

## How IBM Software Works (video transcript)

Today we're seeing the coming of age of a whole new generation of intelligent systems and technologies -- more powerful and accessible than ever before.

Oil exploration, earthquake prediction, water conservation, and traffic management all are using smart systems to find the big answers to the big questions.

At the same time, customers want to integrate their businesses – across the enterprise and beyond. And they're demanding that information improve their experiences, making every interaction -- from a visit to the doctor to the way they interact with local governments -- smarter and more productive.

The good news is the technology on a number of fronts— from cloud and stream computing, to sensors, Web 2.0 tools, and analytics — is here and ready.

IBM Software has a long history of helping clients transform their organizations, integrate their business and IT environments, and operate diverse objects and platforms – from production facilities to electric grids to pipelines and railways.

Our software is being used to make these grids, infrastructures, facilities and products more intelligent so as to save money, improve operations, manage risk, and better manage the use of natural resources.

- *Picture a smarter food system that uses clever RFID tags to trace meat and poultry from the farm through the supply chain to the store shelf.*
- *Picture pharmaceutical companies that use analytics to help doctors make better diagnoses and treatment decisions, develop new drugs, and predict health issues before they happen—by crunching data in days and weeks instead of months and years.*
- *Picture a policemen department that uses business intelligence to access and analyze billions of records and zero-in on criminal suspects within minutes.*
- *Picture home appliances that are smart enough to tell you how efficiently they are running, shut themselves off when energy use peaks, or perform diagnostic tests without you having to call a repair person.*
- *And picture an innovative, high-tech computing system that cured traffic gridlock in Stockholm Sweden by directly identifying and charging vehicles depending on the time of day – higher during peak times, lower during off peak hours.*

In today's tough economic environment, our clients are feeling the pressure to respond in real time to whatever the day brings – a change in supply or demand; a shift in the preferences of buyers; the vagaries of capital markets; an explosion of information; and the unpredictable and unknown – everything from hackers to hurricanes.

Add to that the complexity of transforming the way things work while simultaneously connecting all the different activities in an enterprise and it's like changing tires on a speeding car.

Our strategy is grounded in working with clients every day and meeting their needs and requirements.

First we ask: What are they trying to accomplish with their business? Then, we look at how our middleware – the clever software that tells computers what to do – can be used to meet their needs.

Our portfolio is all about helping customers build, deploy and manage applications that integrate their processes and information specific to their industry requirements. From there, it is all about filling in the critical pieces through building, acquiring or partnering to create complete solutions and help our clients get to a smarter and much more efficient way of doing business.

- From making everything occur in a seamless flow -- a customer places an order, the system checks inventory, delivery gets scheduled, inventory is replenished;
- to quickly pulling together and making sense out of any type of information and data.
- to finding and fixing complex problems with little or no human help;
- to making collaboration a fundamental part of how work is done
- to creating an infrastructure that helps reduce costs, improve service, and manage risks.

Everywhere we look, Internet and digital technologies, along with rapid marketplace shifts, are transforming how we work today -- how we share information, build relationships and make decisions.

With computational power now being put into things we wouldn't recognize as computers, any person, any object, any process or service and any organization —large or small— can become digitally aware, connected and smart.

Indeed. There are billions of devices that now talk to each other. You have a car that can talk to a mechanic, to signal the fact that it needs a repair; you have store shelves that can talk to a supply chain when they're running low on inventory of a certain product. You have this instrumentation in all these devices, but the second dynamic is you have this new connectedness between devices, and as these devices talk, it creates systems that didn't exist before.

Wireless sensors, such as RFID tags, can now collect and transmit information from almost any object — from roads, to food crates, to utility lines, to water pipes.

Meanwhile, our analytics software helps interpret the huge flow of information, so raw data becomes useful knowledge to monitor and optimize transport, electric grids, waterways, and other complex systems.

Smarter products don't just roll off the assembly line at a snap of a finger, and with all of the bells and whistles in place. They require the right tools and business insight to maximize results. If the software doesn't meet performance or functionality requirements, it might fail and then you lose the anticipated benefit.

Information technology has taken us a long way in the past 50 years. But seizing the opportunities before us will depend on more than intelligent machines. It will depend on spreading intelligence across our entire business and technology infrastructures.

This means more than just managing traditional IT assets like servers and software, but managing an environment that requires the integration of business services, transactions and a variety of physical infrastructures like water, chemical, energy and transportation.

But as with any intelligent system, you need more than just cutting-edge technology to be successful. You need to analyze how things flow, how people interact, how processes can be more productive and human, and then bring together the abundance of technologies, skills, approaches and capabilities that makes true innovation possible.

*The End*