CONNECTING THE EVERYDAY WORLD

The Impinj Platform
Delivers Item Intelligence

Introduction

If you've purchased clothing from Zara or Macy's, run a road race like the New York City Marathon, enjoyed a drink from a Coca-Cola Freestyle soda fountain, hit a ball at Topgolf, or checked bags at Las Vegas McCarran airport, then you've probably experienced a benefit of Impinj's products. Impinj wirelessly connects and networks everyday "things" to provide information about an item's identity, location, and authenticity.

The Internet of Things (IoT) is changing the fabric of our lives. But the term "Internet of Things" encompasses far more than just electronic devices like smartphones, tablets, intelligent home appliances, and links.

Shirts, shoes, jewelry, pharmaceuticals, medical instruments, documents, golf balls, marathon bibs, linens, drivers' licenses, cosmetics, tires, and countless other such things pervade our lives. Impinj connects these everyday things to the Internet using RAIN RFID and gathers information about the identity, location and authenticity of each item. We call this item information Item Intelligence and envision the physical world-wide-web built on item connectivity and Item Intelligence.

SOLUTIONS THAT DRIVE SMART BUSINESS

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RAIN RFID solutions developed on the Impinj platform enable enterprises to make smart business decisions and process improvements by way of Item Intelligence. RAIN solutions can improve inventory management, asset tracking, patient safety, sporting and travel experiences, and much more.

Retail Solutions

With RAIN-tagged items in stores, retailers can leverage Item Intelligence to collect data on physical interactions comparable to the types of click-data eCommerce retailers collect. With this data, stores can improve operations and drive sales.

Omni-Channel & Inventory Intelligence

Impinj omni-channel and inventory intelligence solutions can take inventory anytime, quickly locating items, even those left in a fitting room or another department. With confidence in system-wide inventory, retailers can keep stores well stocked and maximize their online assortment while decreasing working capital and increasing turnover. Omni-channel retailers can leverage Item Intelligence to convert stores and in-store inventory into strategic assets by transforming them into virtual fulfillment centers housing distributed inventory.

Product Experience

Impinj product experience solutions provide opportunities to communicate relevant information as the shopper interacts with a product. A tagged item can activate a display that shows product features and benefits, size runs, pricing, or even related-items the shopper might like. By delivering an Item Intelligence powered experience, the retailer can gather new forms of data about shopping to further optimize the experience and drive more sales.

Loss Identification and Prevention

Electronic article surveillance (EAS) systems are enhanced with Impinj loss prevention solutions which not only deter theft by sounding alarms but also use Item Intelligence to identify the specific stolen item. Loss identification is important because otherwise when theft occurs, retailers lose the value of the stolen item plus the value of lost sales due to subsequent out-of-stock conditions indirectly caused by the theft.

Analytics

With an Impinj analytics solution, retailers can collect data streams that were previously only available to eCommerce websites. Item Intelligence helps stores understand how shoppers travel through a store and interact with products, which items are left behind in the fitting room (and how often), and how content and marketing campaigns affect conversion.

Healthcare Solutions

Item Intelligence helps healthcare providers locate medical supplies, equipment and staff, keeping the focus on patient care and not on operational tasks. With Impinj healthcare solutions, medical facilities can save time, reduce inventory spend, and improve patient care.

Operational Intelligence

With Impinj operational intelligence solutions, healthcare providers can better manage and improve the processes that are used to run their operations. These solutions enable real-time location of assets throughout a facility so providers can get the equipment they need, when they need it, no matter where it's stored. RAIN RFID is even cost-effective enough to manage consumables inventory, including implants, medications, and medical supplies. Impinj solutions can also monitor drug kits, supply rooms and cabinets to confirm product availability, monitor usage, trigger billing and replenishment, and notify of product expiry.

Quality Improvement

Hospitals can drive improvements in key quality metrics with Impinj quality improvement solutions. These solutions monitor handwashing compliance, ensure availability of the right supplies at the right time for complex procedures in operating rooms and catheterization labs, and monitor medication administration and safety.
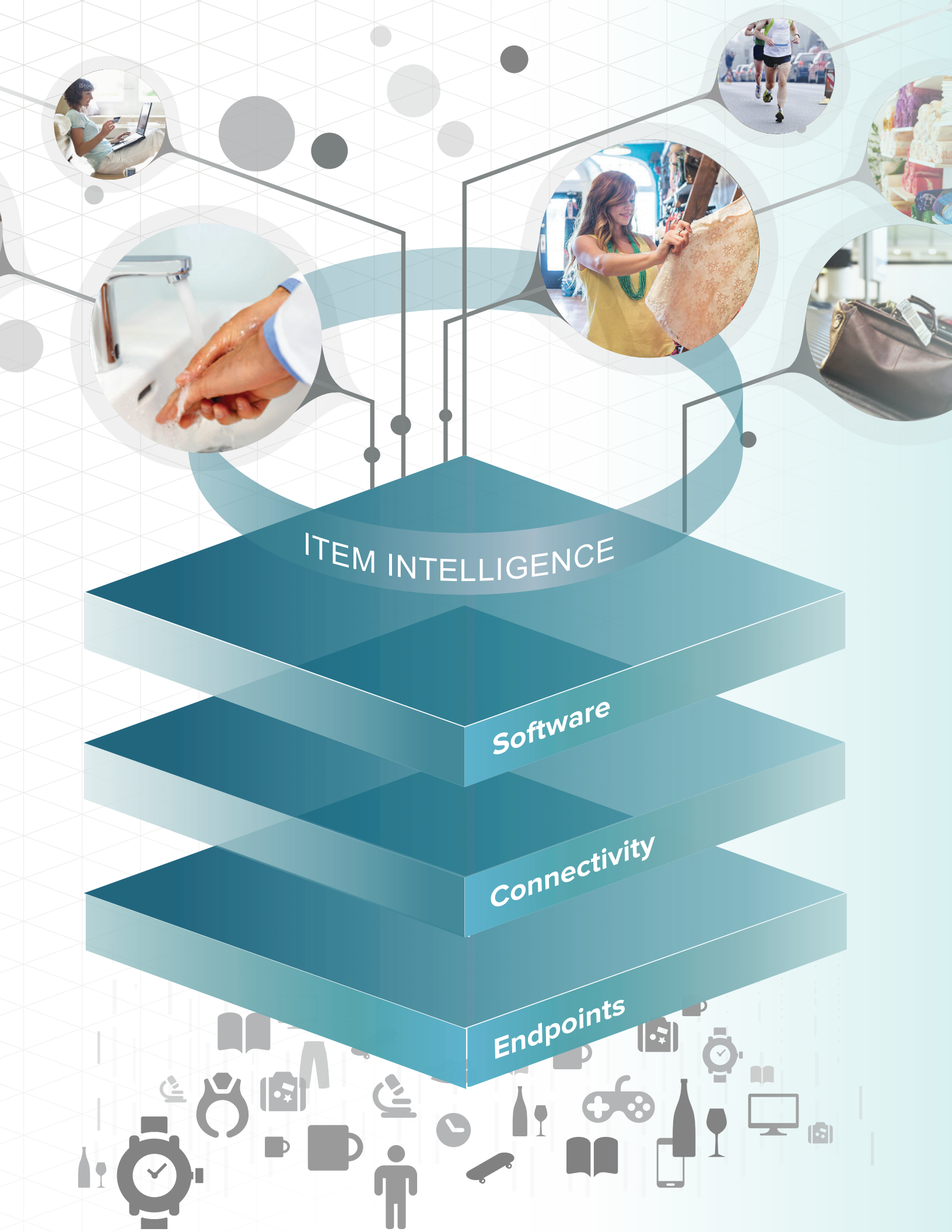
Patient Care

Impinj patient care solutions can help hospitals streamline patient flow from one department to the next, reduce wait times, increase patient satisfaction and also provide alerts as patients arrive and depart care areas. These solutions are designed to improve the patient experience, and make workflows more efficient.

Other Industries

Item Intelligence provides benefits to many industries, a few of which are highlighted here. By connecting items to the Internet, and gathering the identity, location and authenticity of items, numerous solutions are enabled. Manufacturers can use Impinj solutions to enable Industry 4.0 -- the term coined for smart factories where data streams are collected, giving manufacturers advanced analytics for better business decisions. In the food and beverage industry, Impinj solutions provide cold-chain monitoring of refrigerated goods for grocery stores, enable pour-your-own-drink service at restaurants, and monitor inventory and usage information. Impinj solutions can also improve travel experiences at airports and border crossings.

ITEM INTELLIGENCE
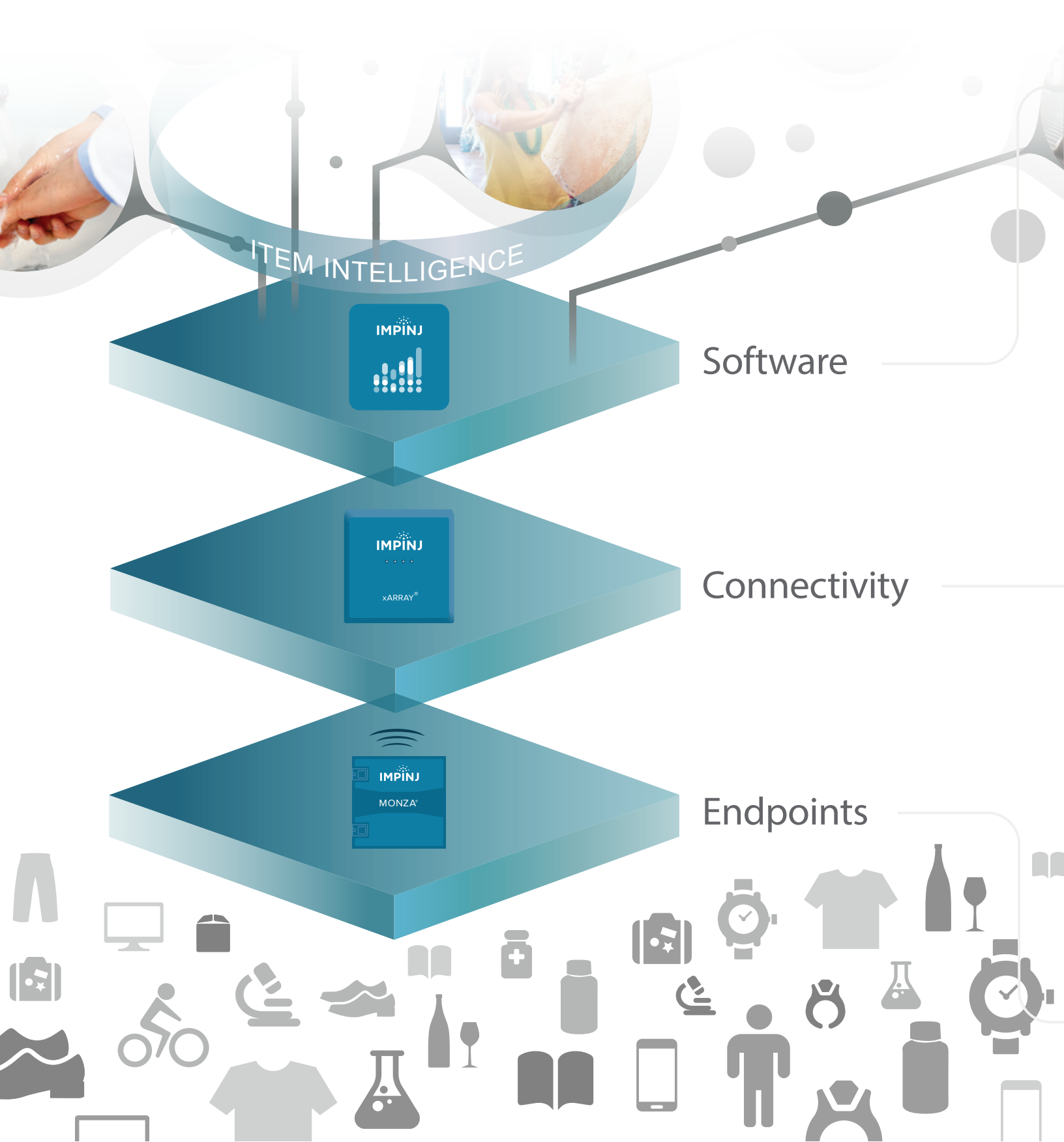
Software

Connectivity

Endpoints

OUR PLATFORM

The Impinj platform is a comprehensive set of hardware and software products on which businesses can develop RAIN solutions. By choosing to develop on this platform, rather than a piecemeal set of products, businesses can deploy a solution, at once or over time, consisting of multiple applications built on one infrastructure. Besides delivering compatibility, scalability and flexibility, using this platform also allows for data sharing across applications. With shared data, the types of applications you can build are endless.

ITEM INTELLIGENCE

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Software

ItemSense software enables businesses to quickly and easily integrate Item Intelligence into enterprise applications. It transforms RAIN RFID data into business-driven information and simplifies the management and monitoring of RAIN hardware devices.

ItemEncode is a flexible software system that boosts the speed and data quality of RAIN RFID tag encoding machines while lowering labor and operating costs.

Connectivity

Indy reader chips and reader SiPs (system in packages) allow RAIN reader capability to be embedded into products. Indy SiP products only need three connections (DC power, UART communication and antennas) to start reading tags, making them a great choice when value, fast time-to-market, and low development risk are solution requirements.

Speedway fixed RAIN readers are high-performance, enterprise-class fixed readers that engage RAIN RFID tags to provide Item Intelligence. With the largest installed base of fixed readers across a diverse range of applications, high mean time between failure, and a suite of supporting products and tools, Speedway readers are a powerful piece of item visibility solutions.

xArray and **xPortal** are fixed infrastructure RAIN gateways that integrate a reader with antennas to provide always-on, wide-area monitoring for real-time identification and location of RAIN tagged items. Ideal for large-scale, item-level applications within retail, healthcare and manufacturing, xArray and xPortal provide data that allows businesses to improve processes.

Endpoints

Monza tag chips attach to items and provide unique serial numbers, unmatched performance, memory options and special features for large-scale Item Intelligence applications.

RAIN SOLUTIONS IN ACTION

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With over 10 billion endpoints and one million connectivity points deployed around the world, Impinj is enabling businesses in retail, healthcare, food, manufacturing and entertainment to collect data, improve key performance indicators, reduce labor costs and increase profits.

ZARA

Case study / **ZARA**

ZARA, a clothing and accessory retailer owned by Inditex SA with over 2,000 stores worldwide, is deploying a RAIN RFID solution in all of its retail and distribution locations. The solution provides Zara with visibility into product inventory (from the distribution center to the sales floor), speedy inventory replenishment, and a reduction in shrink.

Business Benefits

- Reduction in inventory team size (from 40 to 10)
- Improved inventory count times (from 5 hours to 2.5 hours)
- Real-time inventory updates at time of sale
- Restocking alerts when items are sold
- Omni-channel by way of inventory accuracy

Case study / **Hy-vee**

Hy-vee, a grocery retail chain, was faced with the challenge of providing the highest quality products to its shoppers. Shoppers want the longest possible shelf life from perishable products and expect a consistent product experience each time they shop. By tagging perishable goods with sensor tags, Hy-vee is now able to monitor and record time and temperature readings on pre-set intervals throughout the shipping and receiving process. If a product is not delivered in optimal conditions, Hy-vee can refuse shipment at the time of delivery.

Business Benefits

- Corporate-wide management of cold chain
- Labor cost savings
- Better product consistency and quality
- Increased product shelf-life

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Case study / **Northwestern Medicine**

Northwestern Memorial Hospital, was in search of a solution that would stop workflow disruptions and monetary loss due to expired products. By implementing a RAIN solution, the hospital was able to automate inventorying, reducing spend on new items, and better monitoring items about to expire, making sure they get used first. Additionally, this new inventory system ensures items used are actually billed.

Business Benefits

- $3.75 million ROI in first year
- Real time accuracy of product inventory
- Reduced expired product cost to $0
- Reduced labor costs
- Better patient care

Ready to discuss how the Impinj platform can help your business?

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IMPINJ™

Impinj is a leading provider of RAIN RFID solutions. Impinj delivers Item Intelligence, physical items' unique identity, location and authenticity, to the digital world, which the company believes is the essence of the Internet of Things. Its platform connects billions of everyday items such as apparel, medical supplies, automobile parts, drivers' licenses, food and luggage to applications such as inventory management, patient safety, asset tracking and item authentication, delivering real-time information to businesses about items they create, manage, transport and sell.