

A catalog of the Solutions for Advancing All People's Comfort in Air Travel

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Database for Carry-On Equipment into Airplane

Everyone can access a reliable database detailing specifications of carry-on equipment into the airplane, such as passengerowned wheelchairs, medical equipment (e.g., ventilators), and car seats. This enhances the efficiency of flight ticket booking and check-in processes.

Scope: People using wheelchairs/medical equipment/ car seats

People will no longer need to invest time in scrutinizing detailed information regarding carry-on equipment when booking their flight tickets. This streamlined process will ensure faster and smoother check-in.

Scope: Ground staff

For the check-in staff and ground handling staff, collecting information regarding passenger's carry-on equipment, such as wheelchairs (e.g., size, battery types, handling instructions), will no longer be a time-consuming task.

Category: Ticket reservation and check-in system





Special Assistance Information Card Available Across All Airlines

Passengers can utilize a card containing information related to special assistance request, carry-on equipment (i.e., wheelchair data linked to Solution Number 01), and any additional requests. The card can take the form of a chip card or a mobile phone app and is designed to be available at any airline. The data format of the information on the card is standardized.

Scope: People who need special assistance (particularly wheelchair users)

People who need special assistance will experience smoother and faster processing of booking, check-in, and security check procedures. Furthermore, they will no longer encounter repeated inquiries from ground staff regarding the information already contained in the card.



Category: Ticket reservation and check-in system



Self Baggage Drop System for Dealing with Strollers

This self baggage drop system is designed to deal with not only for regular baggage but also for general strollers and special needs strollers for children with disabilities. The feature of automatic stroller packing into plastic bags is also anticipated.

Scope: People with children using strollers

People will no longer need to wait in line at crowded staffed counters to check strollers in.

Scope: People with children with disabilities

Even if people wish to check their special needs strollers at the timing of check-in, they will no longer need to wait in line at a staffed counter.



Category: Airport facility





Security Screening Equipment Available for Passengers in a Wheelchair

Passengers can pass through security screening while in a wheelchair or a special needs stroller without their bodies being directly touched by inspectors.

Scope: Wheelchair users, and people with children with disabilities

People will undergo a contactless security screening instead of having their body touched directly. This will also result in a faster process.

Scope: People with children using strollers

People will no longer need to fold their strollers during the security screening, leading to a smoother and more efficient process.



Interactive Digital Companion for Airport Guidance

Utilizing artificial intelligence (AI) and augmented reality (AR) technology, a digital companion guides passengers through the airport to boarding. This companion also assists passengers in booking alternative flights in the event of cancellations and engages in interactive conversations with them. Although the AR device is inconspicuous to passersby, airport staff can quickly locate and help passengers using the GPS functionality on the device if necessary.

Scope: People who have concerns about communicating with others (particularly people with intellectual and developmental disabilities, and people with mental disorders)

The companion will alleviate passengers' anxiety, enabling them to navigate the airport independently.

Scope: People with visual impairments

Flight announcements and notifications (e.g., changes in departure time or boarding gate) will be conveyed to people as text messages using an AR view.

Scope: Wheelchair users

Even when navigating complex routes in the airport, people will reach their destinations independently without confusion.

Scope: All passengers

All passengers will enjoy communicating with the digital companion while moving around the airport. Additionally, they will effortlessly obtain the latest flight information and will have the ability to book alternative flights.

Category: Airport facility



Courtesy of Toyota Boshoku Corporation / Lai Chunwei



Moving Assistance Device in Airport

This device guides passengers from check-in to the boarding gate, avoiding passersby and obstacles on the route. Moving assistance devices are envisioned to have various configurations, including devices shaped like animals (e.g., dogs, cats), robots, and wheelchairs. The device can provide information regarding airport facilities, direct passengers to boarding gates (even if the boarding gate has changed), and interact with passengers. If necessary, airport staff can quickly locate the passenger and provide assistance, using the GPS functionality.

Scope: People with visual impairments

People will be able to move freely in the airport without airport staff assistance.

Scope: People who have concerns about communicating with others (particularly people with intellectual and developmental disabilities, and people with mental disorders)

The device will ease people's anxiety, and enable them to travel independently to their destinations.

Scope: All passengers

All passengers will enjoy interacting with the device while moving around the airport.

Category: Airport facility





Assistance Enabling Passengers to Transfer to the Window Seat Easily

Even within the confines of a cramped economy class seat, passengers requiring total assistance can be easily transferred to the window seat by two caregivers using a slide board and slide seat.

Scope: Caregivers and ground staff

This method will reduce the physical burden associated with transferring passengers who require total assistance to the window seat.

Scope: Wheelchair users

Passengers who use wheelchairs will be able to book and enjoy a window seat without worrying about imposing a burden on caregivers and airlines.



Category: Operation



Overhead Stowage Bin Capable of Lifting Up and Down

The overhead stowage bin can be sufficiently lowered for easier stowage as needed, when passengers stow their baggage into it. The stowage bin is designed not to disturb seated passengers and not to intrude into the aisle even when lowered. Additionally, the bin is designed to lift up and down with minimal force.

Scope: All passengers and cabin crew

The physical burden of lifting heavy baggage up and down will be alleviated.



Category: Overhead stowage bin





Overhead Stowage Bin with Visible Contents

Part of the overhead stowage bin is transparent or meshed, allowing passengers to see inside without opening it. The design is esthetically considered.

Scope: All passengers and cabin crew

All passengers and cabin crew will easily identify available overhead stowage bins for stowing their baggage without needing to open them. Additionally, the risk of accidentally dislodging contents while retrieving baggage will be reduced.



Category: Overhead stowage bin

Indicator Showing Whether the Overhead Stowage Bin is Latched

When the overhead stowage bin is closed and fully latched, an indicator turns on.

Scope: Cabin crew

Cabin crew will conduct quick safety checks on the latches of overhead stowage bins. Additionally, the physical burden of cabin crew using their hands to confirm complete closure of the overhead stowage bins will be reduced.





Courtesy of Toyota Boshoku Corporation





Folding Seats Enable Standing Up in Seat Space

Passengers can stand in their seat space by folding up the seat.

Scope: All passengers

All passengers will be able to stretch and feel refreshed in place. Passengers in window seats will have easier access to the aisle. Additionally, the seat will be utilized to store special large baggage such as musical instruments.

Scope: People with illnesses

Passengers with economy class syndrome and restless legs syndrome will be able to stretch at their seats.

Scope: People with assistance dogs

Assistance dogs will stay comfortable during the flight.



Solution Number 12 Seat Capable of Tilting



This seat features a tilting function, allowing both the seat and backrest to tilt independently or simultaneously. Passengers are not required to return their seats to the original position during takeoff and landing.

Scope: Wheelchair users and all passengers

Wheelchair users and all passengers will find it easier to maintain a stable posture compared with conventional cabin seats, and overall comfort will be enhanced during the flight.



Seat Facilities with Color Contrasts and Tactile Features

Each seat facility (e.g., seat pockets, tables, monitors, buttons) is designed with differences in color contrast and tactile features. The button to call cabin crew is not only designed to be easily identifiable, incorporating concave and convex features, but is also designed to clearly identify whether the button has been pressed.

Scope: People with visual impairments

People with visual impairments will easily identify the facilities around their seat.





Visually-Distinguished Seat Pockets

Seat pockets are designed with unique colors and numbers for easy identification.

Scope: People with developmental disabilities

The numbered and colored seat pockets will make it simpler for passengers with developmental disabilities to remember the location of their belongings and reduce the likelihood of leaving the airplane with belongings remaining in the seat pockets.

Scope: People with visual impairments

People with visual impairments will distinguish seat pockets easily because of distinct colors and contrasts.





Indicator Showing Original Position of Economy Class Seat

An indicator turns on when the seat is in the original upright position, allowing passengers and cabin crew to easily determine the seat position.

Take Off and Landing

Scope: Cabin crew

Prior to takeoff and landing, cabin crew will be able to quickly assess the seat position. This will eliminate the need to directly inquire about passengers' seat positions.

Scope: All passengers (particularly people with large physiques)

Situations where the passenger's seat appears to be reclined despite being in its original position will no longer be misrecognized by cabin crew.





Indicator Showing Whether the Seatbelt is Fastened

An indicator turns on when the seatbelt is fastened, allowing passengers and cabin crew to identify its status.

Scope: Cabin crew

Cabin crew will conduct safety checks to efficiently ensure that passengers' seatbelts are fastened. This will eliminate the need to directly ask passengers whether their seatbelt is fastened.

Scope: All passengers

When the passenger's seatbelt is fastened, they will no longer be asked about their seatbelt by the cabin crew.



In-flight Service Ordering Using the IFE System

Passengers can directly order in-flight services through the IFE monitor or a mobile phone app, including light meals, beverages, extra blankets and pillows, in-flight sales, and assistance for people with disabilities (e.g., aisle chair use). To make atypical orders, passengers can call the cabin crew and order directly. Consideration of the workload of cabin crew is essential for implementing this system, such as providing information about the number of people waiting to passengers, and limiting service time.

Scope: People with hearing impairments, people with developmental disabilities, and people with mental disorders

These people will be able to order in-flight services without direct communication whenever they want.

Scope: All passengers (particularly window seat passengers)

All passengers will be able to easily order in-flight services.





IFE System Showing Time Schedule of Flight Events

In addition to standard flight information, detailed time schedule of flight events, including meal services, are displayed via IFE monitors. IFE monitors will also provide the latest estimated time of arrival, turbulence forecasts, information on irregular situations such as runway traffic jams and landing timing.

Scope: All passengers (particularly people who need special assistance)

All passengers will be able to plan how they spend time on the plane, such as restroom use. Additionally, passengers will more easily understand situations such as landing timing and irregular events.

Scope: People with developmental disabilities

People with developmental disabilities will be calmed during flights by knowing the order and timing of in-flight services.





IFE System Controllable on Personal Mobile Devices

Passengers can operate the IFE system using their personal mobile devices such as mobile phones and tablets. In the IFE system, not only entertainment contents and flight information, but also in-flight service ordering are included.

Scope: People with visual impairments

People with visual impairments will be able to operate the IFE system using their familiar personal devices.

Scope: Passengers whose hands cannot reach the IFE monitor

Passengers will be able to enjoy IFE content without direct operation of the IFE monitor.





Movable/Detachable IFE Monitor

The IFE monitor, including the type extending from the armrest, can be moved or detached, making it easier for children to watch compared with conventional monitors positioned at adult eye level.

Scope: Children, and passengers who have difficulty watching IFE with conventional monitors

These passengers will enjoy IFE content comfortably.





Subtitle Display for In-flight Announcements

Subtitles for in-flight passenger announcements are displayed on IFE or cabin monitors.



Approach 1





Scope: People with hearing impairments

People with hearing impairments will receive in-flight passenger announcements in real-time as text messages.

Approach 2



Approach 3



Paper Cup Lid with Sophisticated Features

A paper cup lid with an opening for easily adding milk or sugar and convenient drinking is used for in-flight drink service. In addition, the opening is equipped with a feature to prevent the contents from spilling.

Scope: All passengers

The lid will prevent hot drinks from spilling as a result of turbulence, avoiding dirtying tables and clothes, and causing burns.



Category: Tableware





Paper Cup Sleeve with Easy-to-Grasp Handle

A paper cup sleeve featuring an easy-to-grasp handle is used for in-flight drink service. This sleeve is made of cardboard, can be stored compactly before use, and provides an insulating effect.

Scope: People with weak hand grip and people whose hands are sensitive to heat

People with weak hand grip will find it easier to drink comfortably and safely. Additionally, those whose hands are sensitive to heat will enjoy hot drinks comfortably and safely.



Category: Tableware

In-flight Tableware for Eating with One Hand

This tableware (trays, dishes, and cutlery) is designed for easy hold and grip in terms of one-handed use, and ensuring it does not slip. The shape of the dish is designed to facilitate scooping of food with a spoon. Additionally, the height of the meal tray is adjustable for enhanced ease of use.

Scope: People with reduced mobility and older people

People will find it easier to independently enjoy their in-flight meals, even with just one hand.





In-flight Tableware for People with Visual Impairments

The placement and colors of plates and trays for in-flight meal service are carefully designed for people with visual impairments. For instance, main and side dishes are arranged along the clock positions, trays feature a concave and convex surface for easy identification, and one of the trays includes a trash box.

Scope: People with visual impairments

People with visual impairments will find it easier to take inflight meals.





Multi-Purpose Space Available While Airplane is Cruising

Spaces around passenger entry doors and service doors are utilized as temporary multi-purpose spaces, or the space created by space-saving is designated as permanent multi-purpose areas.

Scope: People with children

People will use the space as a nursing room, or as a convenient space for comforting their babies or children.

Scope: People with developmental disabilities

People with developmental disabilities will use the space as a calm-down or cool-down area.

Scope: People with illnesses

Passengers with economy class syndrome and restless legs syndrome will use the space for stretching.

Scope: All passengers

This space will be used for various purposes. If a bed can be deployed in the area, unwell passengers will have the option to lie down and rest.

Category: Cabin facility





Courtesy of Toyota Boshoku Corporation

Flight Experience Attractions



This attraction offers a comprehensive experience of the entire air travel process, covering activities such as check-in, security check, boarding, takeoff, the cabin environment during the flight (e.g., turbulence and noise), in-flight services (e.g., meals, drinks and sales), landing, and disembarkation. This attraction is situated in commercial facilities, among other locations. As a more simplified option, an online digest video is available, summarizing the air travel process, cabin environment, potential risks during flights, and the enjoyment of air travel.

Scope: People with disabilities who have never experienced air travel

By intuitively understanding the flow of air travel and being informed about potential risks and its countermeasures in advance, the anxiety of people with disabilities who have never experienced air travel will be alleviated.



Category: Ground facility

Steam Oven for Easy Removal of Contents

When cabin crew extract an oven pan from this oven, the pan does not get stuck. Additionally, the oven pan can be attached an easy-to-grasp handle, eliminating direct contact with the pan.

Scope: Cabin crew

Cabin crew will carry out their tasks smoothly and safely while avoiding burns.





Easy-to-Operate and Quiet Latches in Galley Compartment

When this latch is pushed or pinched with fingertips, it ensures that fingers and nails are not injured. Additionally, the latch is designed to operate quietly.

Scope: Cabin crew

Cabin crew will no longer injure their fingers and nails when they operate latches.

Scope: All passengers

The passengers seated close to the galley will enjoy a more comfortable flight as a result of a quieter galley environment.



Category: Galley

Attendant Seat Reducing Impact upon Landing

The attendant seat has improved cushioning and comfort.

Scope: Cabin crew

The physical burden of the cabin crew will be reduced because the attendant seat will absorb more of the landing impact.





Category: Attendant seat

Expandable Lavatory Providing Spaces for Caregivers' Assistance

By combining two adjacent standard lavatory units and a connecting cross aisle, a large enclosed space is created onboard without reducing the number of cabin seats. This expanded lavatory is large enough for a passenger in an onboard wheelchair to use the lavatory with two caregivers. The expandable lavatory can be deployed easily and quickly upon request from the passengers during cruising. In addition, a folding bed can be installed in the wide enclosed space created.

Scope: Wheelchair users who require total assistance and their caregivers

Wheelchair users who require total assistance will be able to use the lavatory easily with the help of their caregivers, whereas they have difficulty using existing lavatories because of the confined space. In addition, the folding bed will be useful for changing clothes.

Scope: People who use diapers and their caregivers

People who need to change diapers will be able to use the folding bed equipped in the lavatory.

Category: Lavatory









Lavatory Equipment for Easy Transferring and Seating

Flip-up handrails, L-shaped handrails, and backrests are installed in the lavatory. In addition, the height of the toilet seat is adjustable.

Scope: Wheelchair users and older people

The equipment will make it easier for wheelchair users and older people to transfer to the toilet seat, including stand-up transferring by themselves. Moreover, they will maintain a stable posture on the toilet seat.

Scope: Prosthetic leg users and pregnant women

Prosthetic leg users and pregnant women will be able to comfortably use the toilet seat by adjusting its height to their preference.



Category: Lavatory

Accessible Lavatory with Wide Door

The door width of the conventional wheelchair-accessible lavatory installed on wide-body aircraft can be expanded to facilitate entry and exit with onboard wheelchairs.





Scope: Caregivers of wheelchair users and cabin crew

When a wheelchair user enters and exits the accessible lavatory using an onboard wheelchair, caregivers and cabin crew will no longer need to diagonally push and pull to turn around the wheelchair in a narrow aisle, reducing their physical burden.





Lavatory Sink Enabling Handwashing While Seated on Toilet Seat

The lavatory sink is designed with consideration for arrangement, size, and ease of use, allowing passengers to reach it while seated on the toilet seat.

Scope: Wheelchair users

Wheelchair users will be able to wash their hands effectively after using the toilet, enhancing the usability of the lavatory.



Category: Lavatory



Easy-to-Use Diaper Changing Table and Clothes Changing Board

The diaper changing table has sufficient length to enable diaper changing while facing the baby. A board for changing clothes is provided in the lavatory.

Scope: People with children

These features will facilitate easier changing of diapers and clothes for children.



Solution Number 36 Equipment for Ostomates

A mirror and small folding shelf are installed above the toilet in the lavatory.

Scope: Ostomates

Ostomates will be able to manage their ostomy appliances comfortably on board.





Category: Lavatory

Equipment for Cleaning Urine Bottles

A water faucet with an extensible hose or a connector for extra hoses is installed in the lavatory for cleaning urine bottles. Wastewater is discharged into the toilet.

Scope: Caregivers of urine bottle users

Caregivers will be able to wash urine bottles even during the flight, to ensure that the bottles are clean and hygienic.



Category: Lavatory





Lavatory Equipment with Color Contrasts and Tactile Features

Lavatory equipment (e.g., handrails and buttons) is designed with differences in color contrast and tactile features.

Scope: People with visual impairments

People with visual impairments will be able to easily identify the equipment in the lavatory.



Voice Recognition for Lavatory Control

Multi-lingual voice recognition technology enables passengers to operate lavatory equipment with their voice, such as flushing the toilet, calling the cabin crew, turning on the water faucet, and locking the door.

Scope: Wheelchair users and children

Wheelchair users and children, whose hands may not reach the equipment, will be able to operate the lavatory equipment without using their hands.

Scope: People with visual impairments

People with visual impairments will be able to control the lavatory equipment, even if they cannot identify where the equipment is located.





Category: Lavatory

System Showing Lavatory Availability

The availability of all onboard lavatories is displayed on IFE monitors, as well as through smartphone and tablet apps. In addition, wheelchair users can be given priority to use the accessible lavatory through this system.

Scope: All passengers (particularly people with visual impairments)

All passengers will be able to easily find available lavatories.

Scope: Wheelchair users

Although only one accessible lavatory is normally installed in a cabin, wheelchair users will be able to easily use the lavatory.





Smart Trash Can in Lavatory

A trash can with features that include automatically opening flaps and automatically compacting trash is installed in the lavatory, preventing the trash from scattering.

Scope: Cabin crew

Cabin crew will no longer need to clean up scattered trash.

Scope: All passengers

All passengers will be able to use a clean lavatory.





Category: Lavatory



Dirt Detection and Auto Cleaning System in Lavatory

This system detects dirt inside the lavatory when it is unoccupied, and automatically cleans up.

Scope: Cabin crew

The burden on the cabin crew related to lavatory cleaning will be reduced.

Scope: All passengers

All passengers will be able to use a clean lavatory.



Category: Lavatory

Passenger Identification Using Image Recognition and Augmented Reality Technologies

Cabin crew wear an augmented reality device that identifies passengers using image recognition on the basis of facial information retrieved from passport photos, and displays passenger information (e.g., name, seat number, type of meals to serve, and special assistance requests) in the view field. Due consideration of personal information protection is imperative in the implementation of this solution.

Scope: Cabin crew

Even if the passenger has moved from their assigned seat to another seat, the cabin crew will correctly identify the passenger, and will no longer mistakenly serve special meals such as allergen-free meals.

Scope: Passengers who request special meals and special assistance

Passengers who request special meals and special assistance will be assured of receiving these services wherever they are in the cabin because cabin crew will identify the passengers easily.



Category: Galley



Inventory Management System for Meals and Beverages

When meals and beverages are loaded on board, their information is acquired by scanning carts and compartments, and registered in the cabin system. Cabin crew can easily access the registered information from their terminals or work support monitors (assumed to be installed in the galley). Efficient management can be improved even more by identifying the type and location of opened beverages. It is preferable for the beverages to be centrally managed using a large refrigerator installed in the galley.

Scope: Cabin crew

Cabin crew will be able to quickly complete confirmation of the contents and quantity of the catered meals and beverages when they are loaded. In addition, they will be able to easily identify the storage location of the beverages they use.



Sophisticated Galley with Spacious Worktop

Spacious worktops are created in the galley by saving space through features such as service trolleys that are capable of heating meals, and overhead storage. In addition, the galley facilities, such as a deep sink preventing wastewater from overflowing, lighting with brightness control, and a trash can with a wide opening and a compaction feature, improve work efficiency. Furthermore, it is desirable that the appearance of the galley is designed to be elegant.

Scope: Cabin crew

Spacious worktops will separate storage space and work space in the galley, resulting in greater ease of use for the cabin crew. In addition, cabin crew will experience a feeling of openness, comfort, and enjoyment while they work in the galley.



Category: Galley



Service Trolleys Capable of Heating Meals

The service trolleys are loaded onto the aircraft with entrees (hot meals) stored in the trolleys, and the entrees can be heated directly in the trolleys. The trolleys also ensure that the entrees remain hot during serving.

Scope: Cabin crew

Cabin crew will no longer need to transfer entrees from the steam ovens to the trolleys, reducing their physical burden.

Scope: All passengers

All passengers will enjoy hot meals regardless of seat location and service timing.



Category: Galley



Service Trolleys Operable with Minimal Force

The motor-assisted trolleys, with motors that are activated when the trolleys start moving, allow cabin crew to operate them with minimal force. In addition, the trolleys are equipped with obstacle detection features in the direction of travel to prevent collisions.

Scope: Cabin crew

Cabin crew will be able to operate heavy trolleys loaded with meals and beverages with minimal force, reducing their physical burden.



Category: Galley





Space Creation by Applying Lifting Type Stairs to Crew Rest

By converting the crew rest stairway to lifting type stairs leading to the aft galley, the space previously occupied by the stairway (equivalent to one standard lavatory unit) can be repurposed as a multi-purpose space for passengers.

Scope: People who need multi-purpose spaces

See Solution Number 26 "Multi-Purpose Space Available While Airplane is Cruising" for details.



Category: Cabin facility



Seating System Enabling Passengers to Use Their Own Wheelchairs in the Cabin

This seating system allows wheelchair users to use their own wheelchairs throughout the flight. The seating system usually takes the form of a standard cabin seat available to general passengers, but enables a space to be created for securing a wheelchair by folding the seat when required. Wheelchair users in the space can use the same facilities equipped around conventional seats, such as in-flight entertainment systems and emergency life jackets. In addition, this space created is available to passengers who need ample space other than wheelchair users.

Scope: Wheelchair users

This system will alleviate the physical burden on wheelchair users associated with transferring, eliminate the inconvenience of checking in wheelchairs, and mitigate concerns about wheelchair damage or loss. In addition, wheelchair users will be able to fly in their personalized wheelchairs tailored to their needs.

Scope: Caregivers and ground staff

This system will reduce the physical burden on caregivers and ground staff in transferring care recipients between the boarding wheelchair and the cabin seat in a confined space.

Scope: All passengers (particularly people with children using strollers)

The created space will be available for versatile uses. For instance, strollers for children and special needs strollers for children with disabilities can be secured in the space.





Detachable Seating System that Functions as a Wheelchair

The seating system usually takes the form of a standard cabin seat available to general passengers, but the seat can be detached and used as a wheelchair when required, improving accessibility for wheelchair users in the cabin. Upon request from wheelchair users, this wheelchair can pick up the passenger at the boarding gate or lounge and directly access to their seat location in the cabin. In addition, this detachable seat can be designed to move into the lavatory during the flight without transferring to the onboard wheelchair.

Scope: Wheelchair users

This system will alleviate the physical burden on wheelchair users associated with transferring.

Scope: Caregivers and ground staff

This system will eliminate the physical burden on caregivers and ground staff in transferring care recipients between the boarding/onboard wheelchair and the cabin seat in confined spaces.





Seating System Enabling Passengers to Board While in a Stretcher

This seating system is installed near the passenger entry doors for accessibility, and enables passengers requiring stretchers to board without transferring in the cabin. The seating system usually takes the form of a standard cabin seat available to general passengers, but a space for securing a stretcher can be created by folding the seats when required. Caregivers seated next to the stretcher can assist passengers directly without standing up. In addition, this system is equipped with an in-flight entertainment monitor with an adjustable arm for stretcher users, along with a curtain enclosing the stretcher user and caregivers together.



Scope: Stretcher users

This system will eliminate the physical burden on stretcher users associated with transferring in the cabin. In addition, the low position of the stretcher will facilitate better communication between the caregivers and stretcher user, while also providing the opportunity to enjoy window views and in-flight entertainment.

Scope: Caregivers and ground staff

This system will eliminate the physical burden on caregivers and ground staff in transferring care recipients to the cabin stretcher bed at a high position in a confined space. In addition, caregivers will be able to assist passengers easily throughout the flight.



Seat Providing a Private Room-like Environment

Partitions positioned at the front, back, left, and right sides of the seat create a private room-like ambience. These partitions are designed to ensure unimpeded access to and from the seats.

Scope: All passengers (particularly people who have concerns about being seen by others)

These partitions will provide passengers with a sense of privacy and tranquility by blocking the view of neighboring people.





Seat with Retractable Hood

This seat features a retractable hood that can be expanded to cover the passenger's head. The hood can be used freely by passengers.

Scope: All passengers (particularly people who have hyperesthesia)

The retractable hood will shield passengers not only from the view of others but also from external stimuli such as light and sound, providing a sense of calm.







Positioning Adjustable Seat in the Front/Back Direction

This seat enables the user to adjust the seat position backward and forward, either as a whole or just the seat surface. This allows caregivers to facilitate easier assistance to the care recipient seated beside them. Note that the usability of the equipment for the passenger seated behind should not be affected by the adjustment of the seat position.

Scope: Caregivers

Caregivers will be able to provide assistance easily, such as eating meals in a natural posture.

Scope: People with hearing impairments

People with hearing impairments will be able to enjoy face-toface communication (e.g., sign language and lip reading) with nearby passengers.





Solution Number 55 Width Adjustable Seat

Standard cabin seats, which are usually offered to general passengers, can be transformed into wider seats by changing the position of the armrests when required. The seats are designed as a bench seat with a flat seat surface and freely adjustable armrests, enabling passengers to use the seats comfortably regardless of the seat width.



Pregnant women and people with large physiques will be able to relax more comfortably in the seat.









Seat Enabling the Use of Passenger's Own Seat Cushion

The cabin seat cushion can be replaced with the passenger's own cushion brought into the cabin when required.

Scope: Wheelchair users

Wheelchair users will be able to use their own familiar cushion, enabling them to maintain their usual stable posture throughout the flight.





Seat Enabling a Car Seat to be Secured Easily

Passengers carrying on car seats can use the cabin seats with ISOFIX, an easy anchorage system for child safety seats that is applied in automobiles.

Scope: People with children, including those with disabilities

Car seats brought into the cabin by people with children will be easily attached to the cabin seat. In addition, the types of car seats available onboard will increase.



Category: Seat

Freely Positionable Tray Table

The tray table attached to the seat is designed to be adjustable in height, lateral position, and longitudinal position, and can be angled flexibly.

Scope: All passengers (particularly caregivers and people with large physiques)

Passengers can conveniently adjust the table to their preferred position.







In-Cabin Special Zone for Passengers Using Their Own Wheelchair

The wheelchair-accessible zone for passengers using their own wheelchair in the cabin is located near the passenger entry doors. The passengers can enter and move through a wide aisle in the cabin and directly access the wheelchair securing space (see Solution Number 49). In addition, the accessible lavatory, which can be entered while in the wheelchair, is installed in the zone.

Scope: Wheelchair users

Wheelchair users will remain in their own personalized wheelchairs throughout the flight, eliminating the physical burden associated with transferring, the inconvenience of checking in wheelchairs, and concerns about wheelchair damage or loss. In addition, they will no longer need to use the onboard wheelchair when using the lavatory, reducing their physical burden.



Category: Layout of passenger accommodations

Courtesy of Toyota Boshoku Corporation



In-Cabin Special Zone for Passengers Making Sounds Such as Screaming and Crying

Passengers can book and use the seats in the in-cabin special zone established for passengers making loud sounds, such as screaming and crying.

Scope: People who have concerns about making sounds (particularly people with intellectual and developmental disabilities, and their assistants)

Passengers who have concerns about making sounds will feel less anxious about receiving negative attention from other passengers, because they will be seated with people who have similar experiences, and who are more likely to be understanding and tolerant.



Category: Layout of passenger accommodations



Easily Recognizable Seat Number Signs and Guidance Facilities

The seat number signs written in large letters and Braille are displayed around the seats to improve visual and tactile recognition. In addition, guidance facilities, such as handrails and carpets with distinctive foot feeling, are installed in the cabin aisles.

Scope: Older people and people with visual impairments

Older people and people with visual impairments will be able to easily identify the seat numbers and move easily through the cabin aisles.



Category: Cabin facility

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Makeshift Bed Available During Flight

A makeshift bed for emergency use is provided in the cabin (for example, by temporarily expanding the attendant seats).

Scope: All passengers

Passengers will be able to lie down and take a rest in case of sudden physical discomfort.



Category: Cabin facility