

# Global Innovation Challenge 2025 Life Support Robot Contest

**Application Guidelines** 

Global Innovation Challenge Executive Committee

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## 1 Introduction.

#### 1.1 Introduction.

These Global Innovation Challenge 2025 Living Assistance Robot Contest Application Guidelines (hereinafter, the "Application Guidelines") provide application information and details for the Global Innovation Challenge 2025 Living Assistance Robot Contest (hereinafter, the "contest"). As the Application Guidelines may be revised after publication, please refer to the latest version on the official website. Please contact the organiser if you have any questions or concerns about this Application Guidelines.

The organiser may revise the Application Guidelines without prior notice by indicating and publicizing the changes to the Application Guidelines, the contents of the revised Application Guidelines, and the effective date of the said changes on the official website or in any other manner determined by the organiser. However, if such revision will have a material impact on the applicants, the organiser shall notify the applicants in advance for a reasonable period of time (at least two (2) business days in the case of a material adverse impact on the applicants).

(A "business day" shall mean a day other than Saturdays, Sundays, and national holidays in Japan on which banks generally conduct their normal business operations.) The Bank shall notify the applicant of the date of the notice after the first day of the month in which the notice is given.

Please contact the organizer if you have any inquiries or questions about this Application Guideline.

Contact:inquiry@global-innovation-challenge.com Official:https://global-innovation-challenge.com/

## 1.2 Update History

Date	Version
2/25/2025	1st ed.
7/08/2025	2nd ed.

# 1.3 Major changes from the previous contest

GIC2024	GIC2025
Practical evaluation Criteria Conducted at the GIC Innovation Center in Tsukuba City, with spectators during the practical evaluation.	Practical evaluation Criteria Conducted without spectators during the practical evaluation. (P12-4.2) Practical evaluation is conducted at a venue prepared by the team after consulting with the organiser if the team cannot come to the GIC Innovation Center in Tsukuba City. (P8-2.5) Teams that accomplish the Task will demonstrate in Tsukuba City. (P12-4.3)
Practical evaluation Venue  · GIC Tsukuba Innovation Center	Practical evaluation Venue  • GIC Tsukuba Innovation Center or other venue prepared by the team (P13-5.3)
<ul> <li>Schedule</li> <li>Application Guidelines published: September 2023</li> <li>Entry: End of Feb. 2023</li> <li>Announcement of Document Screening Results: End of March, 2024</li> <li>Demonstration: End of June, 2024</li> </ul>	Schedule (P7-2.3)  Entry period: February 1 to April 30, 2025  Announcement of Document Screening Results: End of May, 2025  Practical evaluation: June to November 2025  Demonstration: End of November, 2025
Tasks  · Members of the team, including assistants, may give instructions to the pilot during conducting the Tasks.	<ul> <li>Tasks</li> <li>Team members, including assistants, are not allowed to give instructions or tell the pilot the time during the task.</li> <li>When the Task is conducted at the venue prepared by the team, the organiser may adjust the time limit of the Tasks depending on the venue environment. (P14-5.4)</li> </ul>

# 2 Contest Summary

## 2.1 Purpose and Objectives

Commitment to "independent walking"

- The number of people who need assistance in their daily lives is increasing all over the world due to illness, accidents, and aging, among other reasons. Both the caregivers and the assisted are burdened mentally, physically, and economically. And yet commercial investment in robotics development in the welfare sector is relatively limited due to the small market.
- With the development of public infrastructure and barrier-free accessibility, it is now more convenient to use a wheelchair to carry out everyday activities without hindrance than before. However, the reality is that places without proper facilities put restrictions on activities. For example, when you visit a friend's house, you might come across steps in the entrance or hallway of a typical home, or insufficient space for a wheelchair. In such cases, living assistance robots that was usable indoors and outdoors, regardless of barriers, would allow people with disabilities to enjoy their lives more freely.
- This Living Assistance Robot Contest aims to support researchers and developers around the world, with the ultimate goal being widely available and innovative tools that leverage remaining limb functions to provide "independent walking", without the support of others, for those people living with wheelchairs due to disabilities such as paralysis of the lower limbs.

#### Purpose of this contest

- 1. Shorten the time to commercialization of living assistance robots by practical evaluation the task demonstration in contest venues that are close to real-world environments.
- 2. Creation of a community of participating teams, promotion of sharing ideas and technical information, and mutual improvement.
- In this contest, independent walking is defined as a person with a disability such as paralysis of the lower limbs who lives in a wheelchair being able to move his/her legs and walk without the assistance of others or without using a wheelchair.



# 2.2 Organizer

The Global Innovation Challenge Executive Committee (hereinafter referred to as the "Organizer") is an organization created to realize "2.1 Purpose and Objectives".

https://global-innovation-challenge.com/about/

## 2.3 Schedule

- This Application Guidelines uses Japan Standard Time (JST).
- Entry sheet published: February 1,2025
- Entry period: February 1 2025, to April 30, 2025
- Announcement of Document Screening Results: May 31, 2025
- Practical evaluation period: June to November 2025

# Example of examination schedule (when conducted at the GIC Tsukuba Innovation Center)

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Time	Day 1	day 2	Day 3			
10:00		Orientation	Orientation			
10:30			Task 1			
11:00		Task practice	Task 2			
11:30			Task 3			
12:00		Lunch break	Lunch break			
12:30		Lunch break	Lunch break			
13:00	Arriving at the venue and bringing in equipment		Task 4			
13:30	Facility guide					
14:00			Task 5			
14:30	Assembly and	Task practice	Task 5			
15:00	adjustment of the robot		Task 6			
15:30	TODOL		Task O			
16:00			Task 7			
16:30	Debat confirmation by		I ask I			
17:00	Robot confirmation by Evaluations	Question and answer session	Withdrawal			

## 2.4 Contest Stages

#### 2.4.1 Entry

Teams who wish to enter the contest submit the completed forms to the organiser.

The cost of entry is the responsibility of each team. In addition, the teams shall be responsible for any accidents that occur in connection with the preparation of the entry form.

#### 2.4.2 Document Screening

The organiser will screen documents and inform the result to the teams based on the entry forms submitted by the teams.

#### 2.4.3 Practical Evaluation

Teams that pass the document screening will conduct the Tasks at the contest field in section "2.5 Contest Venue" or at a venue prepared by the team.

Practical Evaluation takes place for one or two days per team during the Practical Evaluation period.

#### 2.4.4 Award Selection

The organiser awards teams that complete the Tasks and grants cash prizes.

## 2.4.5 Demonstration

The demonstration will be held in Tsukuba City in November, 2025. The team will demonstrate the Tasks to spectators.



< Figure: Contest Stages>

#### 2.5 Evaluation Venue

- GIC Tsukuba Innovation Center (former Elementary School)
- 877 Nakasugama, Tsukuba, Ibaraki 300-4242, Japan
- Google Maps URL: https://goo.gl/maps/GFA4XEWKVu8iDxEK9
- The team that cannot come to the venue mentioned above will conduct the Tasks at the venue prepared by the team.

#### 2.6 Fees and Costs

- Entry to this contest is free of charge.
- Interpreters will be arranged by the organiser.
- Please refer to "Table: Additional Costs" on the next page for details on other costs.

Table: Additional Costs

(data) item	cost-bearing
The costs associated with entry (e.g., costs associated with making the video required to create the entry form, costs associated with the doctor's diagnosis, and other costs associated with creating and submitting the entry form)	Responsibility of the team
The costs associated with practical evaluation in Japan (Tsukuba City) (e.g., travel, transportation, insurance and accommodation)  The costs associated with the venue prepared by the team (e.g., rental fee, insurance, and purchase of equipment)	The organiser will cover up to 10,000 USD of the actual costs incurred. The amount exceeding 10,000 USD is the responsibility of the team.
The costs associated with the demonstration (e.g., travel, transportation, insurance and accommodation)	The organiser will cover for the team member(s) deemed necessary to conduct the demonstration after consulting with team representative, pilot, assistants, technical staff and other organiser.

# 3 Entry

## 3.1 Team Eligibility

- Individuals and organizations involved in robot research and development are eligible. Groups that include multiple organizations or individuals are also eligible for the contest.
- There are no restrictions on the nationalities of team members
- Team members must not be members of organized crime groups, companies or organizations affiliated with organized crime groups, or other antisocial organizations, and must not have any relationship with antisocial forces, etc.

## 3.2 Robot Eligibility

- A robot eligible for the contest may be worn externally or fitted internally to the body and is a device or tool that enables the independent walking of a person with lower limb paralysis without the assistance of others.
- Robot that causes physical or emotional distress to the pilot are not allowed.
- There are no restrictions on the shape or size of the robot, provided it can be used in a general residential environment.
- The total weight of the robot and pilot cannot exceed 150 kg.
- A robot used in contact with a person with lower limb paralysis is eligible for this contest. Movement of the robot alone, through remote control or similar, is not allowed.
- The robot may operate automatically or manually. In the case of manual operation, the robot must be operated by the pilot only, and not externally (from the outside) except for safety reasons.
- One robot only may be used in the contest.
- When the team conducts the Task at the venue in Tsukuba City, the robot must be able to be used with the pilot wearing the jacket, which is an accessory to the device which eases the shock of falling.
- Robot that would be difficult to use in real-life situations, for example those that are excessively noisy, are not eligible for selection.
- There is no limit to the cost of building the robot.
- Robots that infringe or may infringe on the intellectual property rights or other rights of a third party, or robots that violate or may violate other applicable laws and regulations, are not eligible for selection.
- During the practical evaluation period, the organiser will check for discrepancies between the entry form and robot itself. Any discrepancy may result in the applicant being disqualified from participating in the practical evaluation.

## 3.3 Pilots Eligibility

- The team member who directly attaches and uses the robot is called the pilot.
- Pilots must not have muscle strength that affects their ability to stand up and walk.
- The pilot will be an individual who is paraplegic, due to spinal cord injury or

other reason, equivalent to a Frankel Classification rating of A to B and ASIA rating A to B. No upper limb impairment is required.

- The pilot shall be a mentally and physically healthy individual.
- There may be different pilots for different tasks.
- Pilots are required to submit a medical certificate and written medical opinion letters, in the format prepared by the organiser, at the time of entry.

## 3.4 Entry Tasks

Applicants may enter all seven tasks or any one or more.
 For example, a team can apply for tasks 1, 3, and 6.

## 3.5 Documents to be Submitted

- Entry Sheet
- Medical certificate from each pilot's physician
- A physician's opinion on each pilot's participation in the contest
- Medical checklist for each pilot
- ASIA rating for each pilot
- Please note that the above medical certificates, opinion letters, medical check sheets and ASIA evaluations for each pilot must have been obtained within one month of the entry sheet submission. If any of the information in the medical certificates or opinion sheets submitted at the time of entry changes before the practical evaluation, the team must submit the changes to the organiser.

## 4 Selection Process

## 4.1 Document Screening

4.1.1 Eligibility for selection

Applicants that submit their entry forms to the organiser during the entry period for this contest are eligible for selection. Entry period: February 1, 2025, to April 30, 2025

4.1.2 Announcement of Document Screening Results
The organiser will notify the results to the team by May 31, 2025.

#### 4.1.3 criterion (criteria) for selection

Based on the content of the entry sheet submitted by the applicant, applicants who satisfy both of the following two criteria will be considered successful

- Applicants who are judged by the organizer to have the potential to accomplish the tasks.
- Applicants who can participate the practical evaluation during the practical evaluation period.
- Applicants who can come to Japan during the demonstration period If the entry form is incomplete or missing information, the organizer will request corrections or additional information from the entrant. We will not respond to any inquiries or objections regarding the selection criteria or the results of the organizer's selection process.

## 4.2 Practical evaluation

The practical evaluation will take place on the contest field at the GIC Innovation Center in Tsukuba City or at the venue prepared by the team. When using the venue prepared by the team, the panel of Evaluations will visit the venue for practical evaluation ("on-site practical evaluation"). The organiser shall assess the Tasks conducted by the team robot and determine which robot complete the tasks. This practical evaluation is conducted without spectators.

## 4.2.1 subject (of taxation, etc.)

Teams that pass the document screening

#### 4.2.2 Practical evaluation period

June to November 2025

The organiser and each team will agree on a schedule, and the team will have about one or two days of the practical evaluation period.

#### 4.2.3 Evaluation location

At the contest venue (Tsukuba City) or the venue prepared by the team.

#### 4.2.4 Practical evaluation Location

Teams will conduct the Tasks at the contest venue prepared by the organiser or the venue prepared by the team.

Evaluations appointed by the organizer will evaluate the achievement of the objectives.

## 4.3 Demonstration

Teams that accomplish the contest tasks in the practical evaluation may participate in the demonstration with spectators in the end of November 2025 in Tsukuba City (scheduled).

It is not mandatory to participation in the demonstration. However, the team will need to provide a good reason why they cannot participate it.

If the team is unable to participate on-site, the organiser may consider other means of participation, such as online or video.

The content of the demonstration does not have any influences on the amount of prize money.

The organiser will cover for the team member(s) deemed necessary to conduct the demonstration after consulting with team representative, pilot, assistants, technical staff and other organiser.

## 5 Tasks

## 5.1 Criteria for accomplishment

- This contest consists of seven tasks.
- For each task, required actions to be performed are set.
- A task is deemed successful when the pilot is able to uses the robot to complete the task without incident within the time limit set for that task.
- A "Evaluation table for Required Actions" is included in the description of each task, which shows the actions that must be performed in order to complete the task. The Evaluations will assess based on this Evaluation t able.

#### 5.2 Contest field

- The floor plans below show the contest field on which the teams will perform their demonstration.
- The dimensions and the size of fixtures can be changed.



< Figure: Contest Field Floor Plan>.

## 5.3 Venue Requirements for On-site Practical evaluation

If the team cannot come to the contest venue in Tsukuba City, the practical evaluation will be conducted at a venue prepared by the team. The requirements of the venue are listed below.

- A floor plan similar to the contest field of GIC Tsukuba Innovation Center.
- If the toilet and bathroom (washroom area) are larger than the contest field, install simple columns or walls so that the size of the toilet and bathroom becomes 90 cm x 180 cm.
- When conducting tasks 5 and 6, install a 20 cm step at the entrance.
- The height of the bed, sofa (at least 2-seater), toilet seat, and chair seat should be 45 cm or lower from the floor.
- The height of a laundry pole in the bathroom to hang clothes (Task 4) should be 185 cm from the floor.
- If a team is unable to prepare equipment (limited to small equipment such as tableware) to be used for tasks, the organiser will provide them.

## 5.4 Practical evaluation Criteria for On-site Practical evaluation

- On-site practical evaluation is basically conducted in the same practical evaluation criteria conducted in Tsukuba City. However, in order to eliminate unfairness in the time limit set for the tasks depending on the size of the prepared venue, the time limit is adjusted based on the following criteria.
- The movement line of the contest field is set as a standard. 4 seconds are added or subtracted for every 1 meter difference (round down after 1 meter).
- Example: If the movement line of the venue prepared by the team is 5 meters longer than the contest field, 20 seconds are added to the time limit
- Example: If the movement line of the venue prepared by the team is 5 meters shorter than the contest field, 20 seconds are subtracted from the time limit.
- If there is no door where it should be, 40 seconds are subtracted from the time limit. The doors not used during conducting tasks should be fixed open if there are more doors where they should be.

## 5.5 Notes Common to All Tasks

## Before practical evaluation

- At the start of each task practical evaluation, the robot should be placed in the position designated by the organizer, away from the pilot's body (except for robot implanted in the body). If shoes are required to wear the robot, please remove them at the start of the program, as they are considered part of the robot.
- Pilots are expected to wear the robot for all tasks. If the practical evaluation of another task is to be continued, the robot must be removed during the preparation time when the previous task is completed, and the robot must be fitted again in the next task.
- The organiser will provide main fixtures used in each task. The teams may bring fixtures if they conduct tasks at the venue prepared by themselves.
- Teams may bring implements (carrying bags, etc.) that they have determined are necessary for carrying out each task, but these must fit into a backpack of 10-liter capacity or less. The tools you bring with you cannot

be changed by task. Throughout all the tasks, the backpack should fit no more than 10 liters. The backpack you bring with you must be in hand at the start of the task.

- You will be required to wear a vest which eases the shock of falling during conducting the tasks at the venue in Tsukuba. The vests are available for rent. Please return them in about a month as the number of vests is limited.
- Start Tasks 2 through 7 with the legs in the down position.
- Participating teams are not permitted to move furniture or other items prior to the start of the task. The pilot may move them after starting the task.

#### **During Practical evaluation**

- The pilot may use walkers, canes, and other walking aids. However, these
  aids cannot be used for purposes other than to assist walking. For example,
  the cane cannot be used to shut a door or the walker to hang or carry
  objects.
- The pilot may not intentionally put his or her weight on the wall, to lean against it or for balance.
- When changing direction or going up and down steps, the pilot may not put his or her entire weight on the walking aid to lift both lower limbs in order to change direction or go up and down steps.
- If a problem occurs with the robot, the pilot must recover by himself/herself. If anyone other than the pilot touches or remotely controls the robot, the pilot will be disqualified.
- If an unexpected event occurs during the practical evaluation, such as dropping an object, the pilot will not be allowed to start the task over. However, if the pilot is able to recover on his/her own, for example by picking up the dropped object, the pilot may continue the task. If an object is damaged when dropped and cannot be returned, the task is judged incomplete.
- If an object is dropped or furniture is knocked over during the practical evaluation, please return it to its original position before finishing the task.
- Any damage to goods or housing during the practical evaluation will result in disqualification. (If footprints or colouring from rubbing are restored, you will not be disqualified.)
- The pilot should close all the doors before finishing the task. However, a toilet door in Task 1 and a bathroom door in Task 7 should be closed after entering each room.

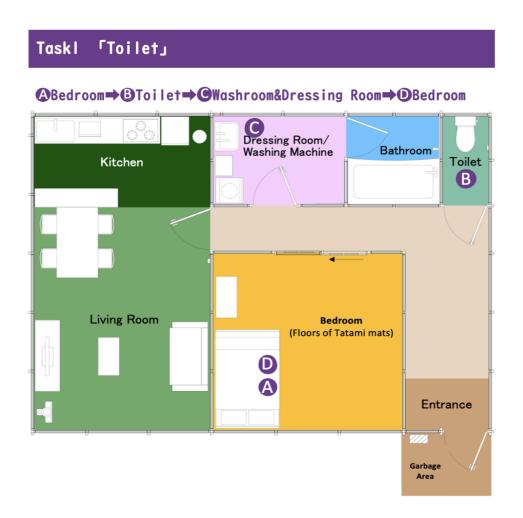
## Regarding assistants

- Please place about 2 assistants around the pilot. You may increase or decrease the number of assistants as needed.
- The assistant should count the seconds for tasks which require time counting, such as toilet, washing hands and showering during the practical evaluation.
- Team members can guide the pilot on the following actions during the practical evaluation. Team members are not allowed to tell the pilot the

elapsed time since it would put pressure on the pilot.

•

## 5.6 Task Descriptions



Task 1: Move to the toilet and use it

Time limit: 8 minutes

#### Task description:

Start by lying in bed (A) in your pyjamas. Sit up and put the robot on. At this time, the robot may be placed on a chair next to the bed. Get up from the bed and move to the toilet (B). Once in the toilet, close the door. Drop your trousers to your ankles, sit on the toilet seat, and count ten seconds. Then get up from the toilet seat and raise your trousers. Pull the flush lever on the right side of the flush tank. Exit the toilet and close the door. Move to the washroom (C) and wash your hands with soap for 10 seconds. Wipe your hands with the towel hanging in the washroom. Return to the bedroom and sit on the bed (D) to complete the task.

#### Task notes:

In the toilet, lower trousers to your ankles.

Task 1: Evaluation table for Required Actions

No.	Location	Required Actions	Evaluation
1	Bedroom	Start lying in bed in your pyjamas	
2	"	Sit up and put the robot on	
3	(Move)	Get up from the bed and move to the toilet	
4	Toilet	Close the door after entering the toilet	
5	"	Drop your trousers to your ankles, sit on the toilet seat, and count ten seconds	
6	77	Get up from the toilet seat and raise your trousers	
7	"	Pull the flush lever on the right side of the flush tank	
8	"	Exit the toilet and close the door	
9	(Move)	Move to the washroom	
10	Washroom	Wash hands in the washroom (about ten seconds, using soap) and wipe your hands with the towel hanging in the washroom	
11	(Move)	Close the washroom door and return to the bedroom	
12	Bedroom	Enter the bedroom and close the door	
13	77	Sit on the bed	

## Task2 「Preparation」

- **△**Bedroom**→©**Washroom&Dressing Room**→**
- Opining&Living Room



Task 2: Wash face in the washroom

Time limit: 6 minutes

#### Task description:

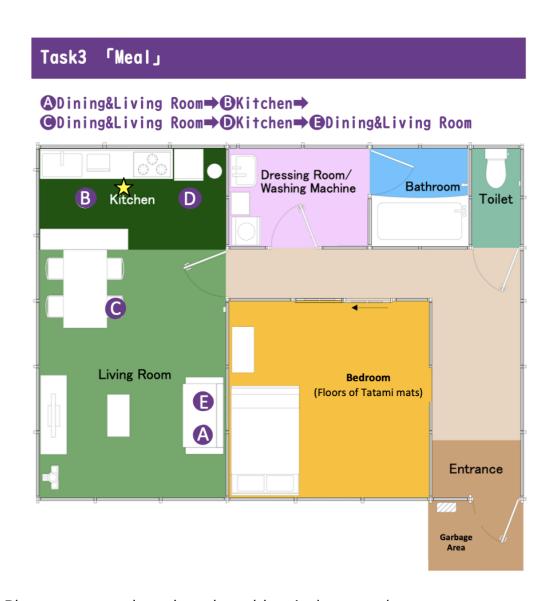
Start from a sitting position on the bed (A). Put the robot on and move to the washroom (B). Take a towel from the rack. Put water in both hands and wash hands over face for three seconds. After wiping your face with the towel, place the towel in the basket in front of the washing machine (marked with a star) and move to the living room. Once in the living room, close the door and sit on the couch (C) to complete the task.

#### Task notes:

When washing your face, pretend to collect water with both hands and make a washing motion with both hands on your face for three seconds.

Task 2: Evaluation table for Required Actions

No.	Location	Required Actions	Evaluation
1	Bedroom	Start from a sitting position on the bed	
2	"	Put the robot on and stand up	
3	(Move)	Go into the hallway, close the bedroom door, and move to the washroom	
4	Washroom	Take a towel from the washroom rack	
5	77	Put water in both hands and wash hands over face for 3 seconds.	
6	"	Wipe your face with the towel	
7	77	Place the towel in the basket in front of the washing machine (marked with a star)	
8	(Move)	Exit the washroom, close the door, and move to the living room	
9	Living room	Close the door after entering the living room	
10	"	Sit on the couch	



Task 3: Place a prepared meal on the table, sit down, and eat

Time limit: 9 minutes

#### Task description:

Start from a sitting position on the living room couch (A). Put the robot on and move to the kitchen (B). Start toasting bread in the toaster, Transfer food from the frying pan to a plate, and serve soup from a pot into a bowl. Take a drink out of the refrigerator and pour it into a cup. Take the toast out of the toaster. Bring all four of these prepared items to the table on tray (C). Then take a seat. Take a spoon and fork from the table and make any sign to begin eating. Perform eating motions for ten seconds. After that, make a sign again which means the end of a meal and carry the empty dishes into the kitchen (D). Place all the dishes in the dishwasher (marked with a star) and press the start button. Return to the living room and sit on the couch (E) to complete the task.

#### Task notes:

- For safety reasons, the tray must not be suspended from the pilot's neck when carrying dishes on the tray. The tray can be suspended from something other than the pilot's neck, but it cannot be carried on top of the walker.
- When seated in the dining chair, the pilot should be sitting straight, facing the table, with knees under the table. Moving the table and putting your knees under the table is not permitted.
- Wrapping or covering dishes with plastic wrap or lids is not permitted.
   At the start of the task, the food and crockery are set out as shown in the picture below.



 Water and food brought in should be exchanged for another container by the assistant.



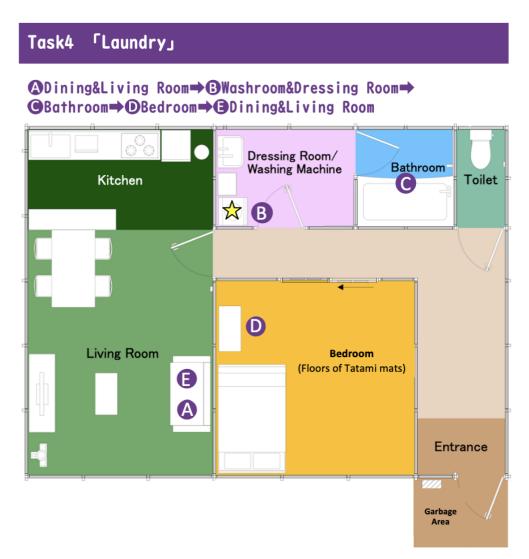


After meal



Task 3: Evaluation table for Required Actions

No.	Location	Required Actions	Evaluation
1	Living room	Start from a sitting position on the living room couch.	
2	"	Put the robot on and stand up	
3	(Move)	Move from the living room to the kitchen	
4	Kitchen	Start toasting bread in the toaster	
5	"	Transfer food from the frying pan to a plate	
6	"	Serve soup from a pot into a bowl	
7	"	Take a drink out of the refrigerator and pour it into a cup	
8	"	Take the toast out of the toaster	
9	"	Bring all of these prepared items to the table on tray	
10	(Move)	Move from the kitchen to the living room	
11	Living room	Take a seat in the dining chairs in the living room	
12	"	Take a spoon and fork from the table	
13	"	Make any sign to begin eating	
14	(Move)	Move from the living room to the kitchen	
15	Kitchen	Place all the dishes in the dishwasher (marked with a star) and press the start button	



Task 4: The task of washing and taking in clothes, folding them and putting them in the closet.

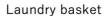
Time limit: 10 minutes

#### Task description:

Start from a sitting position on the living room couch (A). Put the robot on and move to the washroom (B). Take clothes from the basket and put them into the washing machine (marked with a star), add detergent and fabric softener, close the lid of the washing machine, and press the start button. Then immediately take the clothes out of the washing machine and hang them in the bathroom (C). (Please refer to the good example of the section "How to dry clothes" in the next page.) Take down other laundry that was hung out to dry. Fold the laundry (please refer to the good example of the section "How to fold clothes" in the next page) and carry it to the bedroom and put it away in the drawers (D). Move from the bedroom to the living room and close the door after entering the living room. Sit on the living room couch (E) to complete the task.

Task notes:

- A basket or bag can be used to carry the laundry, but it cannot be carried on top
  of the walker.
- The clothesline is fixed at a height of 185 cm from the floor and the hangers are set at 15 cm intervals.
- At the start of the task, the laundry pajamas are casually placed in the basket with the buttons closed.





Laundry pole



Please refer to the following pictures for how to fold and dry the laundry. If you deviate significantly from good examples, you may not be recognized as having completed the task.

How to fold clothes

Good example



Bad example



How to dry clothes

Good example

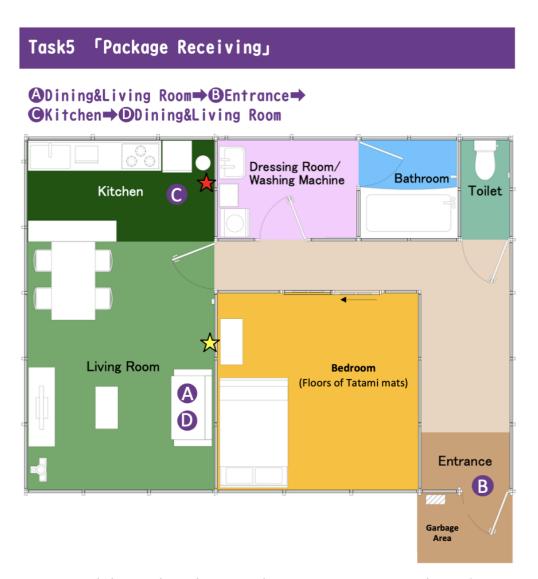


Bad example



Task 4: Evaluation table for Required Actions

No.	Location	Required Actions	Evaluation
1	Living room	Start from a sitting position on the living room couch	
2	"	Put the robot on and stand up	
3	(Move)	Move from the living room to the washroom	
4	Washroom	Take clothes from the basket and put them into the washing machine (marked with a star)	
5	77	Add detergent and fabric softener, close the lid of the washing machine, and press the start button	
6	"	Take the clothes out of the washing machine	
7	(Move)	Move from the washroom to the bathroom	
8	Bathroom	Hang the clothes in the bathroom	
9	"	Take down other laundry that was hung out to dry	
10	"	Fold the laundry (it doesn't matter where you fold it)	
11	(Move)	Close the bathroom door and washroom door and return to the bedroom	
12	Bedroom	Put the folded laundry away in the drawers	
13	(Move)	Go into the hallway, close the bedroom door, and move to the living room	
14	Living room	Close the door after entering the living room	
15	"	Sit on the couch	



Task 5: Receive a delivered package and put its contents in the refrigerator

Time limit: 8 minutes

#### Task description:

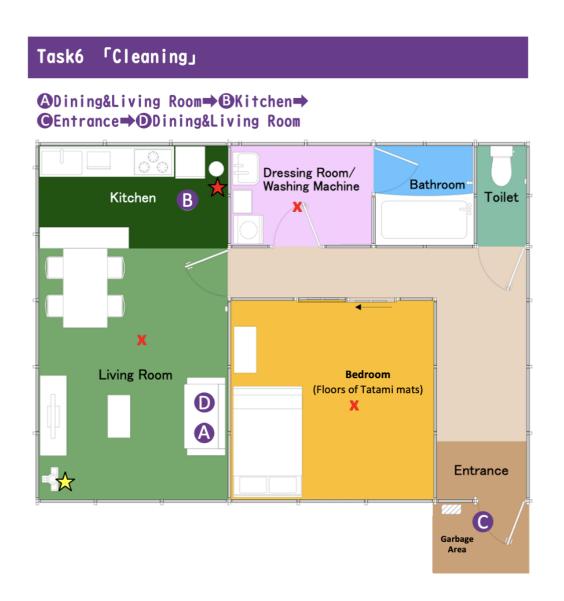
Start from a sitting position on the living room couch(A). When the intercom chimes, put the robot on and get up from the couch. Move to the intercom (marked with a yellow star) and answer it. Then move to the front door(B) with the step (about 20 cm) and receive the package by hand (a cardboard box of about 1.5 kg, 32 cm (W) x 25 cm (D) x 11 cm (H)). Close the front door, carry the package by hand to the kitchen(C), open the package, and put its contents in the refrigerator. Fold the cardboard box and place it by the kitchen trash can (marked with a red star). Close the living room door and sit on the living room couch(D) to complete the task.

#### Task notes:

Carry the received package by hand.

Task 5: Evaluation table for Required Actions

No.	Location	Required Actions	Evaluation
1	Living room	Start from a sitting position on the living room couch	
2	"	After the intercom chimes, put the robot on and stand up from the couch	
3	77	Move to the intercom (marked with a yellow star) and answer it	
4	(Move)	Move from the living room to the front door with the step (about 20 cm)	
5	Front door	Receive the package	
6	(Move)	Take the package by hand, close the front door, and move to the kitchen	
7	Kitchen	Put the package contents in the refrigerator	
8	77	Fold the cardboard box and place it by the kitchen trash can (marked with a red star)	
9	(Move)	Move from the kitchen to the living room	
10	Living room	Close the door after entering the living room	
11	"	Sit on the couch	



Task 6: Use a vacuum cleaner to clean the house, and take the trash bag outside

Time limit: 11 minutes

#### Task description:

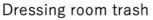
Start from a sitting position on the living room couch (A). Put the robot on and use the vacuum cleaner (marked with a yellow star) placed in the living room to vacuum trash in three places (red X). After vacuuming the trash, dump the trash inside the vacuum cleaner into the kitchen (B) trash can (marked with a red star) and tie up the trash bag. Set a new trash bag in the trash can. Return the vacuum cleaner to its original place. Carry the trash bag (about 4 kg) by hand and exit (C) through the front door with the step (about 20 cm) and quietly place the trash in the garbage area. Close the front door and return to the living room. Close the living room door and sit on the living room couch (D) to complete the task.

## Task notes:

- Carry the trash bag by hand.
- Garbage is in a 20 cm square frame near the center of each room.
- You don't have to remove all the dust, but make sure there are exactly three different colors of dust in the debris you threw away from the vacuum cleaner.

Living room trash







Bed room trash



Task 6: Evaluation table for Required Actions

No.	Location	Required Actions	Evaluation
1	Living room	Start from a sitting position on the living room couch	
2	"	Put the robot on and stand up	
3	(Several rooms)	Use the vacuum cleaner (marked with a yellow star) placed in the living room to vacuum trash in three places (red X)	
4	(Move)	Check that the doors to each room are closed behind you, and move to the kitchen with the vacuum cleaner	
5	Kitchen	Dump the trash inside the vacuum cleaner into the kitchen trash can (marked with a red star)	
6	"	Take the trash bag out of the trash can and tie it	
7	77	Set a new trash bag in the trash can	
8	(Move)	Move to the living room with the vacuum cleaner	
9	Living room	Return the vacuum cleaner to its original place (marked with a yellow star)	
10	(Move)	Move to the front door with the trash bag (about 4 kg)	
11	Front door	Exit through the front door and place the trash bag in the garbage area (next to the front door)	

12	(Move)	Close the front door and move to the living room	
13	Living room	Close the door after entering the living room	
14	"	Sit on the couch	

# Task7 「Bathing」 **⚠**Dining&Living Room**⇒B**Bedroom**⇒@**Washroom&DressingRoom**⇒** DBathroom→ DWashroom&Dressing Room→ BBedroom Dressing Room/ Bathroom Washing Machine Toilet Kitchen O B Living Room Redroom (Floors of Tatami mats) A ß Entrance Garbage Area

Task 7: Have a bath and change clothes

Time limit: 16 minutes

#### Task description:

Start from a sitting position on the living room couch (A). Put the robot on and go to the bedroom and take your pyjamas out of the drawers (B). Take your pyjamas and head to the washroom. Once in the washroom (C), close the door and take a towel from the rack. Take off your clothes and put your clothes in the laundry basket. Then go into the bathroom (D). Take a shower and rinse yourself off. (Use both hands to rinse your hair, wash your back with a towel, and clean the soles of your feet. Spend about ten seconds on each action.) Sit with your buttocks on the floor of the tub for ten seconds. (No water is filled in the tub.) Get out of the tub, leave the bathroom (E), wipe your whole body with the towel, and put on your pyjamas. Dry your hair for ten seconds using the hair dryer by the sink (marked with a yellow star), then return to the bedroom (F). Sit on the bed, take off the robot, and lie down to complete the task.

## Task notes:

- During the task, the bathroom floor may be wet. No water will be used in the shower or tub. Instead, to test the water resistance of the robot, it will be soaked for 30 minutes in 40°C water prior to the task.
- The pilot should wear an inner layer of clothing for actions that require removing

Task 7: Evaluation table for Required Actions

No.	Location	Required Actions	Evaluation
1	Living room	Start from a sitting position on the living room couch	
2	"	Put the robot on and stand up	
3	(Move)	Go into the hallway from the living room, close the living room door, and move to the bedroom	
4	Bedroom	Take your pyjamas out of the drawers	
5	(Move)	Move to the washroom with pajamas in hand.	
6	Washroom	Close the door after entering the washroom	
7	"	Take a towel from the rack	
8	77	Take off your clothes and put your clothes in the laundry basket	
9	(Move)	Move from the washroom to the bathroom	
10	Bathroom	Take a shower and use both hands to rinse your hair and wash your back and soles of your feet with a towel; spend about ten seconds on each action	
11	77	Sit with your buttocks on the floor of the tub for ten seconds	
12	"	Get out of the tub, leave the bathroom	
13	(Move)	Move to the washroom	
14	Washroom	Wipe your whole body with the towel and put on your pyjamas	
15	"	Dry your hair for ten seconds using the hair dryer	
16	(Move)	Close the bathroom and washroom doors and move to the bedroom	
17	Bedroom	Close the bedroom door, sit on the bed, and take off the robot	
18	"	Lie down on the bed	

# 6 Prize Money

## 6.1 Task Group

The tasks in this contest will be categorized into three task groups. The organiser will award a prize for the achievement of each task and for the task group. If a task or task group is achieved at the same time by multiple teams in the same contest, the prize money will be equally proportioned and awarded equally among those teams.

- Task Group 1 includes three tasks: Task 1 "Toilet", Task 2 "Preparation", and Task 3 "Meal".
- Task Group 2 includes three tasks: Task 4 "Laundry", Task 5 "Package Receiving", and Task 6 "Cleaning".
- Task Group 3 consists of Task 7 "Bathing".



THE TOTAL AMOUNT OF PRIZE 1,000,000 USD

< Figure: Tasks, Task Groups and Prize Money>.

## 6.2 Total Amount of Prize Money by Task

The total amount of prize money for each task is as follows:

•	Task 1: Toilet	50,000 USD
•	Task 2: Preparation	50,000 USD
•	Task 3: Meal	50,000 USD
•	Task 4: Laundry	50,000 USD
•	Task 5: Package Receiving	50,000 USD
•	Task 6: Cleaning	50,000 USD
•	Task 7: Bathing	200,000 USD

## 6.3 Prize money for achievement of issue groups

Teams that complete all tasks in a task group at the same time will be awarded a task group achievement prize in addition to the achievement prize for each task. The achievement prizes for the task groups are as follows.

Task Group 1: 150,000 USD
 Task Group 2: 150,000 USD
 All Task Groups: 200,000 USD

Example: When tasks 1 to 5 are achieved  $50,000USD \times 5$  for achievement task + 150,000USD for achieving Group 1 = 400,000USD

## 6.4 Special Evaluations Award

#### 6.4.1 Purpose

In addition to completing tasks, a Special Evaluations Prize will be awarded to robot that "wheelchair users would like to use".

## 6.4.2 Prize Eligibility

- Any team that has completed at least one task.
- The prize may not be awarded.

#### 6.4.3 examination

- A panel of Evaluations requested by the organiser will carry out the practical evaluation.
- The practical evaluation criteria for the Special Evaluations Prize will not be announced, but Evaluations will consider robot to which this statement applies: "If this robot was on the market, I'd definitely want to buy it and use it."

#### 6.4.4 Prize Money

• 10,000USD

## 6.5 Prize Money Distribution

- If a task or group of tasks is achieved by more than one team at the same time in the same contest, the prize money for the achievement will be divided equally between the respective achieving teams.
- The prize money will be awarded within one month of the end of this competition.

#### 6.6 Other

- If, after the contest has been completed, a team is found to have presented false information or engaged in any other fraudulent activity that the organiser deems inappropriate, the organiser reserves the right to cancel distribution of the prize money.
- Previous winnings will be reset and you will still be able to attempt previously completed tasks.
- Prize-winning teams will be announced on the official GIC website and elsewhere.

# 7 Awards and Closing Ceremony

- At the end of the contest, the teams that completed tasks will receive awards.
- A closing ceremony will be held after all tasks have been completed.

## 8 Other

## 8.1 Safety Measure

To prevent accidents, the organiser will install device which eases the shock of falling and provide assistants. Evaluations may suspend a demonstration for safety reasons. In such cases, follow the Evaluations' instructions. In addition, each team member (especially the pilot) is responsible for his/her own and his/her team's safety in participating in this contest.

## 8.2 Confidentiality

The organiser will not use the confidential information on robotics and other technologies obtained during the evaluation process for any purpose other than the Evaluation. The submitted confidential information will be stored in strict confidence for a certain period using an appropriate method and then destroyed. The confidential information will not be disclosed without the team's permission. This does not apply if the information is public knowledge, or it was already in the possession of the organiser prior to the evaluation process, or it was legally obtained from a third party that possessed the appropriate rights thereof without any obligation of confidentiality, or it has been mutually confirmed as exceptional information by the organiser and the owner of the information. The organiser may also disclose confidential information to the extent necessary to comply with the law or a court order or directive, regulatory authority, or other public body with the authority to regulate the organiser. In the event of such a disclosure, the organiser will contact the team in the subject in advance (or, if unavoidable, afterwards).

## 8.3 photography

The organiser may photograph, record, or videotape the contest Award Ceremony and demonstrations, etc., and distribute such recordings over the Internet or otherwise, or post them in printed materials, etc., for the purpose of promoting the contest and related events such as promoting technological development and commercialization in the field of living assistance robots, etc. In addition, the organiser may distribute the team and its members' likenesses, names, self-introductions, and other information via the Internet or other media or post them in printed materials for the purpose of promoting the contest and related events. However, the privacy of all parties involved, including the team, will be taken into consideration and the information will not be used for any purpose other than that for which it was intended.

## 8.4 Indemnity and Damages

Except in the case of intentional misconduct or gross negligence on the part of the organizer or its affiliates, the organiser will not be liable for any accidents, theft, loss, disputes, or information leakage that may occur to the team or its affiliates before, during, or after the entry, selection, and contest period of this contest. Teams are responsible for taking all necessary precautions to prevent accidents.

In no other event shall the organiser or its affiliates be liable for any other damages incurred by the team or its affiliates as a result of participation in the contest, except to the extent permitted by applicable law, unless such damages are caused by the intentional or gross negligence of the Organiser or its affiliates.

In addition, the team and its affiliates will be liable for all damages caused by that team to the organiser or its affiliates or to other teams or other third parties in connection with this Contest.

If a team does not meet the conditions of participation as stated in the Application Guidelines (e.g., members belong to antisocial forces, etc.), or in the event that a team is found to have submitted false information, the team may forfeit its rights under the contest, including the right to participate and be judged, even during the course of the competition.

Neither the teams nor their members may object to the organizer or its affiliates regarding the loss of rights, nor may they make any claim against the organizer or its affiliates for any damages resulting from the loss of rights.

## 8.5 Media Coverage

There is a possibility that teams and team members may be interviewed by television, newspapers, Web media and other media in connection with this contest. When a media representative contacts the organiser to interview the team, the organiser will procure the team's permission before such interview takes place.

## 8.6 Cancellation of the Contest.

The organiser may cancel or reschedule the contest if the organiser determines that the contest cannot be held due to an accident involving the organiser, any member of the team or any other person involved, or due to an earthquake, outbreak or spread of an infectious disease, or any other reason. In the event the contest is cancelled, no prize money will be awarded to any team. The organiser cannot be held liable for any damages caused to entrants or other third parties because of the contest's cancellation.

## 8.7 Revision of Application Guidelines

The organiser may revise these Application Guidelines from time to time as it deems necessary. The revised version will be posted on the contest's official GIC website.

## 8.8 Dispute Resolution

The laws of Japan shall apply to the rights and obligations pertaining to the contest and its terms and conditions, and all disputes arising from the contest and its terms and conditions shall be subject to the exclusive jurisdiction of the Tokyo District Court as the court of first instance.

