Contactless service and operations: Waste management

Improving and enabling human-oriented service and operations in response to COVID-19
The IDEA Framework in action: sector examples

Contactless Service and Operations was developed to provide a framework for reevaluating an organization’s key customer and employee journeys and interactions in light of COVID-19. It focuses on making those journeys and interactions better not just safer.

The goal of the IDEA Framework is to help organizations reimagines mission-critical priorities, investments, and operations while providing the “human” elements related to service.

This document provides a sector specific example on how the process of the IDEA Framework could be applied.

If you would like to view additional details of this approach please click here (link to CxO)

Organizations should follow local regulations and country-specific circumstances before implementation of specific interventions.

This content consists of insights from McKinsey’s operations and design practice and is provided “as is” solely for informational purposes. It does not constitute or is intended to be legal or safety advice. Organizations should consider all applicable laws, standards, and country-specific circumstances before adopting any measures. Organizations should engage their own legal counsel and safety experts to ensure compliance.
The IDEA framework provides a process that can help identify human-centered solutions for evolving business scenarios

**Identify interactions & areas of concern**

Identify the types of work environment relevant to the business

**Diagnose & prioritize areas of concern**

Prioritize areas of concern using multiple lenses:

- Type of interactions
- Evolution of customer and employee experience
- Implications on operations and cost

**Develop & Execute solutions**

Develop and roadmap solutions across three horizons:

- Immediate needs to continue or re-start critical operations
- Re-prioritizing and accelerating key initiatives
- Investment in distinctive long-term solutions

**Adapt & sustain**

Operationalize solutions across the organization, iterating and adjusting to meet the needs of the evolving situation

Empower teams to stay ahead of emerging situations and bring learning back to the organization

Organizations should engage their own legal counsel and safety experts to ensure any adopted measures are compliant with applicable laws and standards in their jurisdictions.
The first step of the IDEA framework is to identify interactions and areas of concern across key journeys and interactions.

**Detailed areas per type of interaction and operation**

<table>
<thead>
<tr>
<th>Interaction types</th>
<th>Goods transfer</th>
<th>Services</th>
<th>Internal tasks/processes</th>
</tr>
</thead>
</table>
| **Employee to employee** | - Handling paperwork (incl. work plan and pick-up schedule)  
- Collecting and combining waste  
- Loading and unloading waste  
- Sharing devices, equipment, vehicles, and other work supplies | - In-person clocking in and out  
- Operating trucks (incl. refilling gas) and shipping waste  
- Working closely with other employees to complete trash-collection duties | - Workplan set-up and truck dispatch  
- Sorting, collecting, and further transferring waste  
- Cleaning, maintaining, and operating the waste-transfer station, landfills, and recycling center |
| **Employee to customer** | - Recycling bin hand-off door-to-door  
- Distributing recycling materials  
- Handling waste from bin to the truck  
- Exchanging hazardous waste at transfer station | - Coordinating pick-up with customer  
- In-person communication and assistance about customer’s needs at waste-transfer station | - Processing waste service request from the customers  
- Processing customer’s hazardous waste  
- Follow-up communication with customers |
| **Customer to customer** | - Sorting waste in common area (incl. street and apartment)  
- Moving recycling bins | - Interacting with other customers while waiting at the waste transfer station  
- Using same hazardous waste collection window | - Sharing air circulation (incl. elevator and garbage room) in the property  
- Touching the same surfaces, including elevators and bins |

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Once identified, organizations are advised to diagnose and prioritize areas of concern.

### ILLUSTRATIVE EXAMPLE

<table>
<thead>
<tr>
<th>Customer acquisition</th>
<th>Waste collection and processing</th>
<th>Waste recycling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers request services</td>
<td>Work plan set-up</td>
<td>Waste utilization</td>
</tr>
<tr>
<td>Service contract sign-up</td>
<td>Waste collection</td>
<td>Waste recovery</td>
</tr>
</tbody>
</table>

#### Municipal waste collection and processing journey

1. **Customers** pre-sort waste
2. **Employees** pick up waste and load onto truck
3. **Employees** deliver waste to treatment facilities
4. **Employees** sort waste, collect and bale reusable material
5. **Employees** ship waste for further treatment

#### Potential interactions

- **E2C** Delivering recycling bins to customers
- **C2C** Customers sharing recycling and landfill bins
- **E2E** Dispatching truck and coordinating internal work
- **E2C** Handling waste bins and touching waste
- **C2C** Interactions between customers in common areas
- **E2E** Combining several garbage loads into one

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1. Customer will directly send the waste to the transfer station if it’s hazardous.
Companies can seek to develop and execute solutions to help improve safety and experience across key business elements.

### Potential levers that could be utilized in solutions

#### New offers & services

- **A** Re-designed low-touch devices and interfaces
- **B** Smart recycling system to identify high-risk waste items (ie, face masks)
- **C** Smart fleet management to minimize in-person
- **D** Workspace layout and flow that support physical distancing
- **E** Completely digital recycling process (ie, online tracking, digital receipt)

#### Policies

- **F** Automated waste sorting and recycling system
- **G** Limitation on the number of customers in the waste-transfer station
- **H** Sanitation of recycling kiosk
- **I** Scheduled regular disinfection for equipment, vehicles, and workspace
- **J** Upgraded PPE for employees and customers
- **K** Improved air filtration and ventilation systems in the property
- **L** Additional separation for the high-risk waste
- **M** Fixed crews to limit exposure between teams

#### Processes

- **N** Digitization

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Waste management-Municipal
# The last step to consider is to pilot, adapt, and scale solutions as appropriate, keeping employee and customer experience in mind

## ILLUSTRATIVE FUTURE STATE JOURNEY EXAMPLE

<table>
<thead>
<tr>
<th>Customer acquisition</th>
<th>Waste collection and processing</th>
<th>Waste recycling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service set-up/pre-sort</strong></td>
<td><strong>Collection</strong></td>
<td><strong>Transfer</strong></td>
</tr>
<tr>
<td>Reopen</td>
<td>Potential actions to consider</td>
<td>Collection</td>
</tr>
<tr>
<td></td>
<td>• Receiving equipment in person (incl. recycling bin)</td>
<td>• Pulling the bin to the street/moving it back</td>
</tr>
<tr>
<td></td>
<td>• Pre-sorting waste by customers</td>
<td>• Touching and handling waste when moving it to the truck</td>
</tr>
<tr>
<td></td>
<td>• Meeting other customers while throwing trash</td>
<td>• Combining waste loads</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reopen</td>
<td>Reopen &amp; immediate needs</td>
<td>Transfer</td>
</tr>
<tr>
<td></td>
<td>Contactless equipment drop-off</td>
<td>Limited number of employees in the same fleet and workstream</td>
</tr>
<tr>
<td></td>
<td>Communication with customers on safety efforts</td>
<td>Courtesy gloves, wipes, and hand sanitizer available at transfer station</td>
</tr>
<tr>
<td></td>
<td>Customers interacting in trash rooms</td>
<td>Enforce physical distancing in transfer stations</td>
</tr>
<tr>
<td></td>
<td>Sanitation of common space</td>
<td></td>
</tr>
</tbody>
</table>

## Reimagination

**Distinctive long-term solutions**

- Re-designing low-touch devices and interfaces (incl. bins and doors)
- Providing digital waste category reference for pre-sorting to decrease future manual sorting
- Applying additional self-sorting for the high-risk waste (incl. mask and pharma equipment)
- Increased sanitation and streamlined collection process
- Smart waste collection and combining system
- Waste-collection route optimization based on big data to decrease employee exposure
- Automatic sanitation of waste bins during pick up
- More touch-free fleet management and logistic solutions
- More automated transfer station operation and maintenance
- Sensors to limit the number of employees and increase the distance between employees in the working area
- Virtual customer guidance for hazardous waste (eg, mobile)
- Automated waste sorting, recovering, segregating, and baling process
- Contactless digital hazardous waste recycling methods (eg, digital payment, paperless receipt)
- Automatic sanitization of the recycling kiosk after each use
- Hazardous waste pick-up service upon request
- Optimized and streamlined waste recovery workflow
- Waste transferring and treating system that is more automated
- Digital tool that enables waste footprint tracking

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