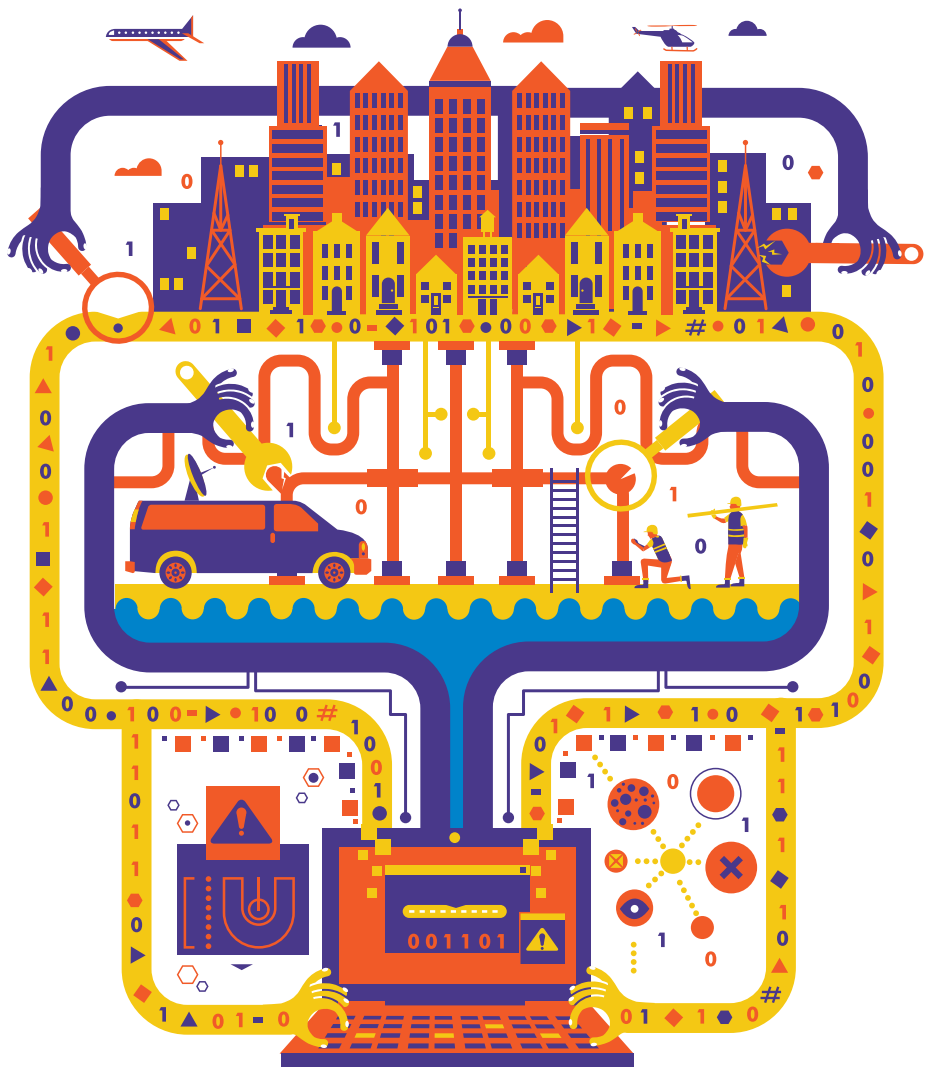
The world has always worked on scheduled maintenance. "Change your oil every 3,000 miles," for example. The problem is, things don't always break on schedule. This can leave companies either fixing things that don't need it, or cleaning up after the problems that happen earlier than they were supposed to.

Over the next decade, India will need to spend an estimated $1.7 trillion on infrastructure repair.

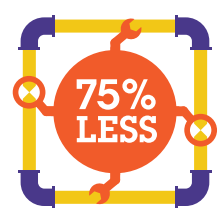
This isn't efficient—unnecessary repairs mean unnecessary downtime. It isn't safe—accidents can happen when things aren't properly maintained. And with the U.S. alone needing to spend an estimated $2.2 trillion in the next five years to bring its infrastructure up to date, the way of "always doing things" is becoming less and less feasible.

FROM SCHEDULED MAINTENANCE TO PREDICTIVE MAINTENANCE.

Today, the businesses and organizations that understand the need for change—along with the leaders bold enough to act on it—are using predictive maintenance models to anticipate not only when a problem will occur, but where and how. With sensors and analytics that scan for problems thousands of times a second, these models can help predict which part will fail, where a pipe will burst or even what storm will be most likely to blow a branch down on a power line. Which means that instead of fixing things whether or not they need it, they can predict a problem and help prevent it from becoming an even bigger one.



NOW WE PREDICT THEM.



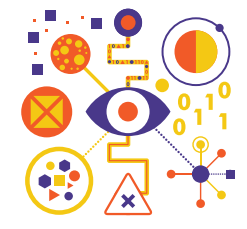
Predictive maintenance can help reduce breakdowns by up to 75%.

FIXING WHAT WILL BREAK NEXT, FIRST.

Imagine a leaky faucet in your house. Now imagine you have 10,000 leaky faucets, and they're all buried underground. That's what senior managers at a major city's water utility were constantly struggling with. Rather than replace every pipe and valve in the system, they added sensors and analytics that can identify which assets are most in need of attention. Now the utility can pinpoint small leaks and stem them before they become floods. Managing its infrastructure proactively rather than reactively has helped the utility reduce its customer calls by 36%.

An oil refinery is a complex puzzle made up of thousands of interlocking pieces, and for such a system to work at its safest and most efficiently, every one of those pieces has to function flawlessly. So Kenya Petroleum is using predictive maintenance to help monitor and track the lifecycle of every part of its 60,000-square-foot refinery. Now the company can predict when a pipe, pump, compressor, valve, furnace, turbine, tank, heat exchange unit, boiler or any other piece of the puzzle will fail before it does, so it can have the right parts available and schedule repairs during downtime instead of bringing the entire operation to a halt.

These same predictive principles can be applied to something much more personal. A leading maker of blood glucose monitoring systems for people with diabetes sends out over 4 billion test strips a year. These test strips are used only once, but they play a crucial role in providing accurate results. That's why the company began using predictive maintenance to quickly identify and fix potential problems in its manufacturing process—giving its customers the best product possible. Changing the way it has always done things helped the company increase the number of test strips passing release testing from 92% to 97%.



Predictive maintenance taps into the sets of structured and unstructured data that organizations already have available.

REPLACING INTUITION WITH ANALYTICS.

No one knows your organization's millions of moving parts better than you. But now with IBM predictive maintenance, you can spend less time and fewer resources repairing things either too early or too late, and more time focusing your attention on what will happen next. You can make maintenance smarter. Because the simplest and most efficient way to fix a problem is to make sure the problem never happens in the first place. To learn more, please visit us at ibm.com/predictivemaintenance

LET'S BUILD A SMARTER PLANET.

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