Global Innovation Challenge 2021

Living Assistance Robot Award

Entry Form

2nd Edition

Global Innovation Challenge Executive Committee

Points to note when applying for the Award

- ✓ The Global Innovation Challenge 2021 Living Assistance Robot Award Entry Form (hereinafter, "the Entry Form") must be submitted when applying for the Global Innovation Challenge 2021 Living Assistance Robot Award (hereinafter, "the Award"). The Organiser will screen the application based on the submitted Entry Form.
- ✓ When filling out this Entry Form, please read the separately distributed Global Innovation Challenge 2021 Living Assistance Robot Award Application Guidelines (hereinafter, "Application Guidelines") carefully and fill in all the necessary items and submit them together with the pledge at the end. Please note that Entry Forms with any omissions or incomplete Entry Forms will not be accepted.
- ✓ By submitting this Entry Form, you are deemed to have agreed to the terms and conditions of this application.
- ✓ The personal information of the applicant and technical information about the robot disclosed in this Entry Form will be used only for the purpose of judging this Award and will not be used for any other purposes, unless otherwise stated in this Application Guidelines or pledge.
- ✓ If you have any questions about this Entry Form or if you have any questions about the contents to be filled in, please contact the Executive Committee below by e-mail.

Entry Form submission and enquiries: inquiry@global-innovation-challenge.com

Update History

Last Updated	Version
September 1, 2020	1st edition
December 8, 2020	2nd edition Key Changes Notes on the Award ・ Modifications 1. Team ・ Change of format 2. Compliance with entry requirements ・ Change of the description about robots to the description about pilots 3. Approaches to achieving the Award Tasks ・ Correction of heading and number notation 4. Degree of pilot impairment ・ Change of description items Pledge ・ Change of contents

1. Team

The information entered in "A. Team Information" and "B. Team Representative Information" here will be used by the Organiser to contact the teams and notify them of the event. The information entered in "C. Team Profile" will be used to introduce the team on the Award's website, etc., so please provide information that can be disclosed to the public.

A. Team Information	Team name	GIC Robotec
	Nationality	Japan
	E-mail Address	robot@gic.co.jp
	Telephone number	+81 | 123-456-789
	Address	1-2-3 Nagatachou, Chiyoda-ku, Tokyo 100-0014 Japan
B. Team Representative Information	Name	○○ ○○
	Nationality	Japan
	E-mail Address	○○○@○○.co.jp
	Telephone number	+81 | ○○○-○○○-○○○
	Organisation (Affiliation name)	○○○ ○○○
	Address	○-○-○ Aoyama, Minato-ku, Tokyo 107-8010 Japan
C. Team Profile	Team overview / features	Our team works at the robot laboratory affiliated with ○○ University. We have been conducting research with a total of 10 engineers since 2010, mainly researching and developing exoskeleton robots for people with lower limb paralysis (paraplegics).
	Reason for deciding entry	Although we have been developing robots for 10 years, we have not had much experience in operating them in daily life situations, and it is unknown to what extent our robots can be used in daily life. So, we have decided to participate in this GIC because we thought it would be a good opportunity to find out where our robots stand today and what issues we need to address in the future.
	Motivation for achieving the Task	To accomplish the Task, we will rehearse with the pilot and adjust the robot. We are also planning to use the prize money we get from accomplishing the Task for further development of robots. We want people who cannot walk to feel the joy of walking independently as soon as possible.

	Other appeal points	Our robot has a controller attached to two canes, and it controls standing, sitting, walking, and turning while balancing with the canes. In the future, we aim to establish an interface between people and robots using IoT technology, and to develop robots that can be operated without a cane.
	URLs for websites, social networks, etc.	https://www.gic.co.jp

2. Compliance with entry requirements

Please check whether the following entry conditions described in the Application Guidelines for the Global Innovation Challenge 2021 are met, and if so, check (✓).

	Entry Requirements	Check box
1	Teams and team members do not belong to organized criminal groups	✓
2	The robot is used by people with quadriplegia due to spinal cord injury or paralysed both lower limbs (※1 ASIA Impairment Scale) A to B or (※2 Frankel Classification) A to B	✓
3	A robot is an "intelligent mechanical system that has three elemental technologies of sensors, an intelligence/control system, and a drive system", and is a device/tool that supports a pilot's independent walking without the care of others	✓
4	The robot can be used in a general residential environment	✓
5	The robot is used in contact with the user	✓
6	In the case of a manually operated robot, operation is by the user (Do not operate from the outside except for safety reasons)	✓
7	Only one robot is used	✓
8	The robot is not difficult to use in real life, such as the robot producing a noticeably loud volume	✓
9	The robot does not infringe on the intellectual property rights of third parties or other applicable laws and regulations	✓

※1 AIS (ASIA Impairment Scale)

Level.	
A	Complete: complete paralysis of both perception and movement in S4-S5
B	Incomplete: only sensory functions remain below the neurological level, including S4 to S5
C	Incomplete: motor function remains below the neurological level, but more than half of the major muscle groups are below muscle strength 3
D	Incomplete: motor function remains below the neurological level, with at least half of the major muscle groups above muscle strength 3
E	Normal: Normal motion and perception

※2 Frankel Classification

Classification		
A	Complete	Complete paralysis of motor perception below the injured high level
B	Sensory only	Complete paralysis of movement, with some preservation of sensation only
C	Motor useless	A little muscle strength below the injury height, but not practical.
D	Motor useful	Utility of muscle strength below the injured height, able to walk with or without assistive devices
E	Recovery	No muscle weakness, no sensory deficits, no sphincter damage, may have abnormal reflexes.

3. Approaches to achieving the Award Tasks

3.1 Award Tasks to be entered

There are seven Tasks for this Award. Please check (✓) the subject to be entered after carefully reviewing the content and selection criteria in Section 4.1 "Criteria for Selection" in the Application Guidelines and Appendix "Task Achievement Checklist" in the Selection and Judging Guidelines.

Tasks	1 Toilet	2 Preparation	3 Meal	4 Laundry	5 Package Receiving	6 Cleaning	7 Bathing
Check box	✓	✓					

3.2 Specific measures to achieve the Award Tasks

Please describe in detail your approach and ideas for achieving the Award Tasks.

To accomplish the Tasks, we prepared a residential environment close to the real one and checked the operation of our robot with a real pilot. And it became clear that it took a long time for the pilot to put on and take off the robot for the Tasks of “Toilet” and “Preparation”. We will focus on the ease of attaching and detaching the robot by the time of the judging for the Award and make it possible to remove the fixed part of the lower limbs so that the robot can be put on and taken off more easily to accomplish the Tasks.

3.3 Video and photographs of the Task

Please attach a video (one cut, no editing required) and a photograph of the pilot carrying out the Task. Also, please attach a floor plan of the location where the video was taken.

https://youtu.be/B7qpLBNfupI

3.4 Degree of pilot impairment

Please attach the documentation showing the degree of disability of the pilot as shown in section 3.3 "Video and photographs of the Task".

Robot pilots must meet the pilot conditions defined in "2. Compliance with entry requirements".

AIS Classification: A
Frankel Classification: A
Location of spinal injury: L1

Global Innovation Challenge 2021 Living Assistance Robot Award

Pledge

In entering the "Global Innovation Challenge 2021 Living Assistance Robot Award" (hereinafter, "the Award"), we understand the terms and conditions of the Global Innovation Challenge Executive Committee (hereinafter, "the Organiser"), the content of the Award and accept the following:

1) We are all in good health and none of us is in any of the following conditions
   - Having problems, pain or illness in my back or neck that affect robot manipulation
   - May have extreme mental illness due to tension and stress
   - Being pregnant
   - Being injured
   - Having a heart disease
   - Having a drinking problem
   - Being in a poor physical condition
   - Being restricted by doctors in undertaking such as strenuous exercises

2) If the Organiser deems it necessary, we will follow the transportation, first aid, and treatment to the medical institution designated by the Organiser.

3) Health management of team members including pilots is the responsibility of the participating teams.

4) We will follow the safety instructions of the Organiser.

5) We understand that there may be a risk of accidents and injuries during the process from application for the Award to the selection process, judgement, and the Award Ceremony.

6) The robot used in this Award does not infringe the intellectual property rights of third parties and we comply with all applicable laws and regulations.

7) We participate in this Award at our own risks, and in the event of any accident, we will not be liable for compensation or guarantee.

8) The Organiser will not be held responsible for any disputes between participants, disputes between participants and the Organiser, and any events caused by this.

9) It is our responsibility to manage our belongings such as participating robots and personal valuables.

10) We acknowledge that personal information such as portraits, names and self-introductions of the team and ourselves will be used in the Global Innovation Challenge brochures, results, public relations materials related to this Award, news reports, and information media.

11) Regarding the cost burden related to participating in the Award, we follow the instructions of the Organiser.

12) We understand the objectives of the Organiser and cooperate with them to ensure that the event is held smoothly even in the event of unforeseen circumstances.

13) We and the organisation to which we belong pledge that the following items do not apply now and will not apply in the future.

A. Gangsters, organised crime groups such as terrorism groups, associate members of gangsters, persons involved in organised crime groups such as companies related to gangsters, general assembly shops, social movements, political activities, or any other similar people (hereinafter, "anti-social forces").

B. Having a socially criticized relationship with antisocial forces.

C. Five years have not passed since the person ceased to fall under A or B.

D. Perform the following acts or similar acts against the Organiser by us or by using a third party.

a. Violent demands

b. Unreasonable demands beyond legal responsibility

c. Acts of threatening behaviour or using violence

d. Damage the credibility of this Award or the Organiser, or interfere with the business of this Award by disseminating of rumours, using counterfeiting or power

14) We agree to resolve any matters not stated in this pledge in accordance with the Global Innovation Challenge Application Guidelines, entry form, and instructions of the Organiser.

Date: _____ Year _____ Month _____ Day

Name of representative: _____

Signature: _____