The Insider's Guide to Emerging Technologies
Helping You Make the Most of Your Time at MODEX

Presented by:
fortna®
The Distribution Experts®
Today’s Presenters

Roger Counihan
Emerging Technologies Strategist
RogerCounihan@Fortna.com

Luke Nuber
Emerging Technologies Specialist
LukeNuber@Fortna.com
Agenda

• What’s Driving Investment in Emerging Technologies?
• What are the Emerging Technologies to Watch?
• Where are they Being Implemented?
• What’s the Business Case?
Driving Factors

- LABOR
- SPEED SERVICE
- FLEXIBILITY
- BOARD EXPECTATIONS
Emerging Technologies: Maturity

Production
- GTP - AS/RS shuttle systems
- Robotic Depalletizers
- Truck Loaders

Initial Implementation
- Material Movement Bots
- WES

Pilot
- Machine Learning
- Co-Bots
- Drones
- Augmented Reality
- Lights-out Autonomous Bots

Conceptual
- Exoskeletons
- Humanoid Bots
Drones Inside the DC
Drones Inside the DC
Drones Inside the DC
Augmented Reality
Augmented Reality / Wearables

- Data transmitted wirelessly
- Projected onto screen in glasses
- Overlaid on top of “real world”
- Hands-free access
- Increased productivity

GUIDED WORK INSTRUCTIONS:
Access and assign intuitive AR instructions on the job, displayed in your field of view, relating relevant project data, maximizing efficiency and accuracy in task completion.
Picking Robots

• Stronger business case
• Maturing, lower price point vision systems and sensors
• More intelligent use of sensor data to automate decision making and learning
Material Movement Bots
Material Movement Bots: Self-Driving Vehicles/Lift Trucks
Material Movement Bots: Kiva-style Goods-to-Person
Material Movement Bots
Collaborative Bots: Carton, Tote and Pallet Shuttles
Lights Out Bots: Self-Driving with Picking Extensions
Lights Out Bots
Lights-out Bot
Picking Bots: Grippers
Under-utilized Technologies
Robotic Depalletizing
Robotic Truck Loading
ASRS/Goods-to-Person
Conceptual Technologies
Humanoid Robots
Software as Enablers
Machine Learning

• Vision and sensor networks capture vast amounts of data
• Leverage that data for real-time decision making
• Add in data on traffic, weather, expected delivery times, past orders, etc.
Learning to Pick Even Better

- Which product is within reach?
- Can I see the label?
- Is the product damaged?
- How do I position my hand to pick up the item?
- When I pick it up:
  - What are the irregularities with regard to weight or center of gravity?
  - What can I learn for next time?
Next Generation Distribution Requires More than Technology

People

Processes

Software

Assets
Takeaways

• There is a Solid Business Case for New Technologies
• Many are Already Piloting/Implementing
• There are Some Hurdles, but Point Solutions are Taking Shape
• Technology Will Continue to Evolve
For More Information:

RogerCounihan@Fortna.com

LukeNuber@Fortna.com

website: www.fortna.com

Or visit MODEX Booth B2715