

# HOW THE INTERNET OF THINGS IS TRANSFORMING MANUFACTURING

## From Plant to Warehouse to Delivery - Highlights of the 2014 Forrester IoT Study

A day in the life of a manufacturing supply chain looks very different now than it did just a few years ago—thanks in large part to the Internet of Things (IoT), the new world of connected devices. A range of IoT-enabling technologies are giving manufacturers deeper visibility into every stage of their supply chain, helping them track the location and condition of products and personnel through a secure network. Here's how IoT has transformed manufacturing in a variety of industries:

## A CONNECTED NETWORK

One thing many supply chains have in common is that products have a long way to travel before they reach customers. That's why 97% of manufacturing professionals say the realization of IoT solutions will be the most important technological initiative the business world has seen in a decade. IoT-enabling technologies help accomplish goals such as these:



Enable real-time workforce communication to improve efficiency



Monitor the status of goods during transport to ensure maintenance of all quality and safety standards



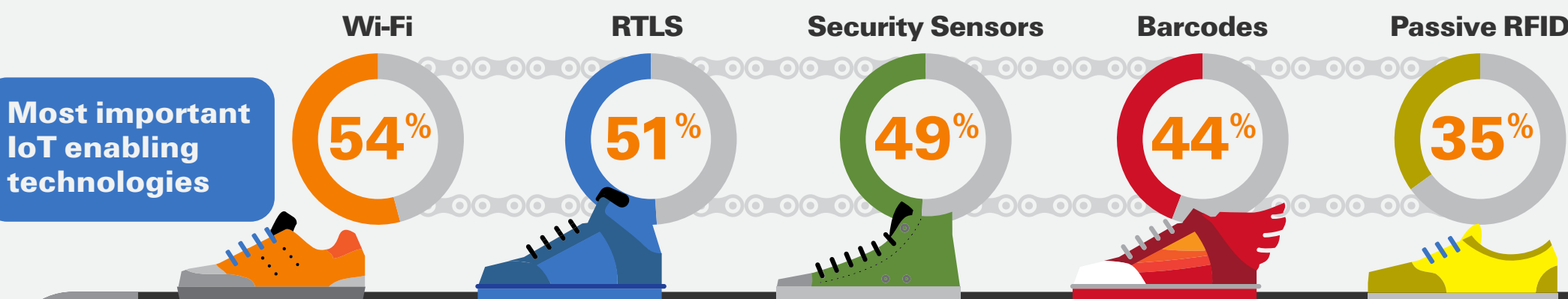
Track the path of inventory through the supply chain to make sure it arrives in the right place at the right time



Dynamically connect field operations personnel to one another, to the supply chain, and to customers in order to deliver higher-quality service

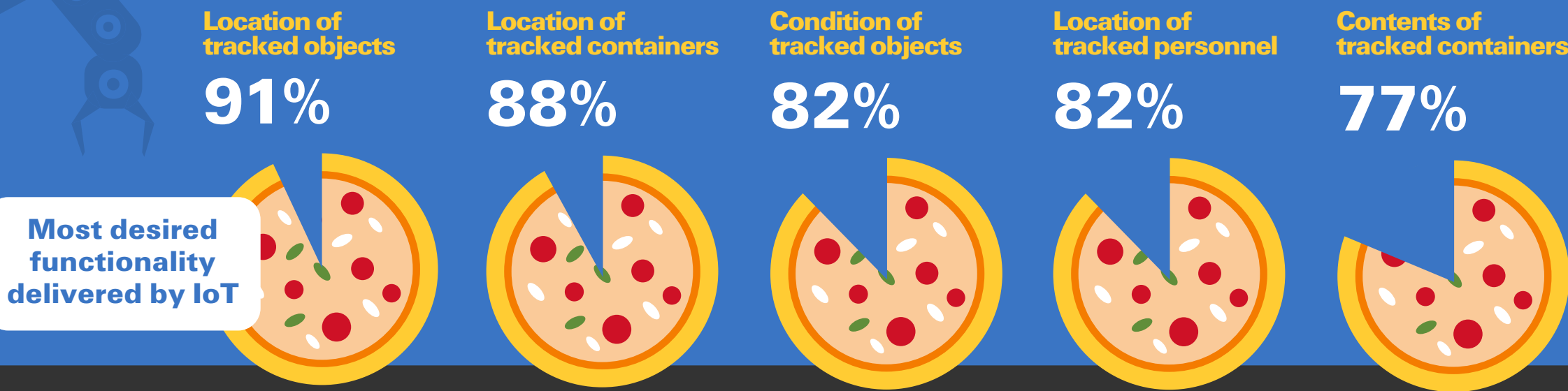
## MANAGING COMPLEXITY

When it comes to manufacturing apparel—especially complex items such as made-to-order shoes—a variety of parts need to come together at the processing plant each morning. If the assembly line is operating more slowly than usual, it's critical that plant operators deploy barcode scanners to track the movement of parts and products through the plant. Then, they can access and analyze that IoT data through a centralized dashboard, enabling them to quickly diagnose and fix the problem.



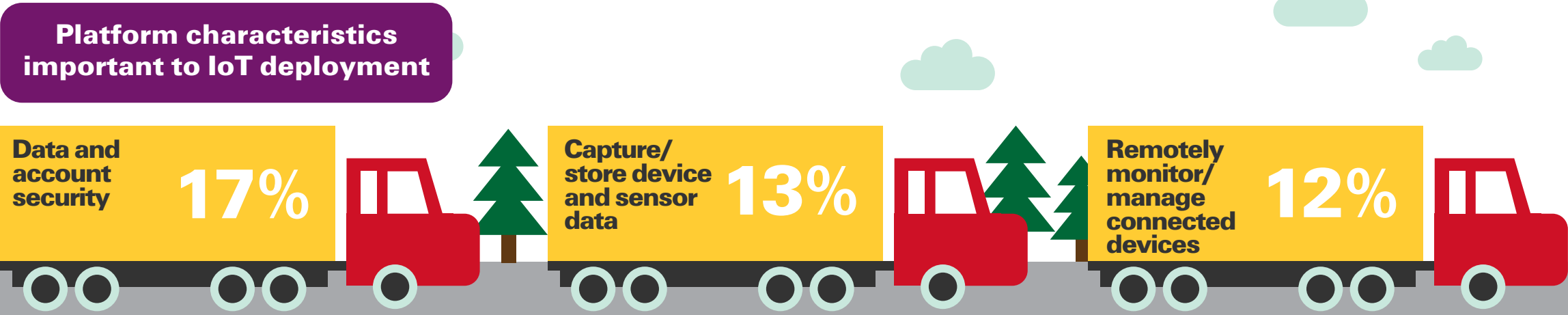
## FOOD FOR THOUGHT

To maintain visibility into every stage of the process, food manufacturers rely on IoT-enabling technology that track both the location and condition of products and personnel. RTLS tags, for example, help monitor the location, status and temperature of shipments of products that arrive at the warehouse, while also tracking products and containers as they are shipped out to customers.



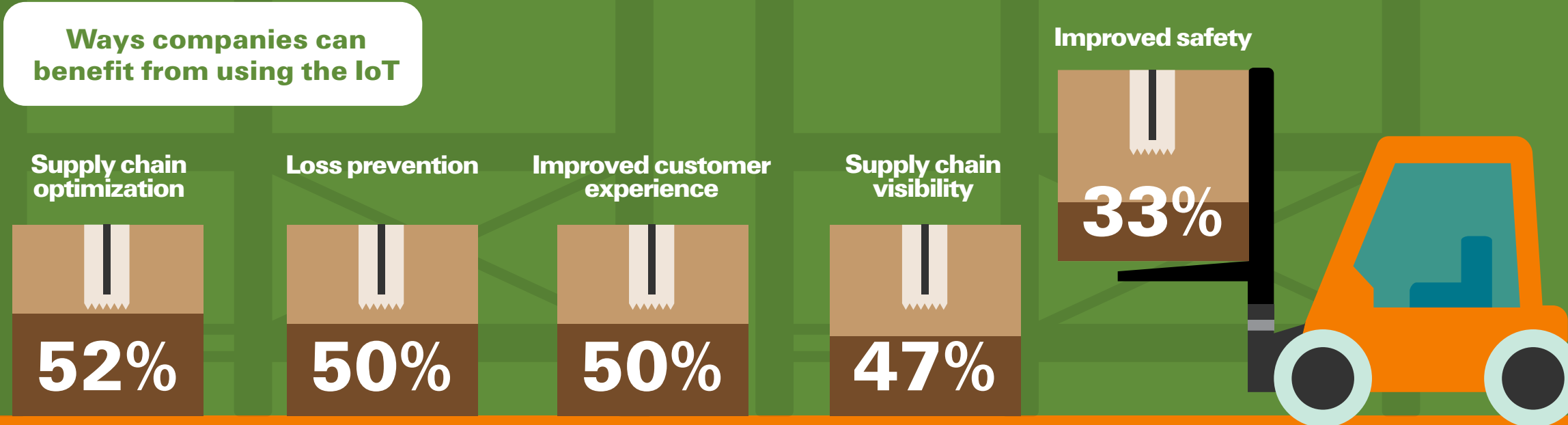
## VISIBILITY IN THE FIELD

A large industrial equipment repair company has dozens of service agents deployed in the field on any given afternoon. GPS tracks the location of trucks to ensure repair personnel are progressing through their routes efficiently and on time. Handheld computers enable employees to tap into their company's secure network to communicate information about the status of accounts and access key data pertinent to the service process. And smart, connected assets are constantly reporting their status to the IoT.



## DAILY BENEFITS OF IOT

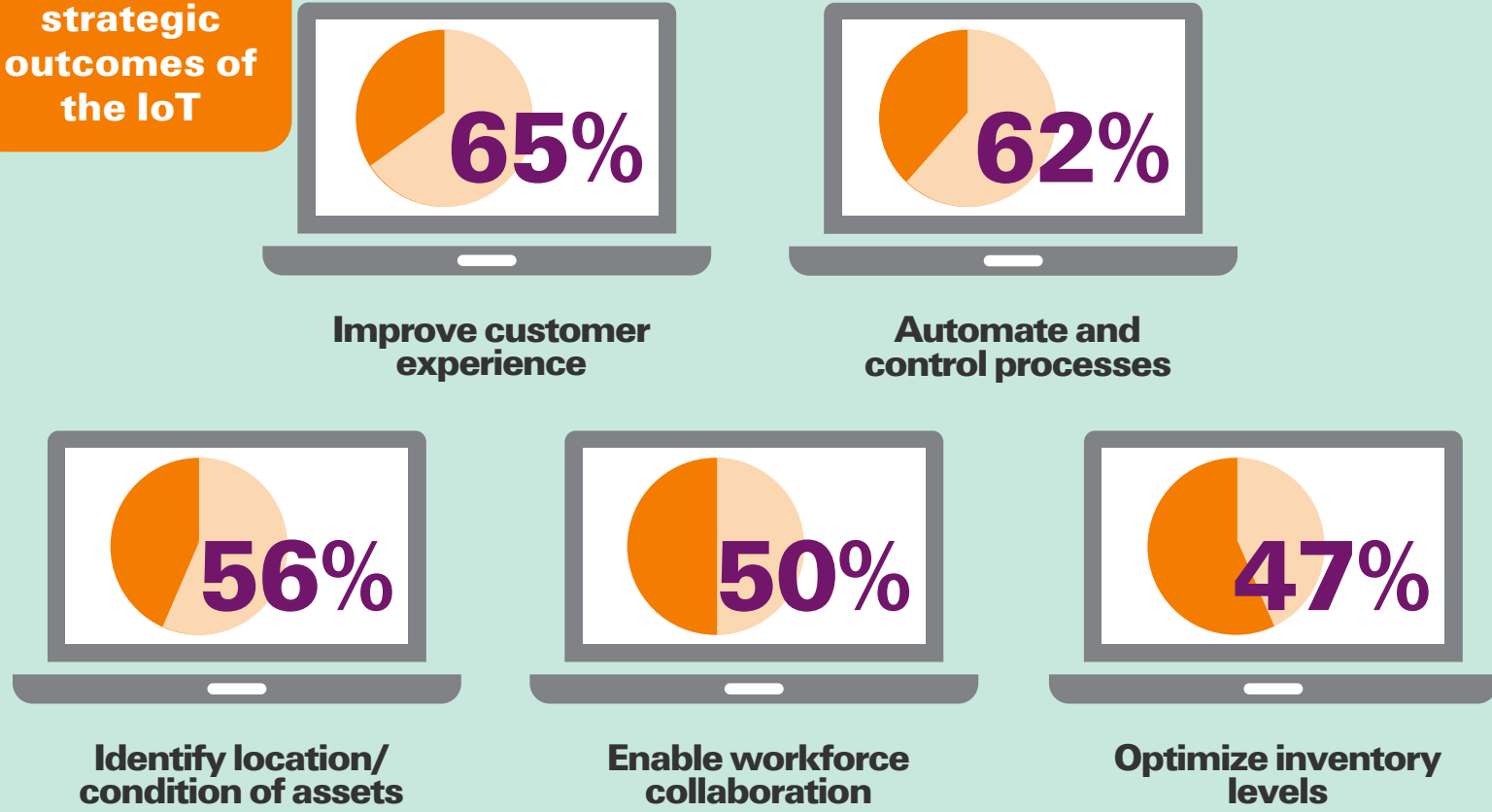
By the end of each day, growing numbers of manufacturing professionals have used IoT data to enhance supply chains, mitigate loss and risk, and optimize costs. Through IoT-enabling technologies, manufacturers gain actionable insights that help strengthen supply chains. Access to this real-time data makes it easier than ever to keep plants, warehouses and field operations running smoothly.



## STRATEGIC OUTCOMES

By sampling all the benefits of IoT-enabling technology, manufacturing professionals in a wide range of industries can reach strategic goals, such as streamlining operations, utilizing assets more efficiently, promoting collaboration, and better serve customers.

Expected strategic outcomes of the IoT



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\*STUDY METHODOLOGY: In October 2014, Forrester Consulting conducted a commissioned online survey on behalf of Zebra Technologies with nearly 600 IT decision-makers who hold titles of manager and above and are individual contributors responsible for making or influencing decisions related to their firms' IoT solutions. Firms had 250+ employees.

