

# Leveraging Mobile Technology in the Medical Device Supply Chain



**MEDICAL DEVICE INDUSTRY**  
SUPPLY CHAIN COUNCIL<sup>TM</sup>

November 2007

- **The Global Mobile Landscape**
- **Do Hardware & Operating Systems Matter?**
- **Current State of the Supply Chain in Medical Device Industry**
- **Benefits to the Supply Chain by Leveraging Mobile Technology**
- **Increasing Visibility**
- **FDA Compliance**
- **Getting Started in your Organization**
- **Case Studies**

# My personal cell phone

- **Voice**
- **Texting**
- **Instant Messaging**
- **Music & Video**
- **Web Surfing**
- **Contacts**
- **Calendaring**
- **Tasks**
- **Maps, Directions, Information**
- **Must have at all times**
- **Pay more than cable**



# Global Mobile Device Landscape

- **1 billion handsets per year**
- **\$100 billion annual market**
- **Tens of device manufacturers**
- **Hundreds of network operators**
- **An eco-system with thousands of businesses**
- **Windows Mobile accounted for 3.2 million PDA shipments in Q1 07 or more than 60% of all PDA shipments in the qtr**
- **RIM continues to lead the PDA market**
- **RIM is shifting to Smartphones – Blackberry Pearl represents 55% of RIM's total shipments**

# PDA Market Growth

| <b>Company</b>            | <b>1Q07<br/>Shipments</b> | <b>1Q07<br/>Market Share</b> | <b>1Q06-1Q07<br/>Growth (%)</b> |
|---------------------------|---------------------------|------------------------------|---------------------------------|
| <b>Windows<br/>Mobile</b> | <b>3,184,703</b>          | <b>62.1%</b>                 | <b>64.4%</b>                    |
| <b>RIM</b>                | <b>928,239</b>            | <b>18.1%</b>                 | <b>-0.2%</b>                    |
| <b>Palm OS</b>            | <b>314,353</b>            | <b>6.1%</b>                  | <b>-35.7%</b>                   |
| <b>Symbian</b>            | <b>288,000</b>            | <b>5.6%</b>                  | <b>118.2%</b>                   |
| <b>Linux</b>              | <b>33,400</b>             | <b>0.7%</b>                  | <b>-23.3%</b>                   |
| <b>Other</b>              | <b>377,150</b>            | <b>7.4%</b>                  | <b>175.3%</b>                   |
| <b>Total</b>              | <b>5,125,845</b>          | <b>100%</b>                  | <b>39.7%</b>                    |

# Do Hardware and Operating Systems Matter?

## Operating Systems

- Windows Mobile
- RIM
- Apple OS X
- Palm
- Symbian
- Linux

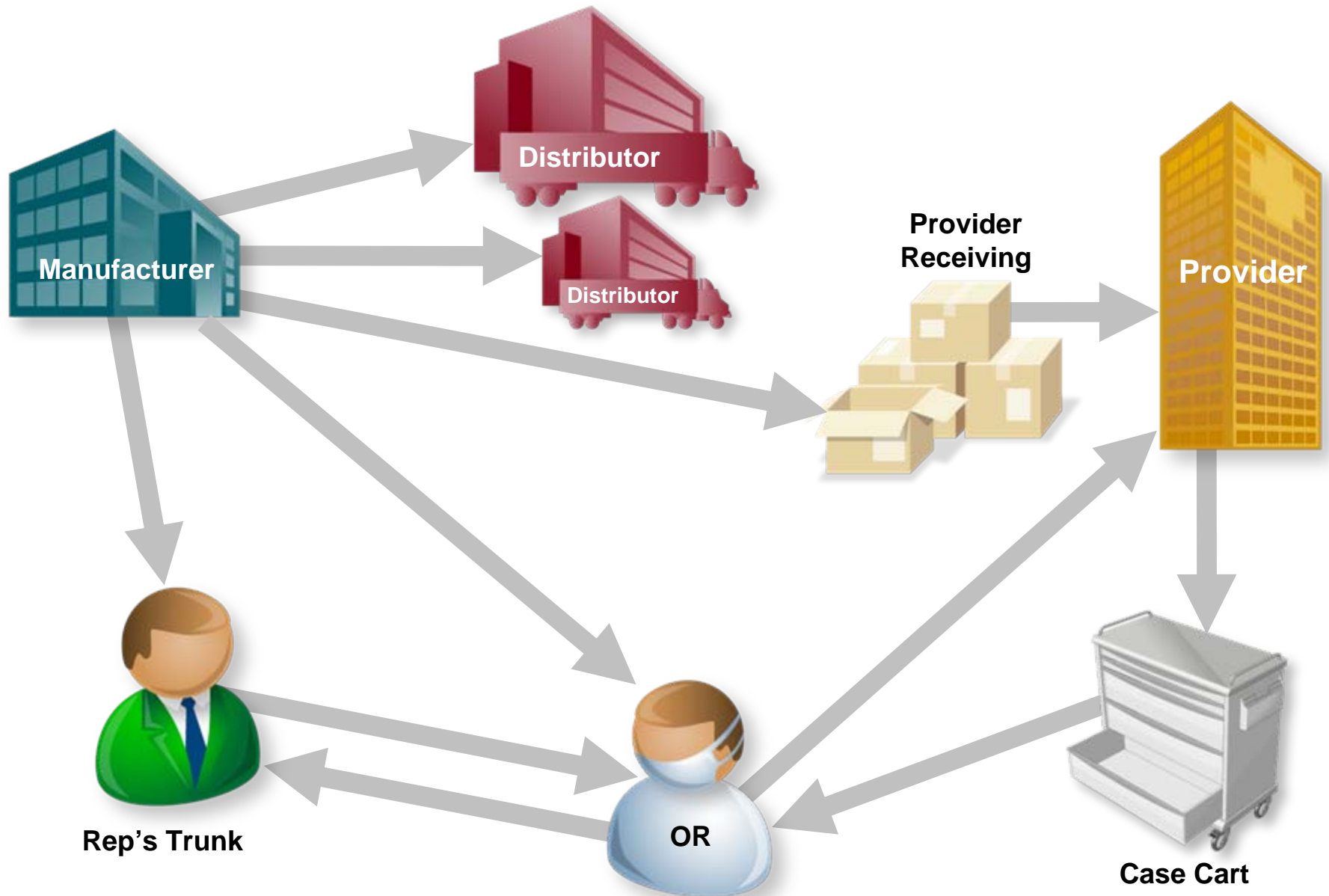


## Hardware Issues

- Memory
- Screen Real Estate
- Touch Screen
- Smart Keys
- SD Slots, mini SDs
- Radios
- Rugged
- Sexy factor
- Scanners
- RFID Scanners

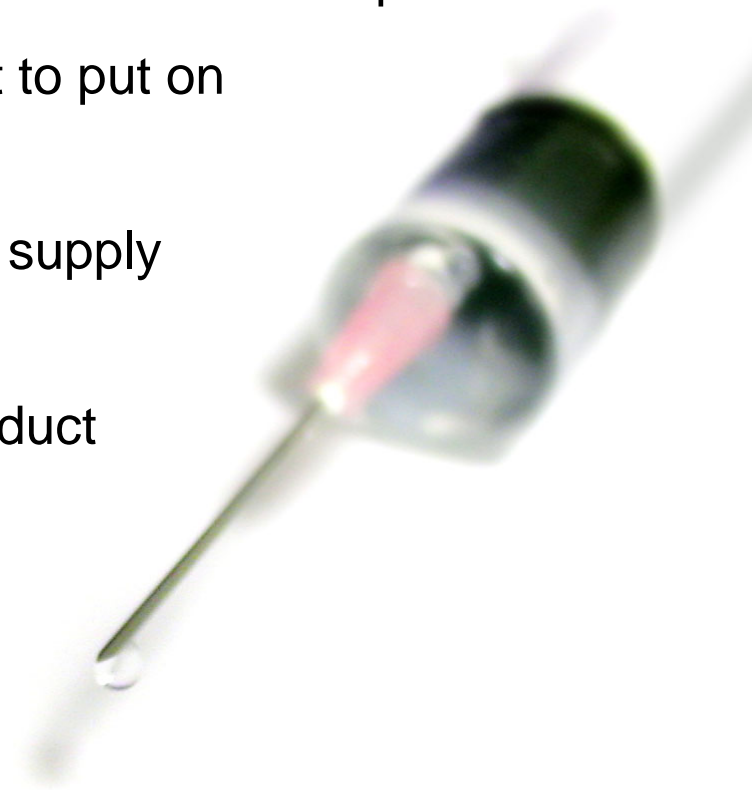


# Implantable Medical Device Supply Chain

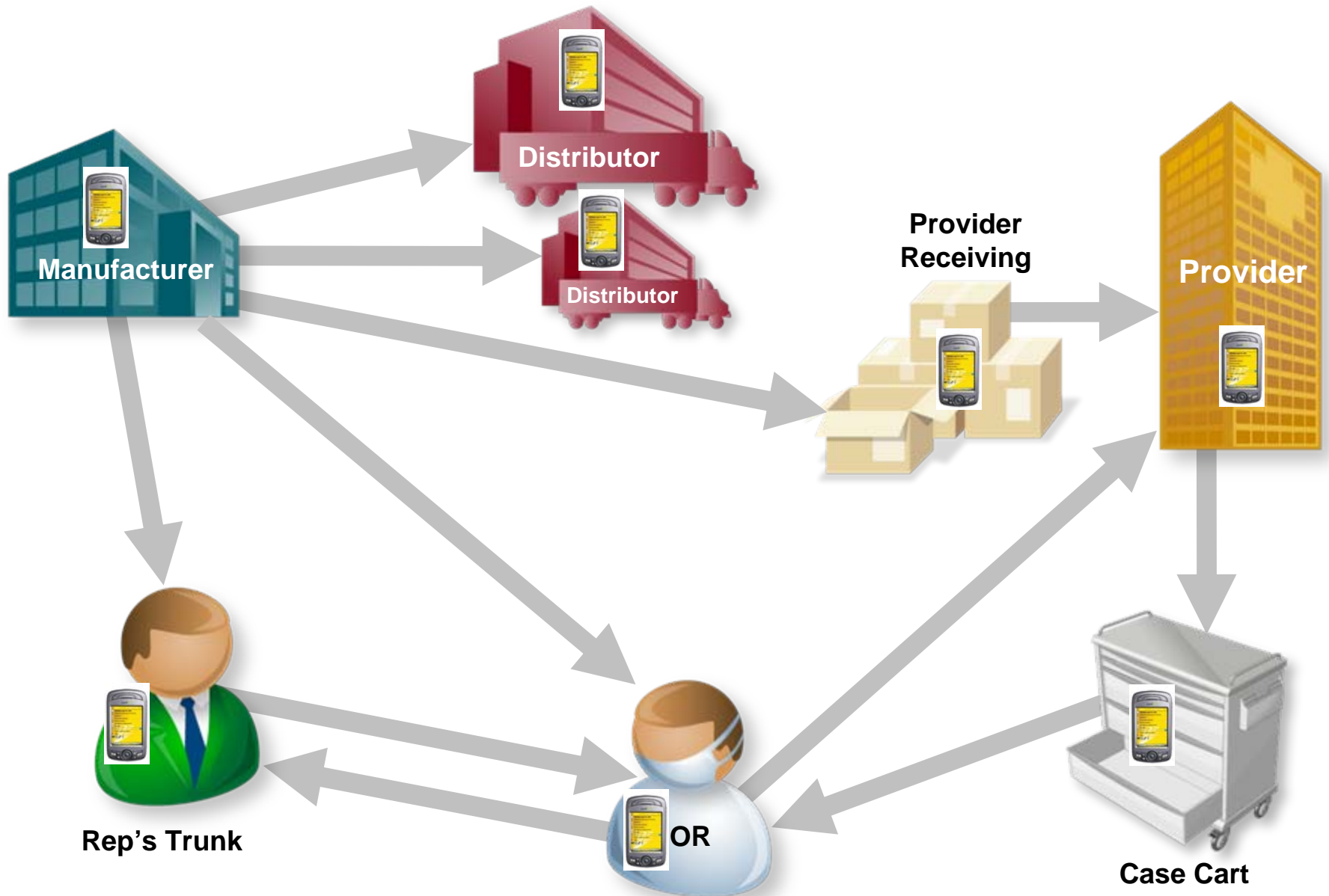


# Supply Chain Pain Points

- **Requisition System** Limitations (Order type / Lot-Serial #)
- **EDI** Limitations (Special fields cannot be sent through EDI)
- **Clinicians** key order data into other systems (OR Scheduling)
- **Capitated Items:** Difficult to Match Product Codes to Cap items
- **Non-item master products** are difficult to put on electronic reqs
- **Clinicians & Sales reps** don't prioritize supply chain activities
- **Low visibility** for manufacturer once product leaves the warehouse
- **High PO Reconciliation** because consignment is difficult to track

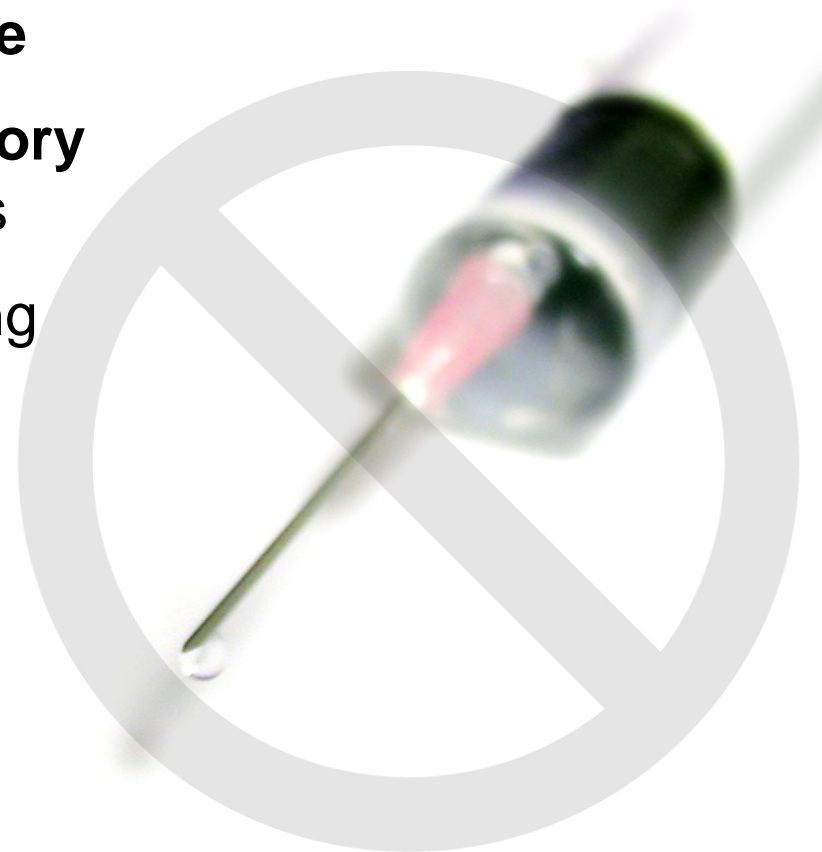


# Leveraging Mobile Technology

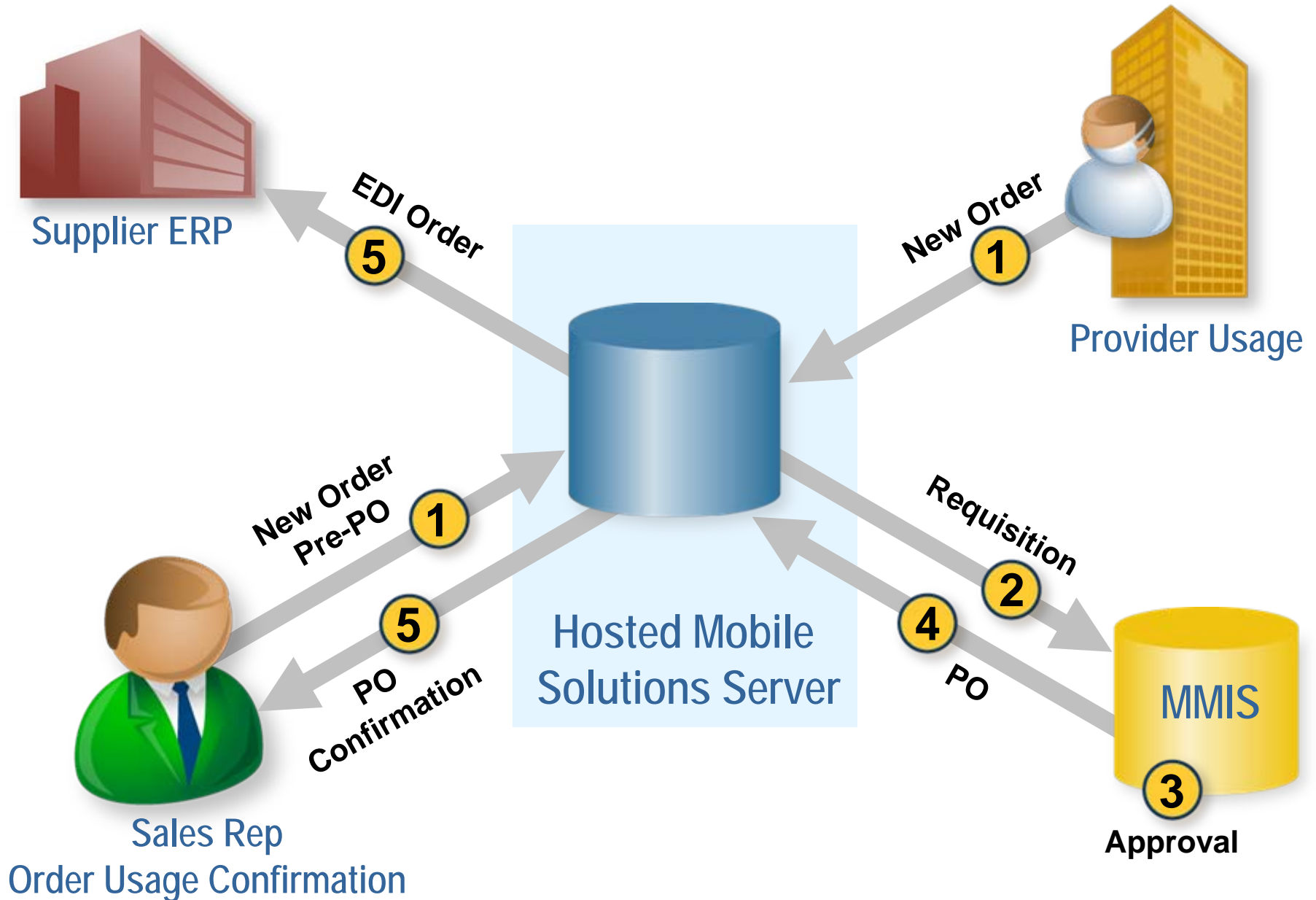


# Mobile Technology Can Mitigate the Pain

- **Increased visibility** throughout the supply chain
- Ability to **link suppliers to providers** from location to location
- Ability to **track lot, serial and usage**
- All stakeholders can **access inventory information** throughout the process
- More **accurate** and **efficient** tracking
- Reduction in **reconciliation** errors
- Supports **JIT delivery** across the supply chain



# Usage Confirmation Workflow



## **FDA Tracking enforcement is increasing – UDI rules tightening**

- Patient safety
- Product tracking
- Inventory control
- **Final distributors need to provide suppliers**
  - Patient identification data
  - Device information (lot number, batch number, and/or serial number)
- **Two recent high-profile cases resulted in substantial loss of business**
- **FDA requires 48 hour track and trace in event of a recall**
- **FDA Regs that can be tracked with Mobile Technology**
  - Explanted
  - Usage confirmation
  - Implant log registration
  - Returned to the distributor
  - Recalls
  - Disposed of permanently
  - Permanently retired from use

# Mobile Technology Case Studies

- **Orthopedics Manufacturer**

- \$960M of orders submitted via handheld
- 25% drop in calls/faxes for order entry
- 25% drop in calls for price checks
- Saves sales reps between .5 - 2.0 hrs / day
- Estimated annual savings <\$2M

- **Implantable Device Manufacturer**

- 98% of sales orders submitted via handheld
- Sales force grew by a factor of 15
- Customer Service grew by a factor of 3
- Reduced invoice time from 18 days to 5 days
- Reduced patient & device registration from 2-3 weeks to 2-3 days
- Enabled real time blind inventory audits
- Enabled real time data analysis of surgery schedule, order & PO status

- **Hospital**

- Central supply and purchasing department using mobile technology to reduce lost charges and improve documentation to the point that inventory losses are less than 1 percent, compared with a national average of 15 to 20 percent.

