Improving retail store experience with Real-Time Associate Productivity

One of the hardest problems to solve in retail is how to best match your store associates with the most important activities required to serve the customer, operate the store, and handle a variety of unplanned activities that pop up. The answer usually already lies within the retailers’ hands but is generally untapped to help associates and team leaders make the highest impact, next best action decision—data.

Google Cloud and Deloitte’s Real-Time Associate Productivity cloud-based platform harnesses existing sales, delivery, inventory and associate data, pre-built ML algorithms, and mobile applications for associates to allow retailers to best maximize their store team’s impact.

Improving associate productivity does not only impact stores; value is delivered across the value chain.

<table>
<thead>
<tr>
<th>Corporate</th>
<th>Distribution centers</th>
<th>Stores</th>
<th>Associates</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Connect data across enterprise and store apps to drive automation and recommendations</td>
<td>• Provide better end-to-end inventory visibility</td>
<td></td>
<td>• Improve associate satisfaction (and retention) by providing smart solutions/tools to more efficiently and effectively complete tasks</td>
<td>• Enable a more frictionless shopping experience</td>
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<tr>
<td>• Gain more granular and comprehensive understanding of labor needs to improve labor forecasting</td>
<td>• Gain greater insight into demand patterns to improve inventory management and minimize unnecessary costs (e.g., spoilage)</td>
<td></td>
<td>• Replace store leader “gut feel” with automated task recommendations</td>
<td>• Drive more meaningful customer engagement by prioritizing associate intervention during most impactful shopping moments</td>
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<tr>
<td>• Evaluate technology deployment approach and overall footprint to rationalize costs</td>
<td>• Extend associate productivity tools / learnings to increase labor productivity of distribution centers</td>
<td></td>
<td>• Increase customer satisfaction by limiting out-of-stock experiences (across fulfillment channels)</td>
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</tbody>
</table>
**Making it real: Case study**

In under four months, Google Cloud and Deloitte built and launched an Android-based associate productivity app, integrated with ~10 enterprise systems and powered by Google Cloud and pre-built analytics models.

### Task Management

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Labor + workload</td>
</tr>
<tr>
<td>2</td>
<td>Deliveries</td>
</tr>
<tr>
<td>3</td>
<td>Task manager</td>
</tr>
<tr>
<td>4</td>
<td>Handoff checklist</td>
</tr>
</tbody>
</table>

**Operational Audit**

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Store audit checklist</td>
</tr>
<tr>
<td>6</td>
<td>Walk path customization</td>
</tr>
<tr>
<td>7</td>
<td>Task creation &amp; management</td>
</tr>
<tr>
<td>8</td>
<td>Performance &amp; reporting</td>
</tr>
</tbody>
</table>

### Benefit areas

- **Increase in shelf replenishment execution**
- **Reduction in wasted time per shift**
- **Increase in % of store walks complete**
- **Reduction in labor spend**

### Real-time associate productivity platform

![Diagram of the real-time associate productivity platform](source.png)

**Real-time associate productivity platform**

**Google Cloud**

- **Cloud armor**
- **Cloud firewall rules**
- **Cloud load balancing**
- **Cloud VirtualNetwork**
- **Data management layer**
  - Dataflow
  - CloudSpanner
  - Cloud Functions
  - CloudPub/Sub
  - CloudStorage
- **Data science layer**
  - OR-tools
  - Solvers/Optimizers:
    - Truck offloading
    - Aisle breakdown
    - Aisle stocking

**On-premise and enterprise data sources**

- Inbound trucks
- Employee schedules and skills
- On-hand inventory
- Orders

### Start the conversation

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