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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
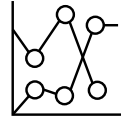
Identify interactions & areas of concern

Identify the types of work environment relevant to the business

Identify types of in-person interactions for priority journeys within three main buckets:

- Employee to employee

- Employee to customer

- Customer to customer

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
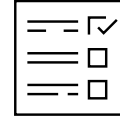
Develop & Execute solutions

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
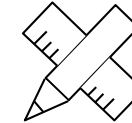
Adapt & sustain

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 appl icable 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

ILLUSTRATIVE EXAMPLE   **NONEXHAUSTIVE**

Detailed areas per type of interaction and operation

	Goods transfer	Services	Internal tasks/processes
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

Interaction types

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

ILLUSTRATIVE EXAMPLE

E2E: Employee to employee **E2C**: Employee to customer **C2C**: Customer to customer

Customer acquisition	Waste collection and processing	Waste recycling

| Customers request services | Service contract sign-up | Work plan set-up | **Waste collection** | **Waste transfer** | **Waste processing** | Waste utilization | Waste recovery |

Municipal waste collection and processing journey

Customers pre-sort waste

Employees pick up waste and load onto truck

Employees deliver waste to treatment facilities

Employees sort waste, collect and bale reusable material

Employees ship waste for further treatment

Potential interactions

E2C Delivering recycling bins to customers	**C2C** Customers sharing recycling and landfill bins	**E2E** Employees working on the same truck or route	**E2E** Sorting and collecting material	**E2E** Transferring to other destinations including landfills, energy stations, and manufacturing sites
E2E Dispatching truck and coordinating internal work	**E2C** Handling waste bins and touching waste	**E2E/E2C**[1] Unloading waste from vehicles at transfer station	**E2E** Processing recyclables from waste packaging	**E2E** Further processing
C2C Interactions between customers in common areas	**E2E** Combining several garbage loads into one	**E2E** Operating and maintaining transfer stations	**E2E** Recovering, segregating, and baling reusable material	

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

ILLUSTRATIVE EXAMPLE   **NONEXHAUSTIVE**

Potential levers that could be utilized in solutions

New offers & services

Policies

Processes

Digitization

Innovations and improvements could address guest and associate safety and comfort in and around the municipal waste-management site

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 interactions
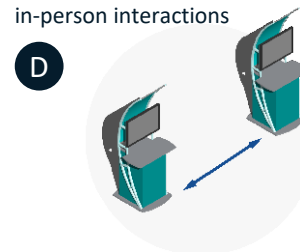
D Workspace layout and flow that support physical distancing
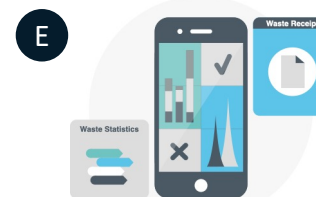
E Completely digital recycling process (ie, online tracking, digital receipt)

Transfer station

Employee entrance

Recycling center

Public entrance
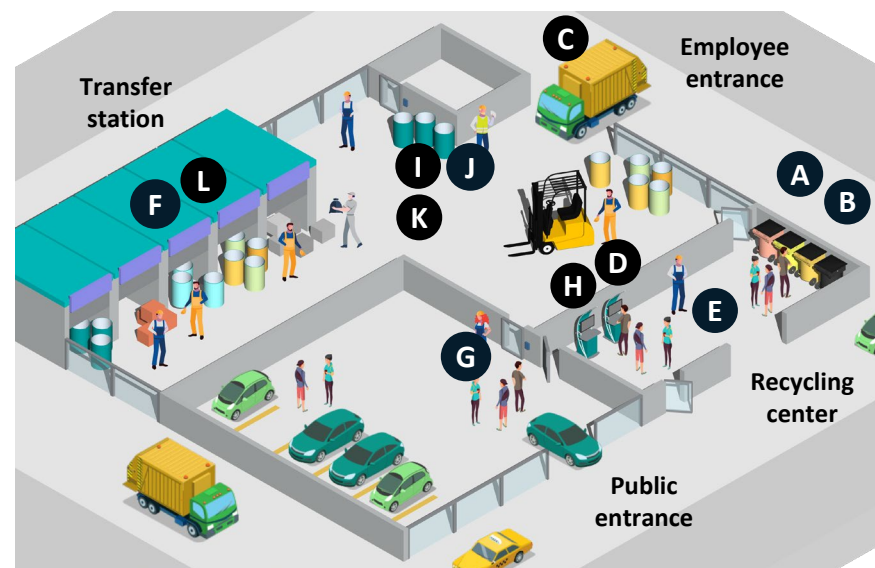
Potential additional examples

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

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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

	Customer acquisition	Waste collection and processing			Waste recycling
	Service set-up/pre-sort ›	**Collection** ›	**Transfer** ›	**Processing** ›	**Waste recovery**
Potential actions to consider	• Receiving equipment in person (incl. recycling bin) • Pre-sorting waste by customers • Meeting other customers while throwing trash	• Pulling the bin to the street/moving it back • Touching and handling waste when moving it to the truck • Combining waste loads	• Truck operating • Unloading waste from vehicles • Constructing, operating, and maintaining transfer stations	• Sorting and collecting material • Processing, recovering, segregating, and baling reusable material • Receiving receipt	• Transferring to other destinations (incl. landfills, energy stations, and manufacturing site) • Further processing
Reopen Reopen & immediate needs	Contactless equipment drop-off Communication with customers on safety efforts Customers interacting in trash rooms **Sanitation of common space**	Minimize direct pick-up interaction between employees and customers **Upgraded PPE for employees and customers** **Provide dedicated hours for high-risk area (incl. low SES area)**	Limited number of employees in the same fleet and workstream Courtesy gloves, wipes, and hand sanitizer available at transfer station **Enforce physical distancing in transfer stations**	**Provide sufficient distance at working space for processing** Separate the high-risk waste (eg, waste from contaminated area) Schedule additional disinfection for equipment, workspace, and customer kiosks	Disinfecting waste Enforcing physical distancing when exiting recycling center Limited interaction between different stakeholders (eg, transportation worker and landfill safety guard)
	Touch-free municipal waste management processes ›				
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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