Injury Elimination Through Innovation
Objectives

• Explain the Safety Hierarchy of Control and the various levels of effectiveness

• Share examples of success using **Prevention Through Design** to **Think Differently** and control retail hazards related to causes of
  
  – Immediate injury
  
  – Repetitive stress
Hierarchy of Control

- **Elimination**: Eliminate the hazard during design or redesign
- **Substitution**: Less hazardous materials, processes, or equipment
- **Engineering Controls**: Minimize risk through isolation and guarding
- **Warnings**: Use of signs, labels, strobes, buzzers
- **Administrative Controls**: Training, work methods, organization
- **PPE**: The “last line of defense”; a barrier to the hazard
Hierarchy of Control

- Elimination
- Substitution
- Engineering Controls
- Warnings
- Administrative Controls
- Personal Protective Equipment

- Higher levels mean
  - Greater effectiveness
  - Better business value

- Lower levels mean
  - Less effectiveness
  - Lower business value
Communication + Teamwork = Success

Corporate Communications
Facilities (Purchasing, Services, Design)
Manufacturers
Education Training and Development
Retail Operations
LP Field
Supply Purchasing
Retail Business Units
LP Support
Pedestrian Safety

**Problem:** Drivers did not know *where* to stop. Therefore, many of them *didn’t.*

- **Before**
  - Drivers did not know where to stop.

- **After**
  - Added “STOP” and line
  - Moved Sign Closer
Flare Curb

**Problem:** Customers taking a direct path from car to store entrance tripped over tapered (a.k.a., flared) curb.
Problem: Pavers shift and loosen after pressure washing. Solution was to use stamped concrete.
Power for Lobby Displays

Problem: Trip hazard was created when providing temporary power to lobby displays.
Seasonal Banners

**Problem:** Associates had to climb 10’ platform ladders to change the banners.
Cash Safes

**Problem:** Associates’ hands naturally wrap around this safe’s thin door.

**Before**

**After**
Deli Hot Case

Problem: The base did not adequately protect customers from hot surfaces at the front of the case.
Soup Bar Trash Door

Problem: Customers’ hands got caught on the metal tab (spring-loaded door).
Combitherm Placement

**Problem:** Potential for water nozzle to discharge into hot grease.
Patty Machine Guard

**Problem:** Guard was inadequate to prevent finger amputations.
Problem: Straight-cut pipe doesn’t direct water into the drain as well as angle-cut pipe.
Back Room Water Fountain

Problem: Water fountain was an obstruction.

Before

After
Industrial Truck Clearance

**Problem:** Inadequate clearance promotes injuries and damaged product/equipment.
Industrial Truck Speed

Problem: Raised loads in tight quarters could be damaged or lost with higher speeds.

Before: Industrial trucks had to be placed into “creep mode” manually, leaving the potential for operator error.

After:
Parking Stops

Problem: Customers were tripping over the parking stops.
Problem: Ladders were not durable. Some associates stumbled off smaller top.
Problem: Associate was struck in the eye while helping to make a bale.
Electrical Drop Cords

Problem: Electrical plugs were seldom unplugged during cleaning or make-shift solutions were employed.
Pallet Jack Foot Injuries

**Problem:** Associates are running over their feet with the front wheels of the jack.
Deli Slicer Cuts

Issue: Slicing with the wrong handle

Changing the color of the food pusher handle from black to red.
## Deli Slicer Cuts

### Issue: Leaving the blade open while placing or adjusting product

<table>
<thead>
<tr>
<th>State</th>
<th>LED Indication</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unplugged</td>
<td>No Light</td>
<td>Blade is open and the gauge plate is closed.</td>
</tr>
<tr>
<td>Gauge Plate Closed and Blade Off</td>
<td>Solid Green LED</td>
<td>Blade is off and the gauge plate is closed.</td>
</tr>
<tr>
<td>Gauge Plate Open or Blade On</td>
<td>Flashing Red LED</td>
<td>Blade is on and the gauge plate is open.</td>
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Ergonomically speaking...

• Thinking differently applies to solving repetitive stress injuries as well.

• Taking a fresh look at existing processes, and involving those that do the work each day, will help reveal innovative and effective solutions.

• Solutions may be “high tech” or “low tech”, but they can all have a tremendous impact.
Deli Slicers

Fixed Height

3-Second Adjust
Deli Slicers, continued

Semi-Automatic Slicing Mode
Express Registers

Lacks adjustability for bagging
Express Registers, continued

Better:
Top section can be flipped, providing two height options.
Express Registers, continued

Best:
- Bag racks easily adjust.
- Rotary table provides space for 3 bags and an area for large items.
Offloading Pallets in Back Room

Use Ladder for Top-Third

Raise Pallet for Bottom-Third
Stocking Merchandise

Box on Shelf Ledge

Dolly and Milk Crates
Donut Glazing Table

Glazing tray was lifted manually above and across the product.

Retrofit eliminates manual lifting away from the body.
Icing Buckets

Dolly allows easy access and storage beneath a table.
Icing Buckets, continued

Frosting bucket stands:

• Keep buckets off tables, making it easier to scoop out icing.

• Provide height adjustability to accommodate the decorator height.
Rotisserie Chicken

Receiver installed in corner of sink keeps the rotisserie spit in place.

Less Fatigue and Injuries
Bird Cart

- Holds over 40 birds
- Reduced stooping
Testing, Piloting and Rollout

Recommended steps/phases for success:
1. Identify issues based on data.
2. Include the manufacturer whenever possible.
3. Test idea for “proof of concept”.
4. Pilot in select number of locations.
5. Determine implementation (retrofit existing equipment, purchase of new equipment, etc.).
Benefit Recap

Successful **Prevention Through Design** results in:

1. Fewer and/or less severe injuries
2. Elimination/Reduction of PPE and/or training
3. Increased productivity and morale
4. Better equipment/facility design
5. Lower overall cost

*And this will add to your company’s bottom line!*
Questions?