



***CYBERDYNE***

**Consolidated Financial Result Briefing for  
the Six Months Ended September 30, 2020**

**CYBERDYNE Inc.  
November 13, 2020**

## 1) COVID-19 solutions for professionals

- **Autonomous navigated “disinfection robot”**  
→ **Automation of disinfection with mounted disinfection unit (disinfection spray and UV ray) and connection with elevators**

## 2) COVID-19 solutions for individuals (developing D to C business)

**Providing “*Neuro HALFIT* at home” via network to promote independence**  
→ **As a counter measure towards risk of reduction of physical functions caused by restriction from going outside**

## 3) Rental of HAL towards facilities

- **Japan: Self paid *Neuro HALFIT* service to promote independence of chronic stage patient**
- **Outside Japan: Obtain approval and install Medical HAL to APAC countries**

# Consolidated Financial Statement

# Consolidated financial results - year-on-year comparison for the six months ended September 30, 2020



**Revenue: ¥794 million (-3.5%)**  
**Profit before tax: ¥442 million (Improved by ¥460 million)**  
**Profit: ¥167 million (profit)**

(Millions of yen)

	FY2019 (Apr.1-Sep.30)	FY2020 (Apr.1-Sep.30)	+/-	+/- %
Revenue (Gross profit)	823 (593)	<b>794</b> <b>(553)</b>	<b>-29</b> (-40)	<b>-3.5%</b> (-6.8%)
Operating profit	-380	<b>-362</b>	18	—
Profit before tax	6	<b>442</b>	+436	+6933%
Profit attributable to owners of the parent	-112	<b>167</b>	+279	—

### Impact of COVID-19

- Robocare & German Center(service) -33M
- Disinfection Cleaning Robot(sale) +18M
- HAL Lumbar towards airport (rental) -39M

**+/- % improved from the previous quarter**  
**Q1: -8.8% to Q2: +1.3%**

R&D expenses -27M (Amortization of R&D equipment)  
 Other SG&A +21M (exemption from payment of overseas claim etc.)  
 Other income +36M (consigned research income, grant etc.)  
 Other expense -17M (exchange loss etc.)

### Revenue related to investment security 471M (net)

(Detail)  
 Gain on valuation +963M (finance income/Gain related to CEJ)  
 Tax effect -293M (Corporate income tax)  
 Reclassification -199M (third party interest in CEJ Fund)

Ref) Revenue related to invest security in the previous  
 fiscal year 241M (net)

# Quarterly results



(Unit: Millions of yen)

Significant improvement from the previous quarter  
Surpassed the accumulated result of previous six months

	FY2019	FY2020			Quarter on quarter		Year on year	
	Q2 (Jul.1-Sep.30)	Q1 (Apr.1-Jun.30)	Q2 (Jul.1-Sep.30)	Q1+Q2 (Apr.1-Sep.30)	+/-	+/- %	+/-	+/- %
<b>Revenue</b>	<b>430</b>	<b>359</b>	<b>435</b>	<b>794</b>	<b>+76</b>	<b>+21.2%</b>	<b>+5</b>	<b>+1.3%</b>
Cost of sales	122	107	134	241	+27	+25.3%	+12	+10.3%
<b>Gross profit</b>	<b>308</b>	<b>252</b>	<b>301</b>	<b>553</b>	<b>+49</b>	<b>+19.4%</b>	<b>-7</b>	<b>-2.3%</b>
R&D expenses	210	180	165	345	-15	-8.3%	-45	-21.5%
Other SG&A	323	347	304	651	-43	-12.5%	-19	-6.0%
Other income/expense	18	46	36	82	-10	-21.1%	+18	+100.5%
<b>Operating profit</b>	<b>-208</b>	<b>-230</b>	<b>-132</b>	<b>-362</b>	<b>+98</b>	<b>—</b>	<b>+76</b>	<b>—</b>
Finance income/expense	-75	53	505	558	+452	+845.9%	+580	—
Other	10	110	135	245	+25	+22.6%	+125	+1313%
<b>Profit before tax</b>	<b>-273</b>	<b>-66</b>	<b>508</b>	<b>442</b>	<b>+574</b>	<b>—</b>	<b>+781</b>	<b>—</b>
<b>Profit attributable to owner of the parent</b>	<b>-268</b>	<b>-129</b>	<b>296</b>	<b>167</b>	<b>+425</b>	<b>—</b>	<b>+564</b>	<b>—</b>

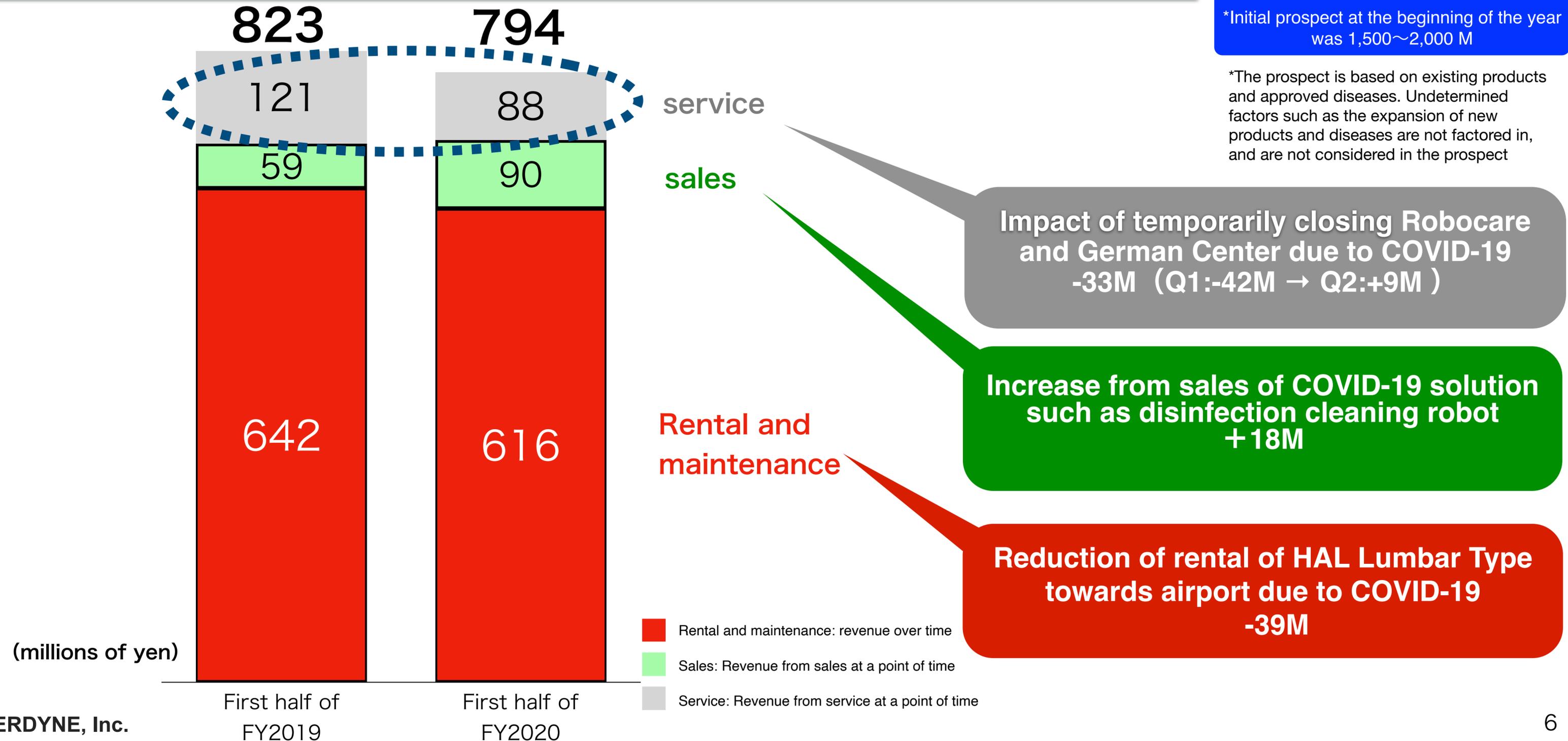
# Consolidated financial results - year-on-year comparison by type of transaction



**Q1 bottom, Q2 recovery, Q3 and onwards will become a plus**

**Prospect for FY2020  
1,800~2,000 M**  
\*Initial prospect at the beginning of the year was 1,500~2,000 M

\*The prospect is based on existing products and approved diseases. Undetermined factors such as the expansion of new products and diseases are not factored in, and are not considered in the prospect

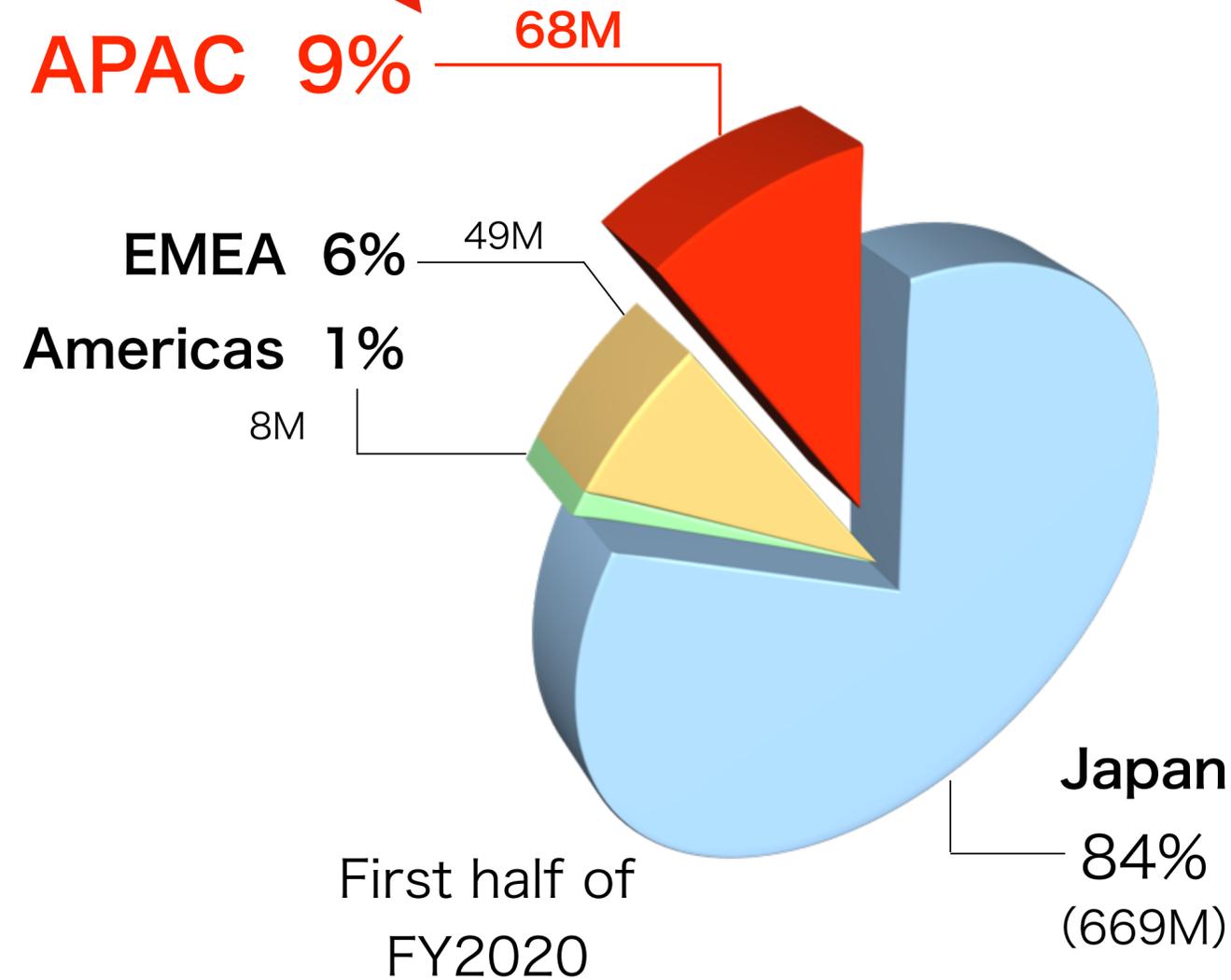
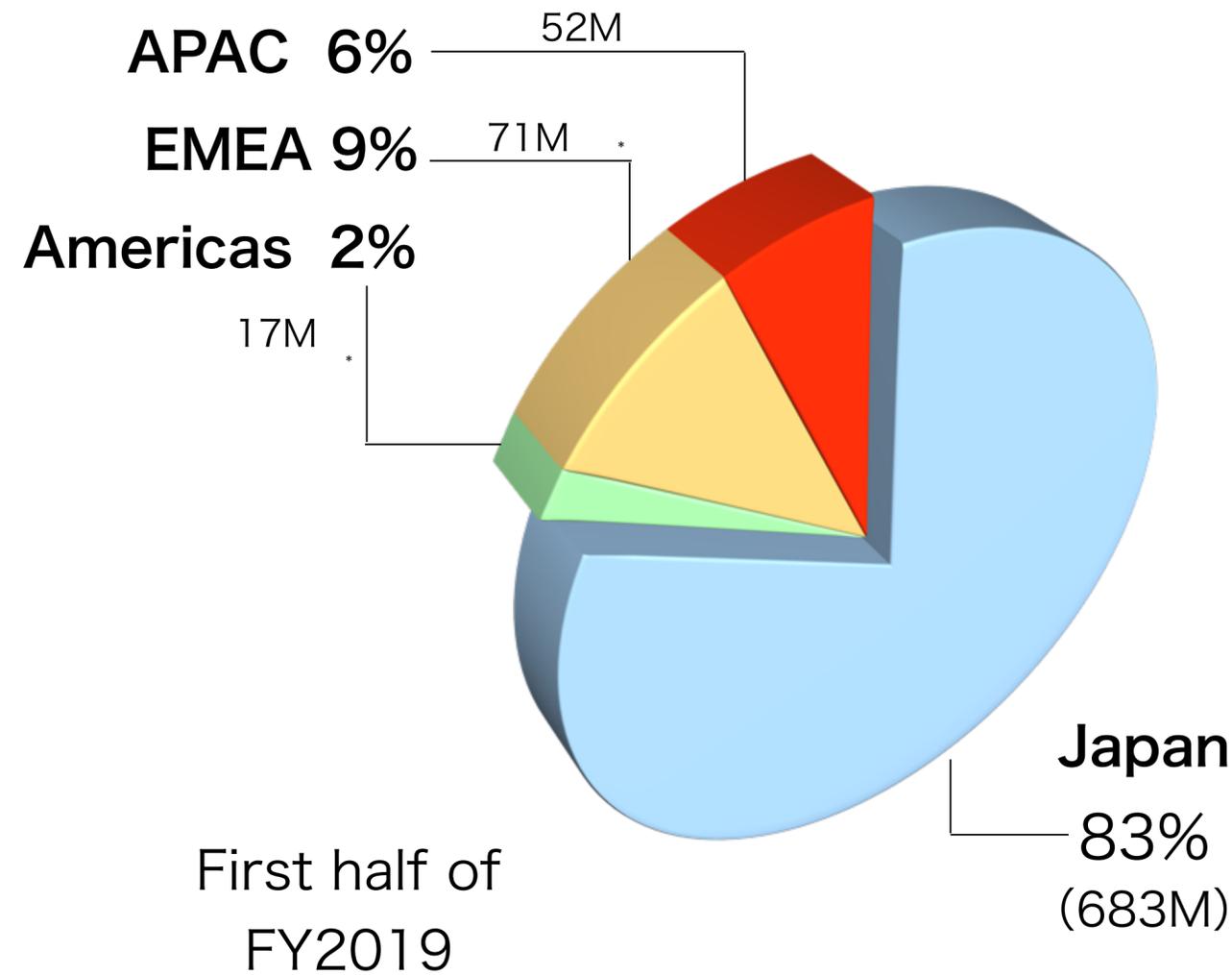


# Consolidated financial results - year-on-year comparison by geographical regions



**APAC (South East Asia)  
31% Increase**

(Unit: Millions of Yen)

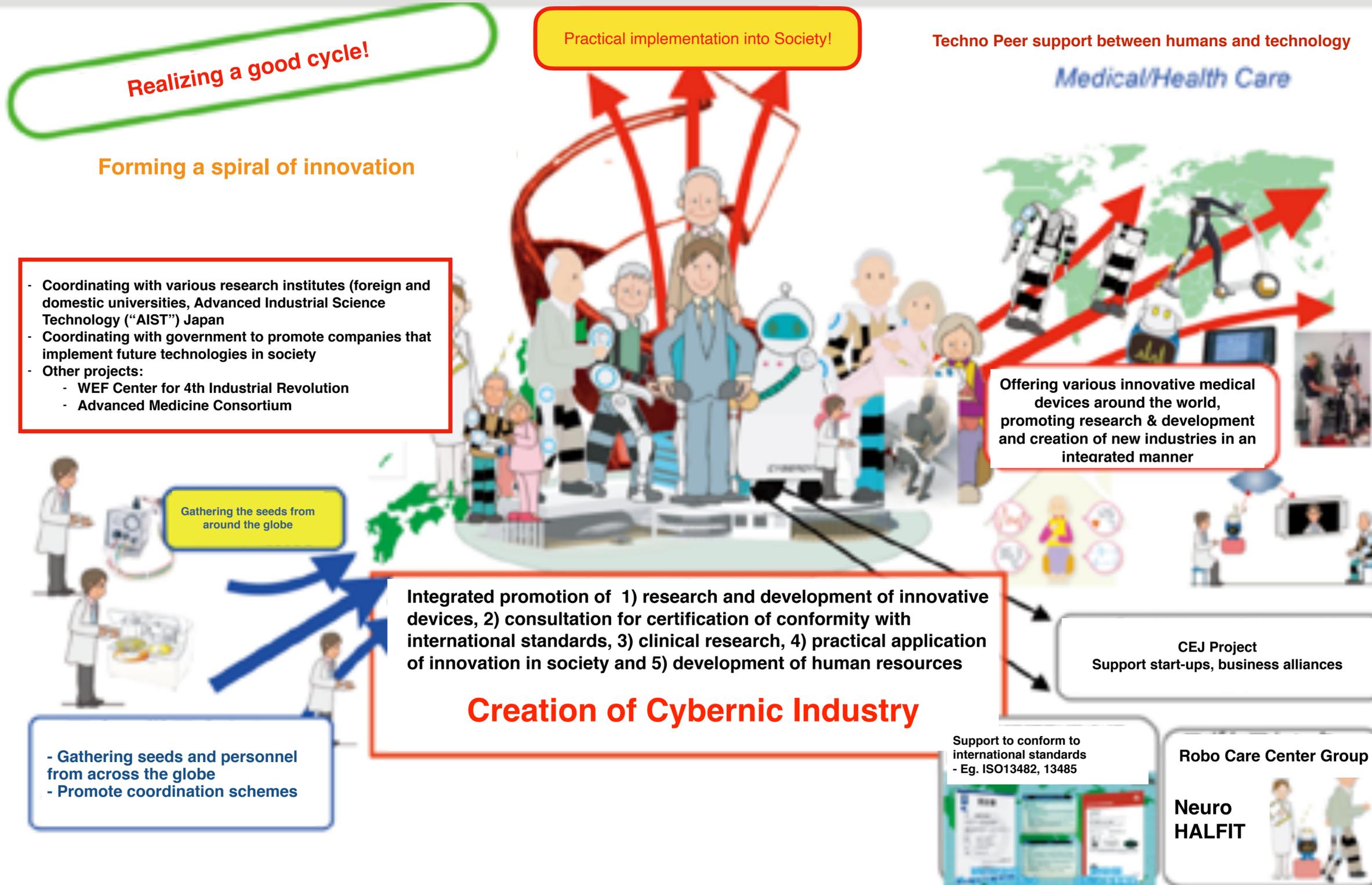


Americas : North America, Central America and South America  
EMEA : Europe, the Middle East and Africa  
APAC : Asia-Pacific \*Excluding Japan

## **Business strategy**

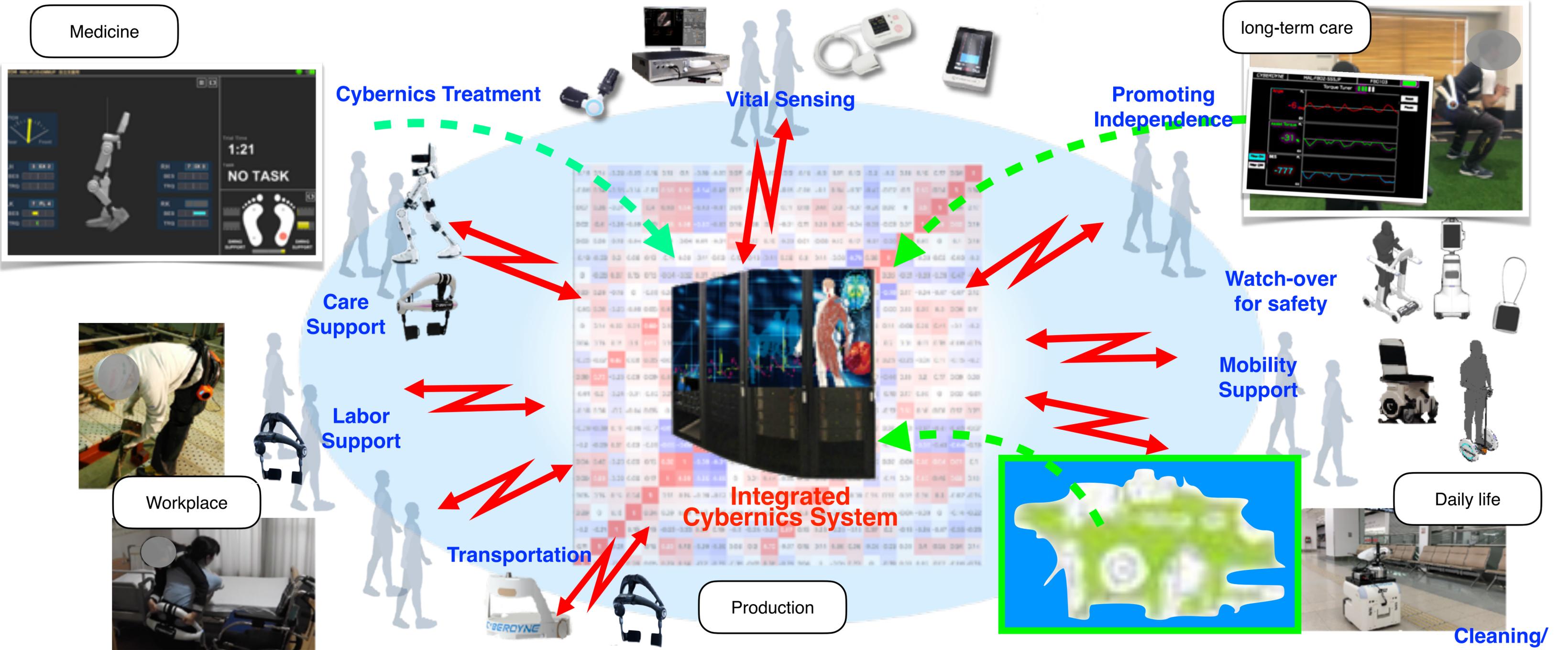
# Global strategy to realize industrial and social revolution

Forming a spiral where all the “seeds” of innovation around the world gather in Japan



# CYBERNICS DIGITAL INDUSTRY

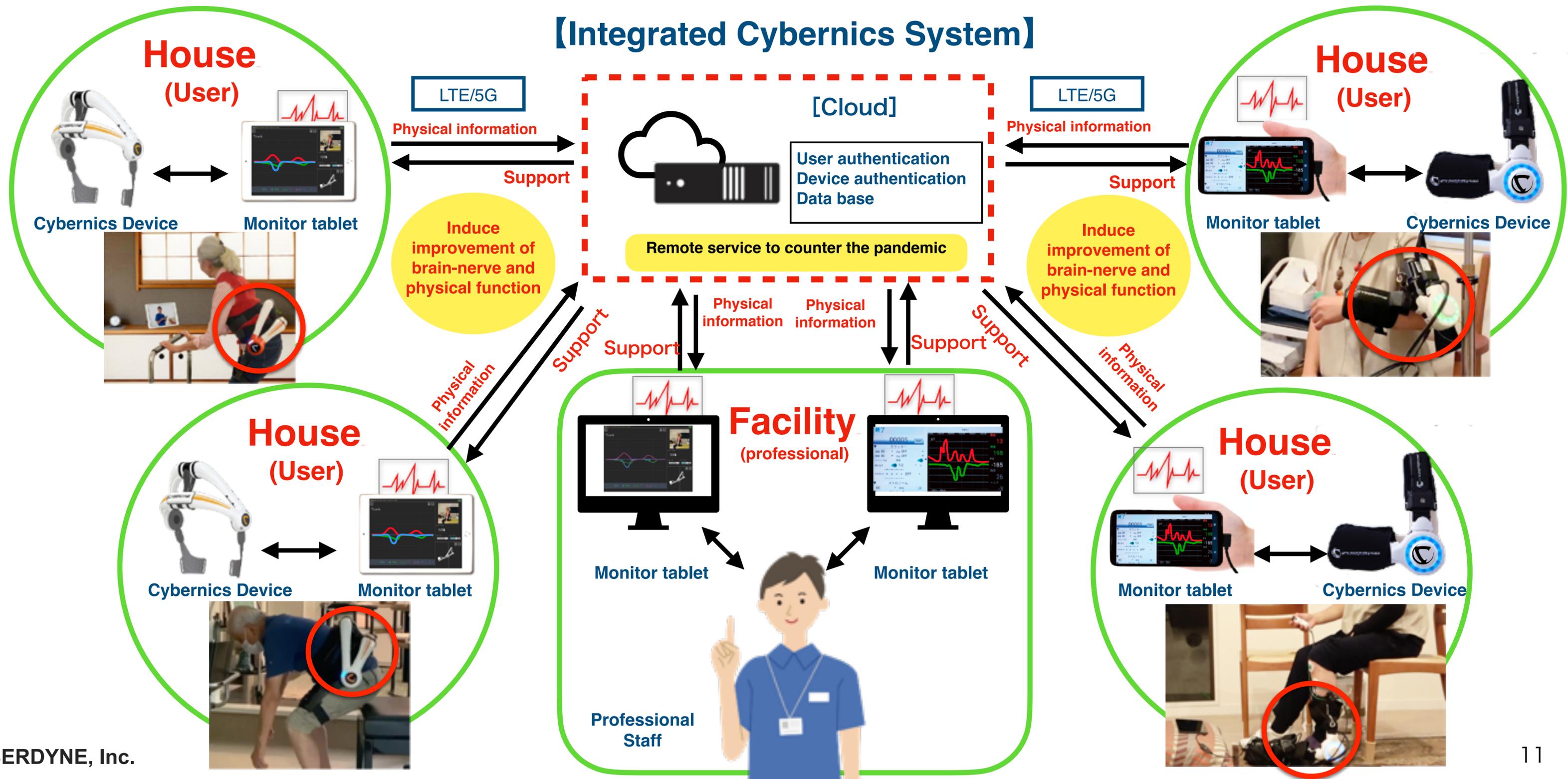
= Fusion of 『Human』 + 『Cyberspace』 + 『Physical space』



Starting to accumulate data from IoH/IoT equipped Cybernics Devices  
Formulating Integrated Cybernics System

# Cyberdyne Cloud System

Remote online service “*Neuro HALFIT* at home” that connects house and facility (hospital)



## Medical Field

# Ref) Potential addressable market for Medical HAL

	Stroke	Spinal Cord Injury	Neuromuscular diseases	Market Size
<b>Japan</b> 	Clinical trial in progress <b>1.2</b>	Preparing for application <b>0.2</b>	Approved <b>0.05</b>	<b>1.5</b> Million
<b>USA</b> 	Approved <b>6.8</b>	Approved <b>0.3</b>	Approved <b>0.15</b>	<b>7.3</b> Million
<b>European Union(*)</b> 	Approved <b>1.8</b>	Approved <b>0.3</b>	Approved <b>0.15</b>	<b>2.3</b> Million
	<b>9.9</b> Million	<b>0.8</b> Million	<b>0.4</b> Million (**)	<b>11.1</b> Million

(Ref) New Energy and Industrial Technology Development Organization (2013), Ministry of Health, Labour and Welfare of Japan (2011), Translational Research Informatics Center (2014), American Heart Association (2010), National Spinal Cord Injury Statistical Center (2013), The Patient Education Institute, Inc. (2010). Parkinson's Disease Foundation (2010)

(\*) Countries included for the calculation of EU numbers (Germany, France, Britain, Italy, Sweden)

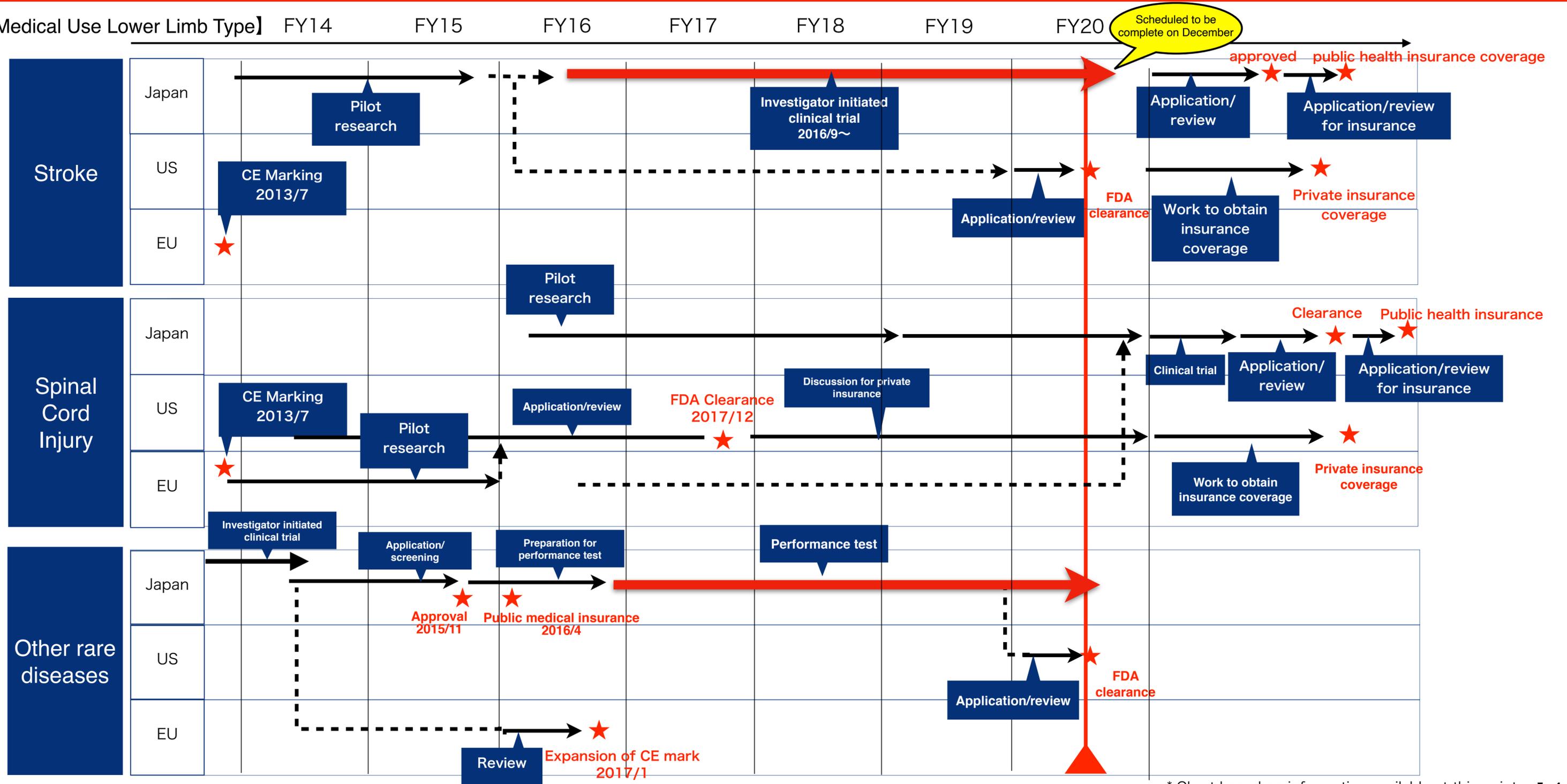
(\*\*) The number of neuromuscular patients in USA and EU were calculated based on 0.05M patients in Japan

(\*\*\*) In addition the Group is working together with regenerative medicine and pharmaceuticals on research on the treatment of Parkinson's Disease 1.9M patient

# Roadmap on regulatory process (Medical HAL)

## Stroke clinical trial is scheduled to finish in Q3

【HAL for Medical Use Lower Limb Type】



Scheduled to be complete on December

2020/9

\* Chart based on information available at this point

## Progress in each region

【HAL for Medical Use Lower Limb Type】

As of November 13, 2020

		Stroke	Spinal Cord Injury	Neuromuscular
Japan		Clinical trial ending in December	Discussing with the regulator	Approved
USA		New! Approved	Approved	New! Approved
EMEA	EU	Approved	Approved	Approved
	Saudi Arabia	Approved	Approved	Approved
	Turkey	New! Tentative approval	New! Tentative approval	New! Tentative approval
APAC	Malaysia	Approved	Approved	Approved
	Indonesia	New! Approved	New! Approved	New! Approved
	Thailand	New! Approved	New! Approved	New! Approved
	Taiwan	(in progress)	New! Approved	(in progress)
	Singapore	(in progress)	(in progress)	(in progress)
	Australia	New! Approved	New! Approved	New! Approved

**Completed the target cases  
(scheduled for completion on December 2020)**

- Design of the trial: random open parallel-group comparison study
- Target cases: 54 (number of subjects who passed secondary enrollment after the pre-observation period in the primary enrollment)
- Outcome measures: ambulatory function (10m walking speed and 6 min walking distance)
- Participating facilities: 16 facility. Multi-site joint clinical research

Timeline	Event
2016/09	Commencing investigator initiated clinical research
2020/08	Completion of target cases (completed recruitment of new subjects)
2020/12	Completion of clinical trial (moves onto phase of data analysis)

Reference) UMIN-CTR registered information of clinical trial [https://upload.umin.ac.jp/cgi-open-bin/ctr/ctr\\_view.cgi?recptno=R000028545](https://upload.umin.ac.jp/cgi-open-bin/ctr/ctr_view.cgi?recptno=R000028545)

# (Japan: stroke trial) schedule



**Expected to receive approval at the end of FY21 and insurance coverage on the first half of FY 22**

Timeline	Event
2020/12	Completion of clinical trial (moves onto phase of data analysis)
2021/06	Completes clinical trial summary report (investigator submits the results to the company)
2021/07	Submits medical device application to PMDA to expand the target disease to stroke
2022/03	Medical device approval (assuming that the review period is 8 months)
2022/04	Submits application for public health insurance coverage to Ministry of Health
2022/07	Receives public health insurance coverage (assuming that the review period is 3 months)
2022/10	Commence treatment of stroke with HAL for Medical Use Lower Limb Type

Note) The schedule above is merely forecast and it may be completed earlier or be delayed.

- Japan: Medical device approval (July 2020), insurance coverage as device to increase exercise load (August 2020)
- USA: Preparing for US FDA application
- EU: Obtained medical device approval (October 2019)



**Elbow Joint**



**Knee Joint**



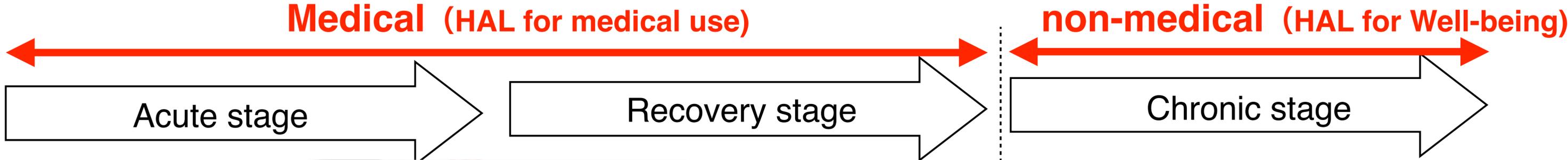
**Ankle Joint**



## Feature

- Light weight and compact design
- Intensive treatment of different joints
- Suited for patient with various condition (can treat while laying, seated or standing)
- Can make early intervention when patient still has to stay on bed

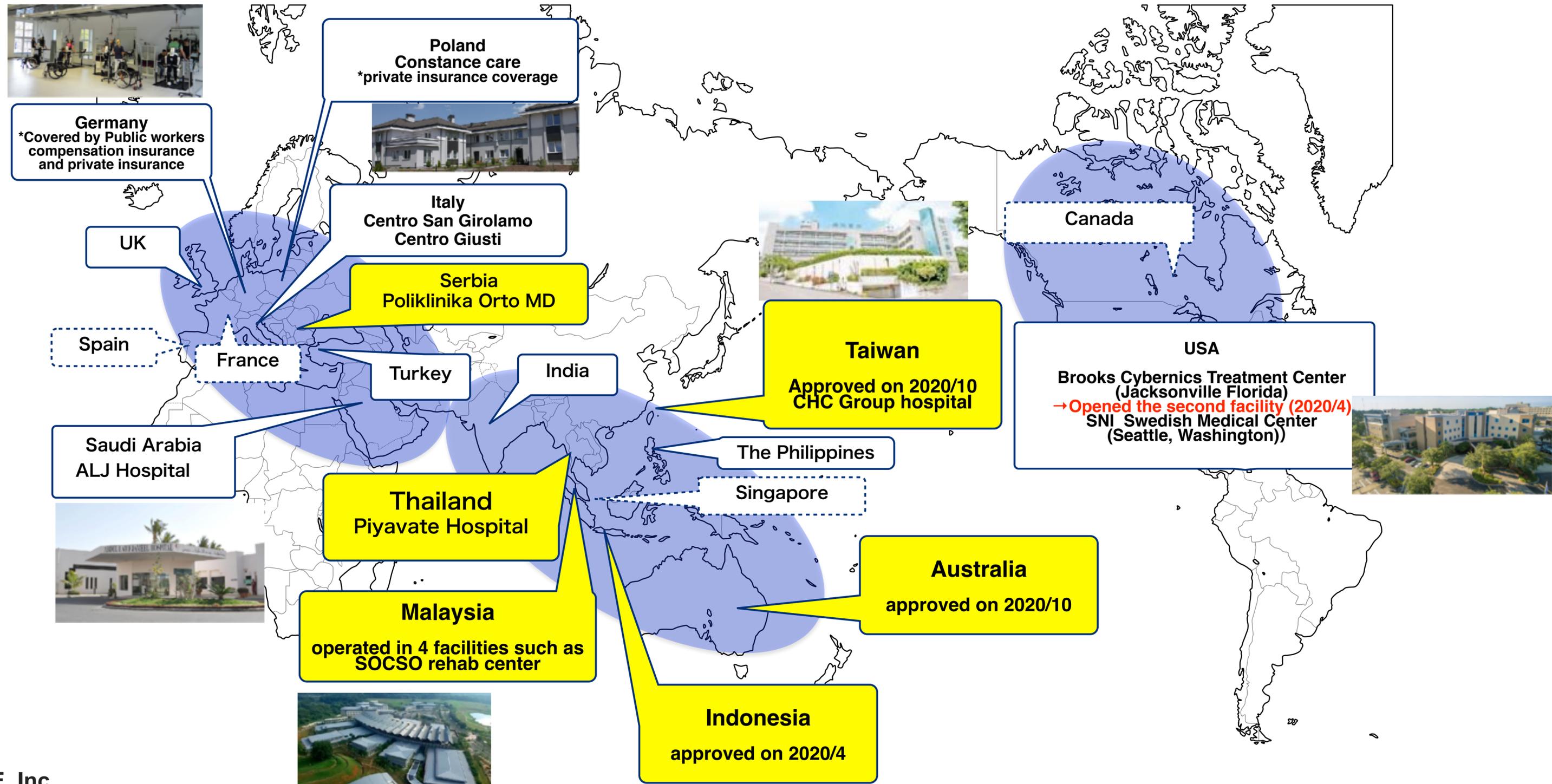
Covers the entire process from acute stages to chronic stages with HAL



Single Joint Type			
Lower Limb Type			
			Lumbar Type

- Locations
- Stroke rehab hospital (I) approx. 2,920
  - Stroke rehab hospital (II) approx. 1,660
  - Recovery rehab hospital approx. 1,990
  - Robocare Center elderly facility, self paid rehab facility Home (Neuro HALFit at Home)

## Expecting rapid growth in APAC (specially in South East Asia)



## Forming relationship with Mayo Clinic to strengthen connection with the medical society and related industry



### Mayo Clinic :

The number 1 hospital in the U.S. (U.S. News & World Report 2019)  
Has one of best teams in the U.S. for integrated research and education  
Ex-presidents of the U.S. and important persons outside of U.S. received treatment at Mayo



Keynote presentation by CEO Sankai "Neuroscience Convergence 2019"  
(November 8, 2019)



The Guillan-Barre Syndrome patient visited to convergence to present her experience

## Important points of the expanding FDA clearance

### 1) Target diseases of Medical HAL now includes “stroke” and “progressive neuromuscular disease”

- ① Paralysis due to stroke
- ② Paralysis due to progressive neuromuscular disease\*

\*spinal muscular atrophy, spinal and bulbar muscular atrophy, amyotrophic lateral sclerosis, Charcot-Marie-Tooth disease, distal muscular dystrophy, inclusion body myositis, congenital myopathy, muscular dystrophy

### 2) Significant treatment effect was acknowledge

- ① Stroke: showed significant additional improvements for patients who no longer felt improvement in conventional rehabilitation
- ② Helped patients maintain their physical function above the baseline level before starting treatment for over 1.5 years without overusing or excessively burdening the muscles when used for patients in this population.

(Note) Text related to the most notable evidence submitted to the FDA

### 3) Single leg-model was also cleared

This allows wider choices of treatment, such as utilizing the double-leg model for paraplegic patients and either single-leg model or double-leg model for hemiplegic patients.

**“great additional improvement”**

## FDA 510(k) Summary

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Once gait function ceased to improve from conventional rehabilitation, subjects started the comparative intervention, and results after a 5 week treatment program (5 sessions per week) were compared to show significant differences between the two groups. The group that used the **HAL showed great additional improvement (greater than the MCID)** whereas the group that continued conventional gait rehabilitation did not show much change. The results of the control group indirectly proves that the criteria used to identify the “end” of natural recovery & rehabilitation was valid, which in turn suggests that the treatment with HAL provides additional improvements for patients in this population.

# (USA: FDA Clearance) medical effect towards progressive neuromuscular disease

**“above the baseline level before starting treatment for over 1.5 years”**

## FDA 510(k) Summary

### FDA 510(k) Summary

Patients with progressive neuromuscular disease are not the typical population to use this type of medical device. However a GCP clinical trial and post market survey in Japan shows temporary effects for this population. Although the speed of disease progression greatly depends on the type of disease and the progression phase, as a group, treatment with the HAL helped patients maintain their physical function (distance walked in 2 minutes) **above the baseline level before starting treatment for over 1.5 years.** Also noteworthy was the finding that CK (Creatine Kinase) levels did not elevate after treatment and instead showed a slight tendency to decrease, which suggests that **treatment with HAL does not lead to overuse or excessively burden the muscles when used for patients in this population.**

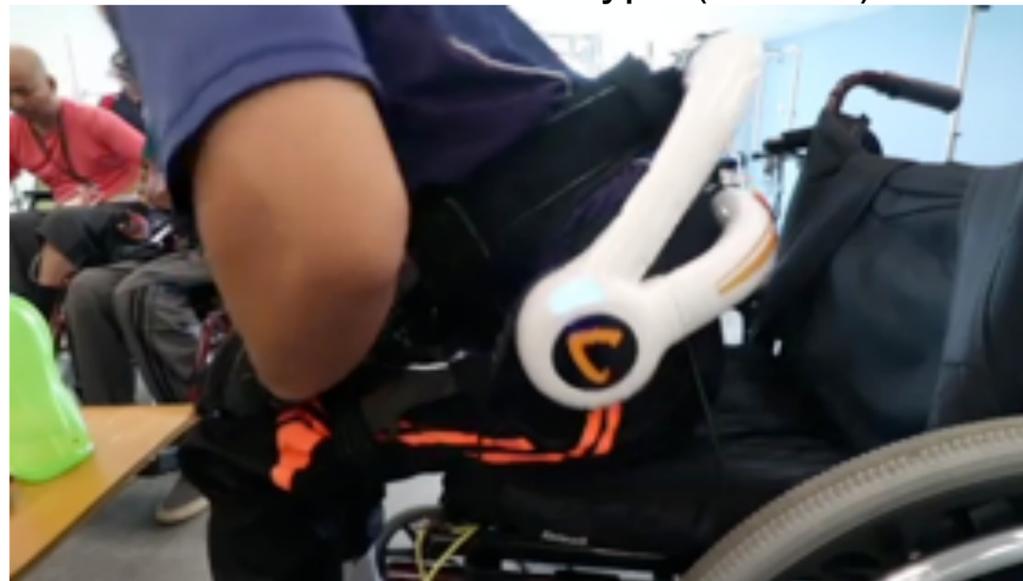
## Cybernetics Treatment Center operated by government organization (SOCSSO)



HAL Lumbar Type (8 Units)

HAL Single Joint Type (8 Units)

HAL Lower Limb Type (8 Units)



# Spreading of Cybernics Treatment in Malaysia



Public social security system allows treatment with minimal financial burden from the patient

## Used in four facilities

South (Melaka)

Central (Kuala Lumpur)

East (Kuala Terengganu)

North (Kota Bharu)

## 60 units of HAL

Lower Limb Type 18 Units

Single Joint Type 24 Units

Lumbar Type 18 Units

## Schedules to spread the technology further

\*SOCSCO (Malaysian Public Social Security Organization)

SOCSCO has four functions: disability pension, survivor's pension, medical coverage and occupational injury coverage, and is compulsory for Malaysian and foreign workers in Malaysia to join the program. It provides medical compensation, disability compensation, funeral benefits, child support and nursing care benefits for illness or injury that occurs while commuting to and from work.



# Largest medical device market in SE Asia: Thailand

Installation by Piyavate Hospital (Bangkok)



**HAL Lower Limb Type approved in April 2020**  
→ Full launch after the effect of COVID-19 settles down

### Coordinating with Indonesian Public Social Security Agency\*

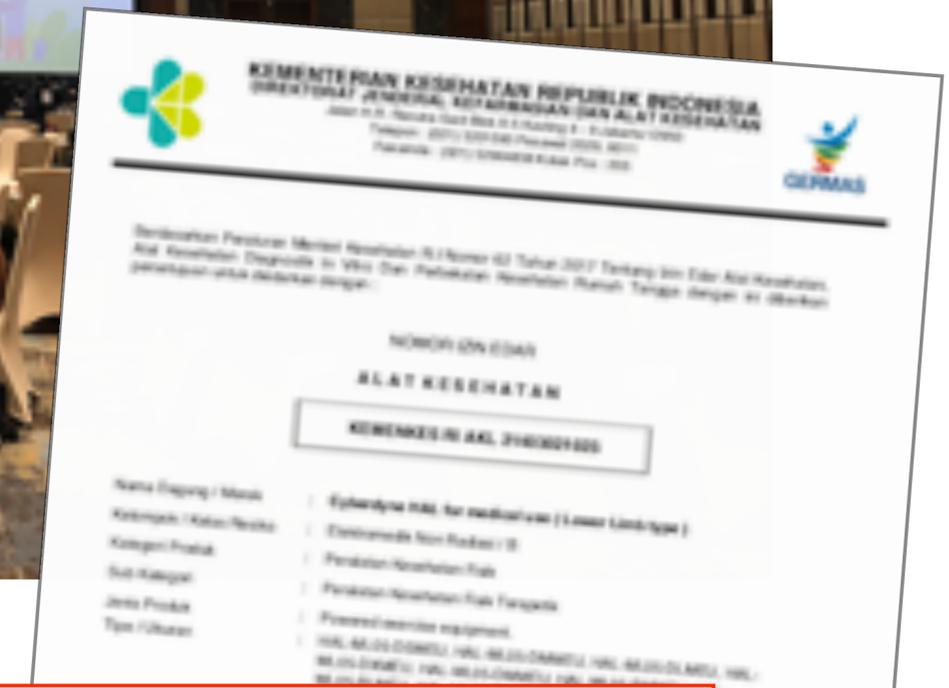
\*Badan Penyelenggara Jaminan Sosial Ketenagakerjaan (BPJS Ketenagakerjaan)



Presentation in Indonesia  
Left: CEO of SOCSO: Dr. Hafez  
Right: Director of BPJS Ketenagakerjaan: Krisna Syarif



Seminar hosted by BPJS Ketenagakerjaan



**Obtained medical device approval for HAL Lower Limb in 2020/4 and reached informal decision to install it to one of the largest public hospital in Indonesia**

**Devices will be exported as soon as restriction due to COVID-19 is lifted**

**Approved by Taiwan's regulator (TFDA) on October 2020**

- 1) Introduction of HAL to Yee Zen General Hospital (CHC Group)**
- 2) Distributor Agreement with Chiu Ho Medical System Company (CHC Group)**



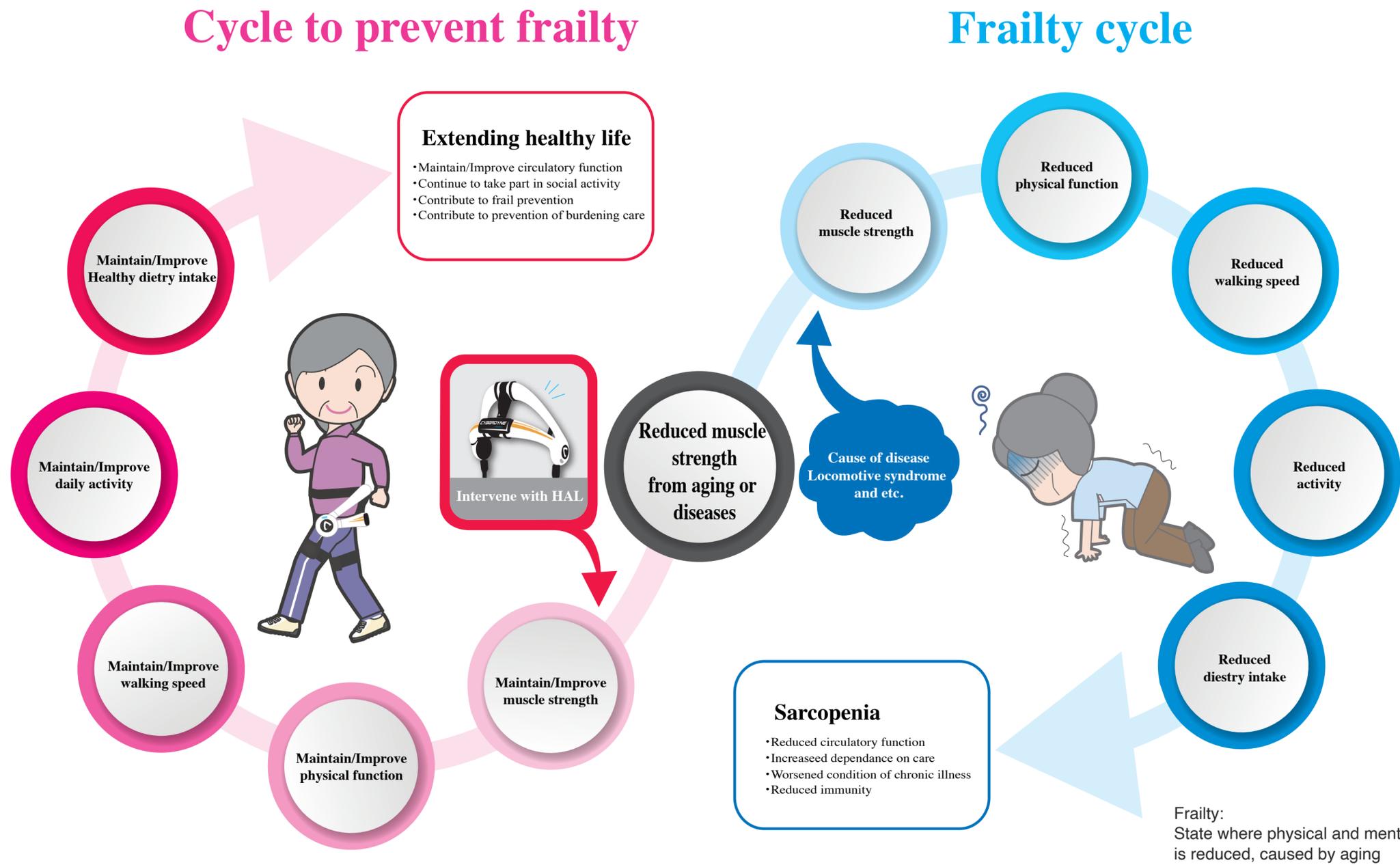
Yee Zen General Hospital



Cyberrics Treatment Center

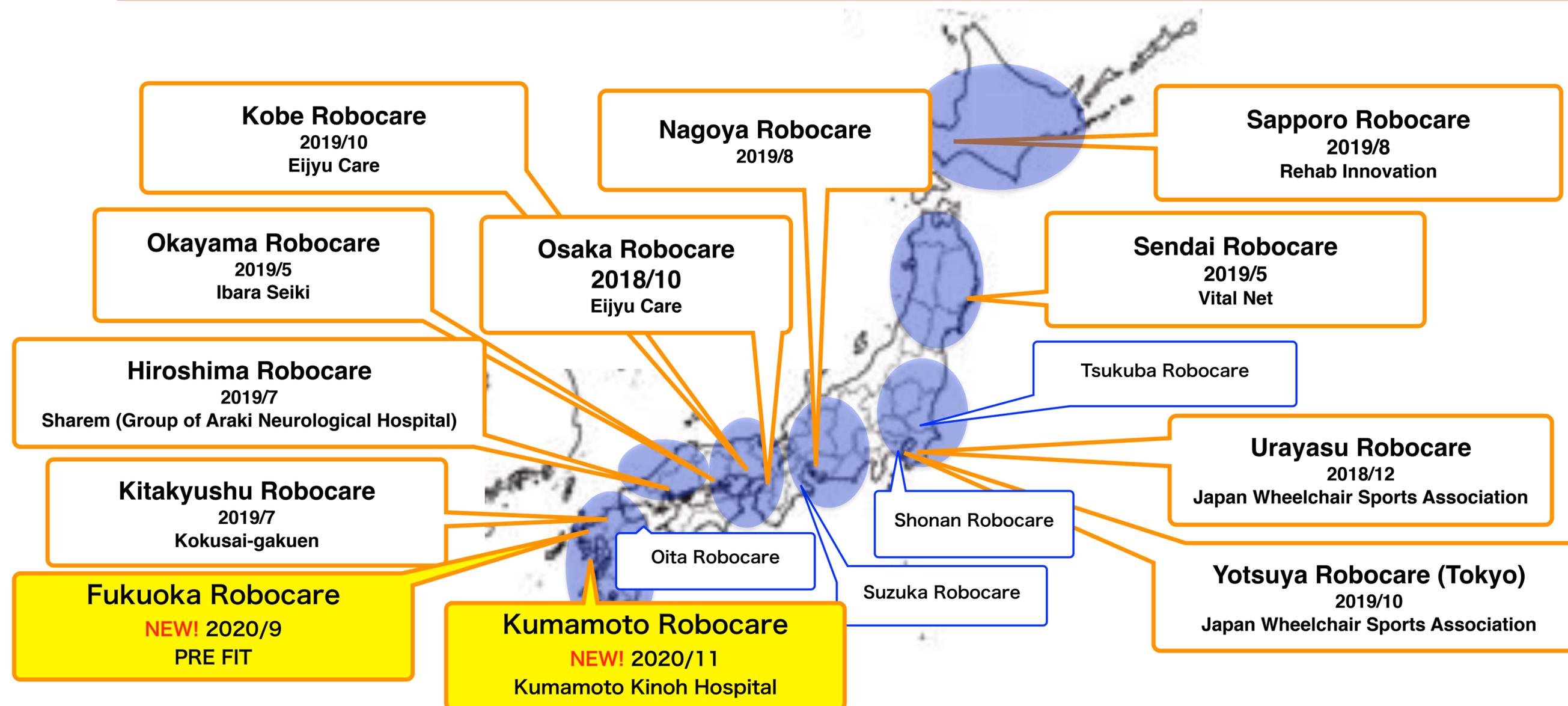
**for care givers and care receivers**

## Improves independence from care and prevents frailty



# Expansion of Robocare Center as a facility for individual customers

## Spreading *Neuro HALFIT* in Japan to 16 centers



AIG General Insurance Auto Insurance from January 2019  
Sompo Japan Nippon Koa Auto Insurance from January 2019  
Cyberdyne Shareholder Benefit from June 2019  
Daido Life long-term care insurance from April 2020

## First add-on service in relation to private insurance coverage started on April 2020 (Daido Life Insurance)

Company	Name of plan (When it started)	Insured person	Coverage
	<ul style="list-style-type: none"> <li>Comprehensive Medical Insurance (July 2017)</li> </ul>	Policy holder who were diagnosed with 8 specific types of neuromuscular disease, and received treatment with HAL Lower Limb Type	HAL Plus Rider (one time payment of ¥1 million)
	<ul style="list-style-type: none"> <li>Long-term care insurance (April 2020)</li> </ul>	Contractor, policy holder and its family member who were certified under the public long-term care insurance system “supporting needs 1 to nursing care needs 2”	Actual cost of 3 Neuro HALFIT sessions at Robocare Centers
	<ul style="list-style-type: none"> <li>Automobile</li> <li>Workers compensation</li> <li>Basic accident (January 2019)</li> </ul>	Policy holder who became paralyzed due to <u>Spinal Cord Injury</u> and etc.	Actual cost of 10 Neuro HALFIT sessions at Robocare Center
	<ul style="list-style-type: none"> <li>Automobile (January 2019)</li> </ul>	Policy holder who became paralyzed due to <u>Spinal Cord Injury</u> and etc.	Actual cost of treatment with HAL ordered by a physician

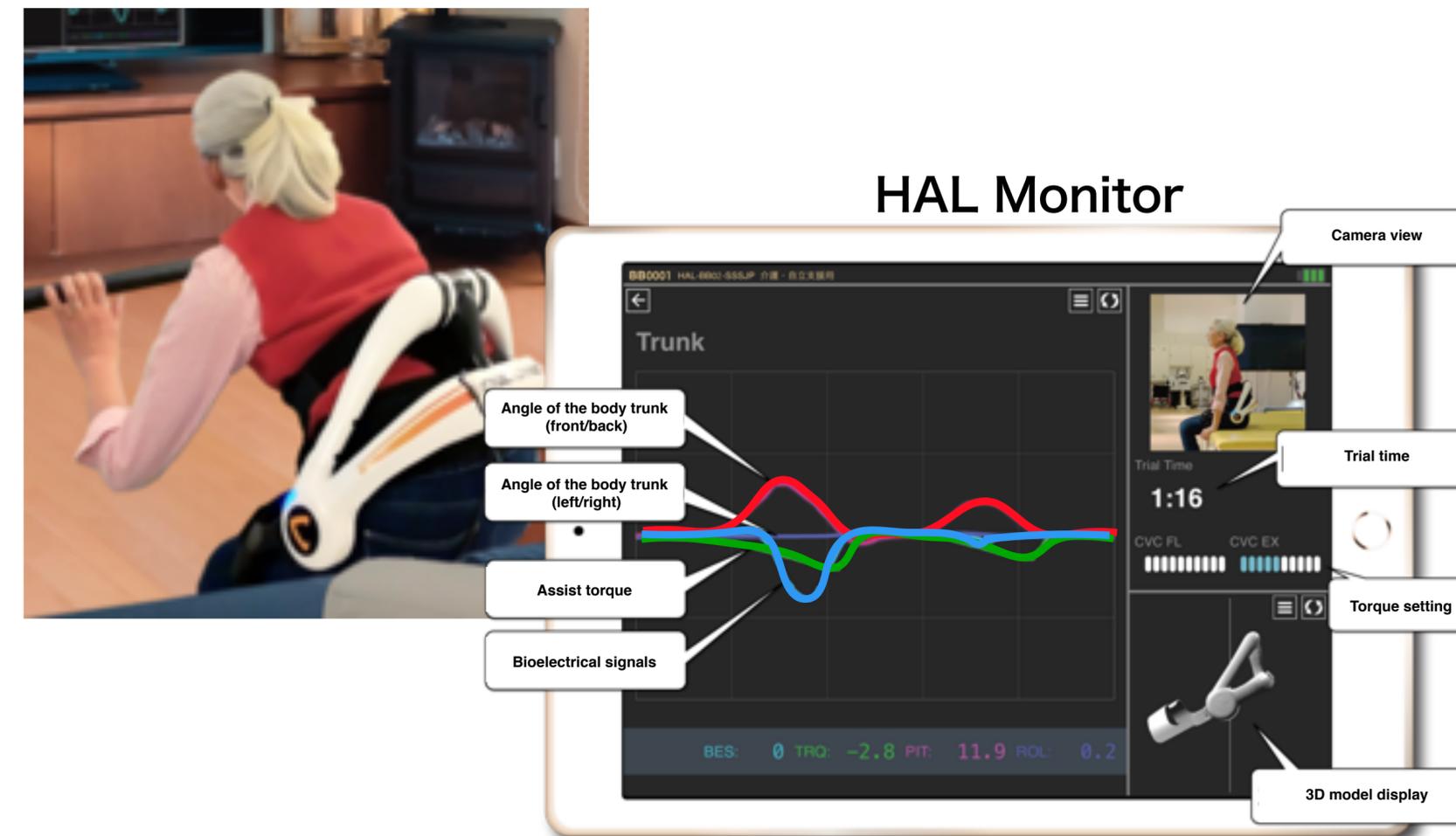
**New feature, remote support and new pricing plans**  
**Sign ups to support can be completed online**

## 1) Attachment of HAL Monitor

- Realtime/recored visualization of physical information
- Support from the staff via monitor

## 2) All process from sign ups to support can be completed online to reduce the risk in the time of pandemic

## 3) Reasonable new pricing: ¥48 thousand



**Induces improvement of brain-nerve and muscular function on daily basis at home and improve independence from care**

Company's D2C Site Opened November 2020  
Gradually expands service for individual users



<https://store.cyberdyne.jp>

# Alliance with Y's, Inc. (m3 group)

HAL is now available at the biggest operator of self paid rehab coordinating for “*Neuro HALFIT* at home” as well

Y's Rehab Center operated by Y's, Inc. (m3 group)

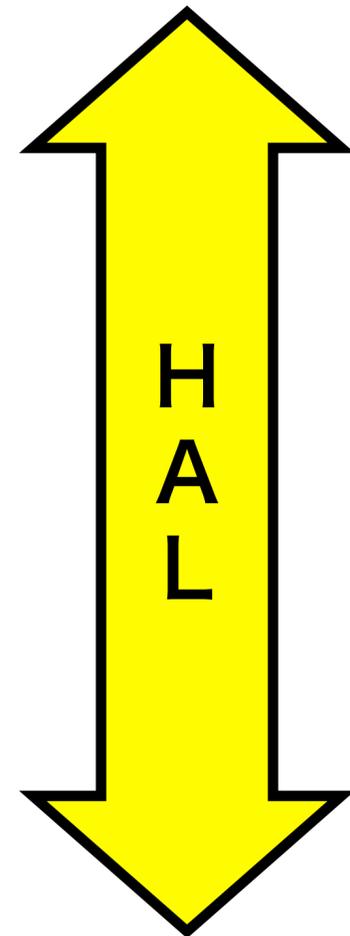


- 1) Program using HAL Single Joint and HAL Lumbar will start in Y's Rehab Center (6 facilities from November. Will be gradually expanded to more facilities)
- 2) Coordinating for “*Neuro HALFIT* at home” as well

## Daily life and work places

# Feature of HAL Lumbar Type for Labor Support

## Advantage of HAL in construction sites, etc.



1. **Lightest (3.1kg) active type device** → can be worn for long hours productivity
2. **Compact** → can be worn with full body safety belts and air-conditioned clothes
3. **Assists walking** → makes travel between locations smooth productivity productivity Safety
4. **Can travel during crouch posture** → Adapts to various tasks productivity
5. **IoH/IoT Device** → Visualizes workload and operation status, and enables total management of productivity productivity Safety
6. **Wearable Cyborg** → Moves according to the wearers intention productivity
7. **Can be worn in 10 seconds** → Can be taken off and on easily, can be shared with other workers productivity
8. **Waterproof/dustproof (IEC standard IP54)** → Can be used outside, even in rain productivity

# HAL Lumbar used by paramedics

Device adopted by firefighting department of Ebina, Kamakura and Tsukuba

Reason of adoption by Kamakura city

- 1) Light weight and compact design, so that it could be comfortably be worn by female paramedics
- 2) Shape of the product that does not get in the way during their work
- 3) Level of assistance that is suited for heavy lifting work
- 4) Dustproof and waterproof
- 5) Previous record of being adopted by Ebina City Fire Department

Handling stretchers



During ambulance transport



# Wearing HAL (Ebina firefighting HQ)



Paramedic team



**Worn in  
8 seconds**

救急活動の流れ



# HAL Labor Support: Supporting recovery

Deployed 30 units to Kumamoto and Oita, which took heavy damage from the rain in July 2020

Deployed to help the locals, who were unable to gain support from people outside due to travel restriction from COVID-19

Kumamoto (5 places) 20 units

Oita (3 places) 10 units



Visualizes workload and operation status

Optional LTE Communication Function enables remote management

Cloud



# HAL Labor Support: Record of supporting recovery

July 2018 14 units to Mabi and Takahashi (Okayama) to support Cyberdyne staff and local volunteers restore damaged houses

August 2018 2 units to Mabi (Okayama) to support Cyberdyne staff and Sompo Japan Nipponkoa Staff restore covered roads

September+October 2018 2 units to Kaita (Hiroshima) to support Cyberdyne staff restore dirt in shrine

September 2019 10 units to Omachi (Saga) to support ANA and Cyberdyne staff restore damaged houses

October 2019 Daigo (Ibaraki) 6 units to support Cyberdyne and local volunteers restore damaged houses

November 2019 3 units to Sagamiko and Tsukuiko area (Kanagawa) to support Cyberdyne staff and local volunteers working on recovery efforts 2020

July to November 2020 20 units to Hitoyoshi, Yatsushiro, Aso, Amakusa and Tamana (Kumamoto) to support local volunteers

July to September 2020 10 units to Kokonoe and Yufuin (Oita) to support local volunteers

Removal of mud from houses (underfloor)



cleaning operation using a high-pressure washer



Removing dirt



transportation of relief supplies



mud scraping work with a shovel



# Cleaning Robot : Practical installation in airports (8 in Haneda, 10 in Narita)

## Automates cleaning at airport

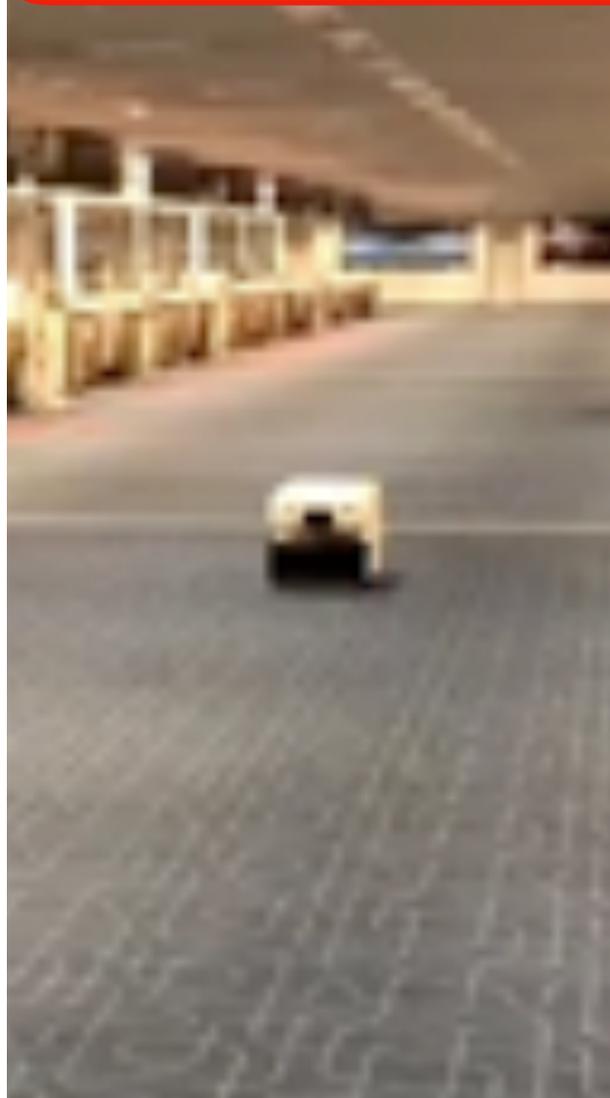
Autonomous navigation with SLAM\* at the highest level

\*SLAM stands for Simultaneous Localization and Mapping

Covers wide area at the max speed of 4km/h  
Capacity : Max 3,000m<sup>2</sup> in two hours

Navigates safely around  
passengers

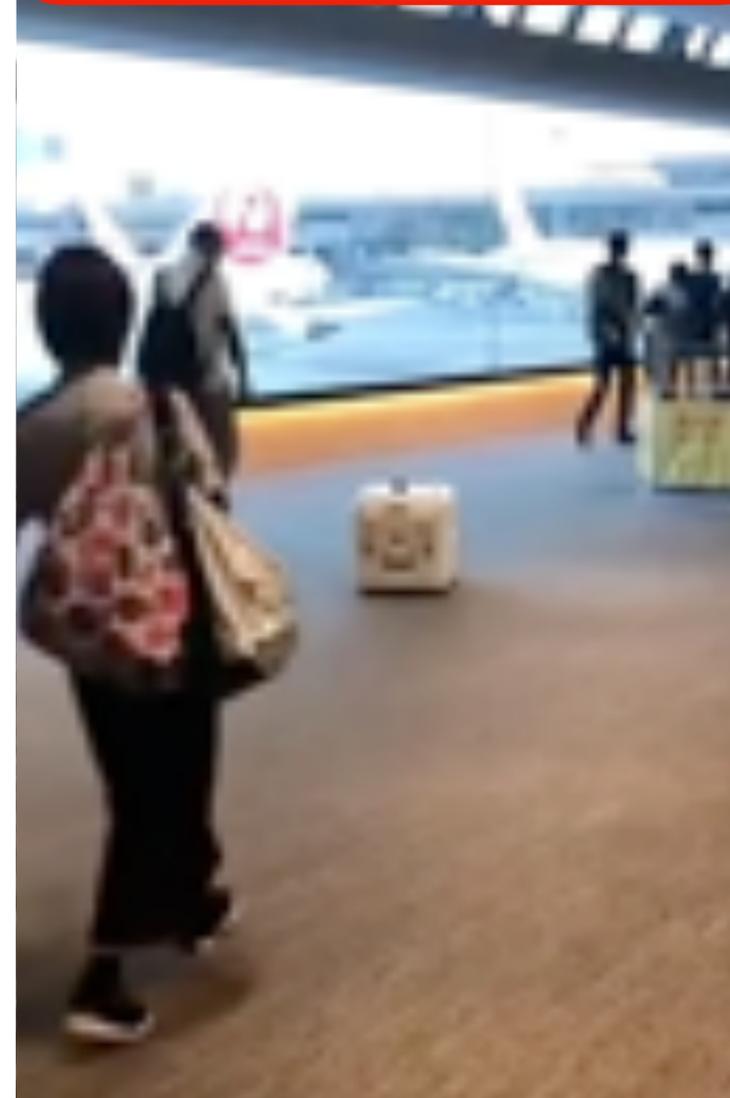
Avoids obstacles



Haneda Airport  
Terminal 2



Narita Airport  
International Terminal



Narita Airport  
International terminal



Haneda Airport  
Terminal 2

# COVID-19 Countermeasure- Disinfection Cleaning Robot (2020/4~)

“CL02” mounted with a unit to spray disinfection agent and UV Ray lights on the bottom to disinfect virus on floors  
Realizes contactless and automated cleaning/disinfection

Airport



Haneda International Airport

Hotels



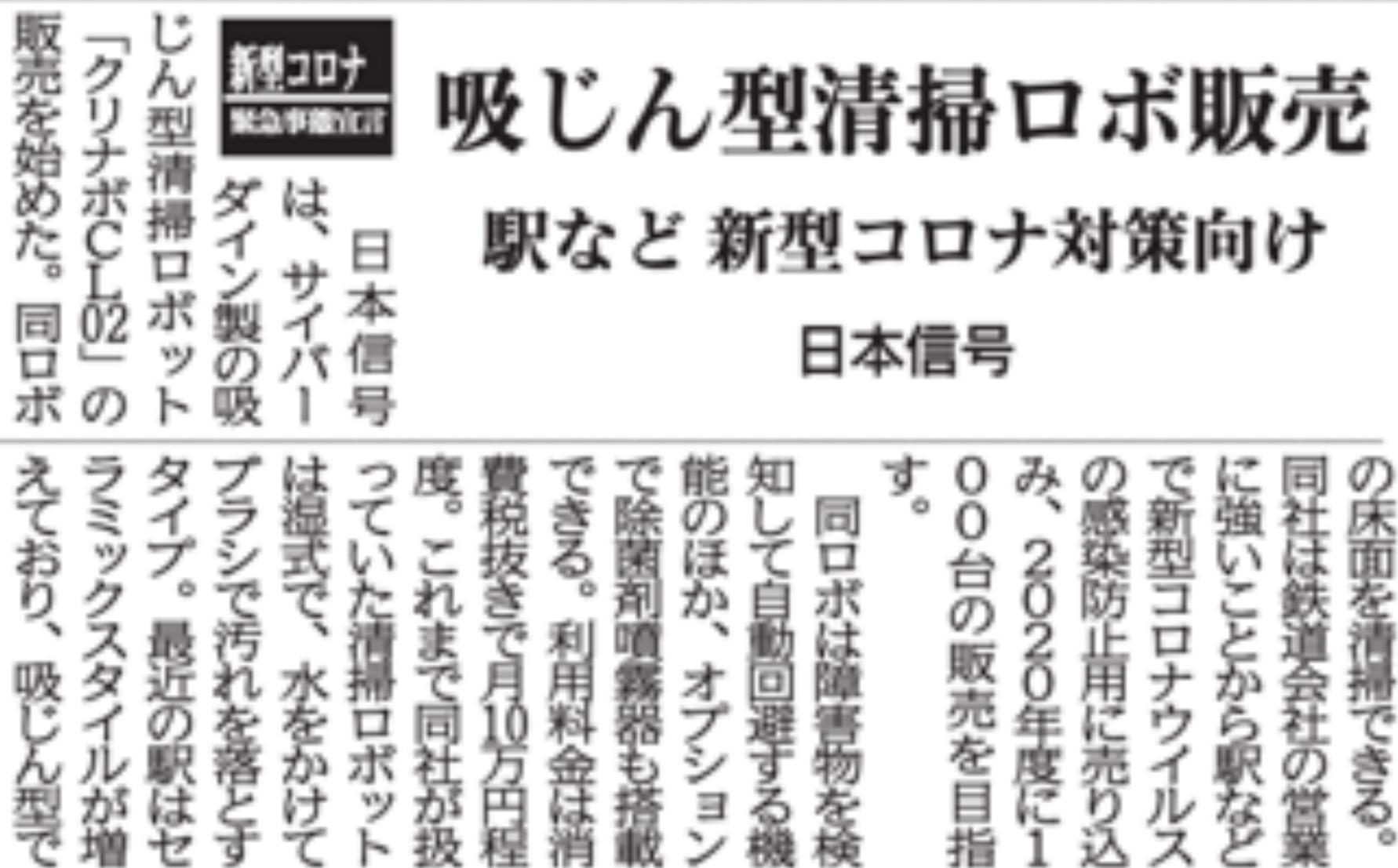
Hotel Route In Grand Tokyo Asakusabashi (Trial)

Public facility



Tsukuba City Hall

Utilizes the network with the railway industry owned by Nippon Signals to install autonomous navigated solutions of the Company



**新型コロナ**  
MEDIANOVIT

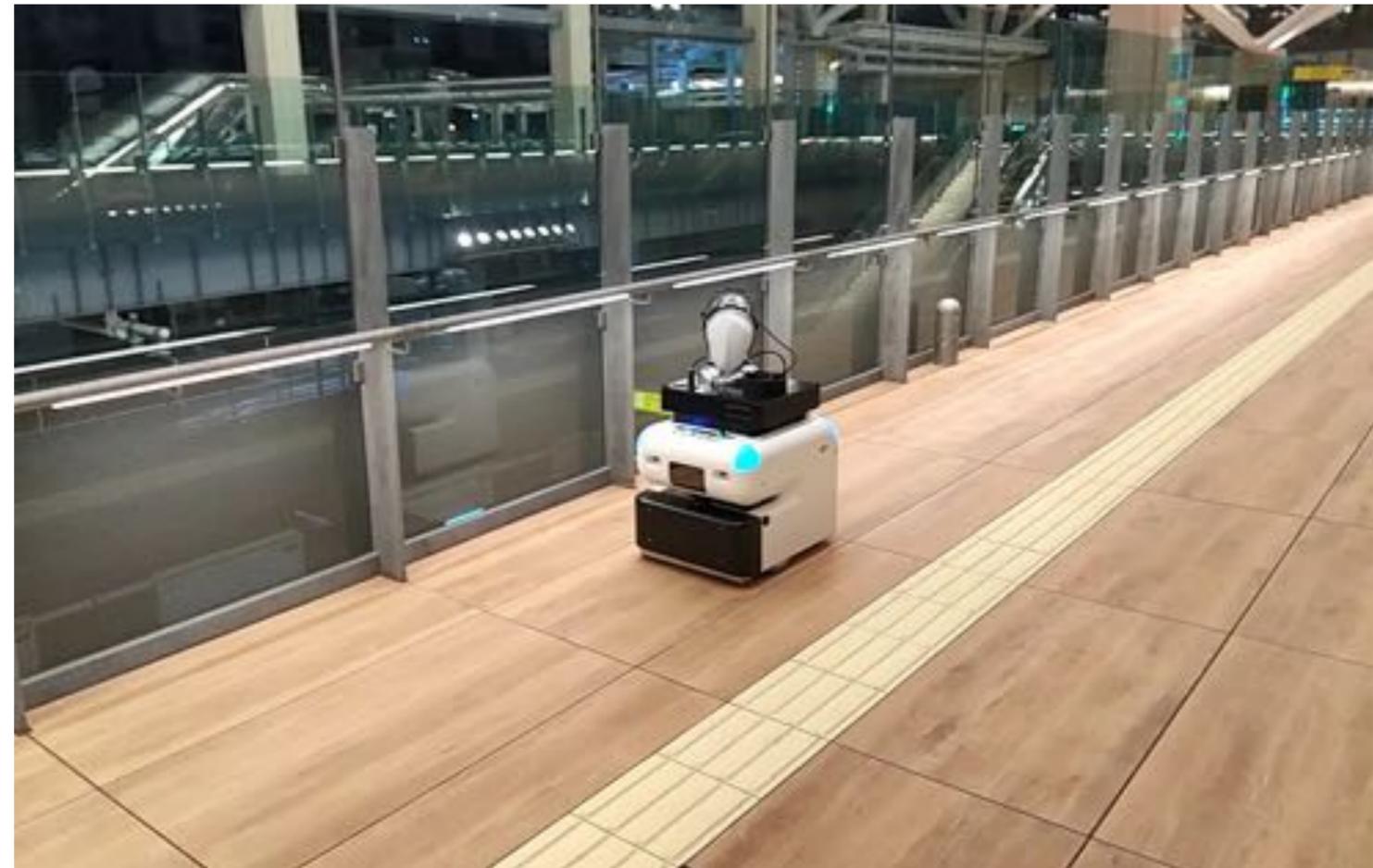
## 吸じん型清掃ロボ販売

### 駅など 新型コロナ対策向け

日本信号

日本信号は、サイバーダイイン製の吸じん型清掃ロボット「クリナボCL02」の販売を始めた。同ロボットの床面を清掃できる。同社は鉄道会社の営業に強いことから駅などで新型コロナウイルスの感染防止用に売り込み、2020年度に100台の販売を目指す。

同ロボは障害物を検知して自動回避する機能のほか、オプシヨンで除菌剤噴霧器も搭載できる。利用料金は消費税抜きで月10万円程度。これまで同社が扱っていた清掃ロボットは湿式で、水をかけてブラシで汚れを落とすタイプ。最近の駅はセラミックスタイルが増えており、吸じん型で



Takanawa Gateway Station verification test

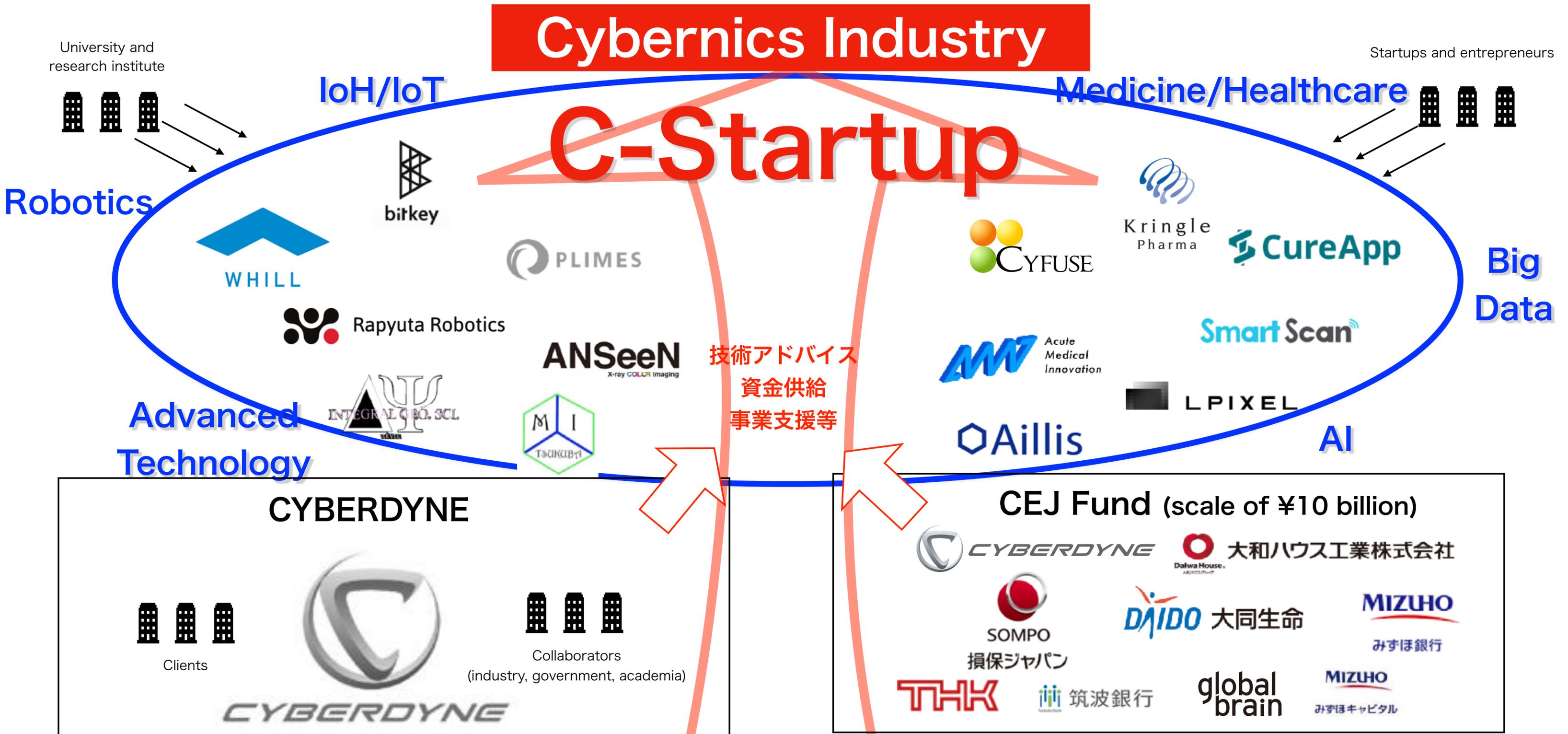
2020/5/22 Nikkan Kogyo Shimbun

# Coordination with elevator (Tokyu Community)

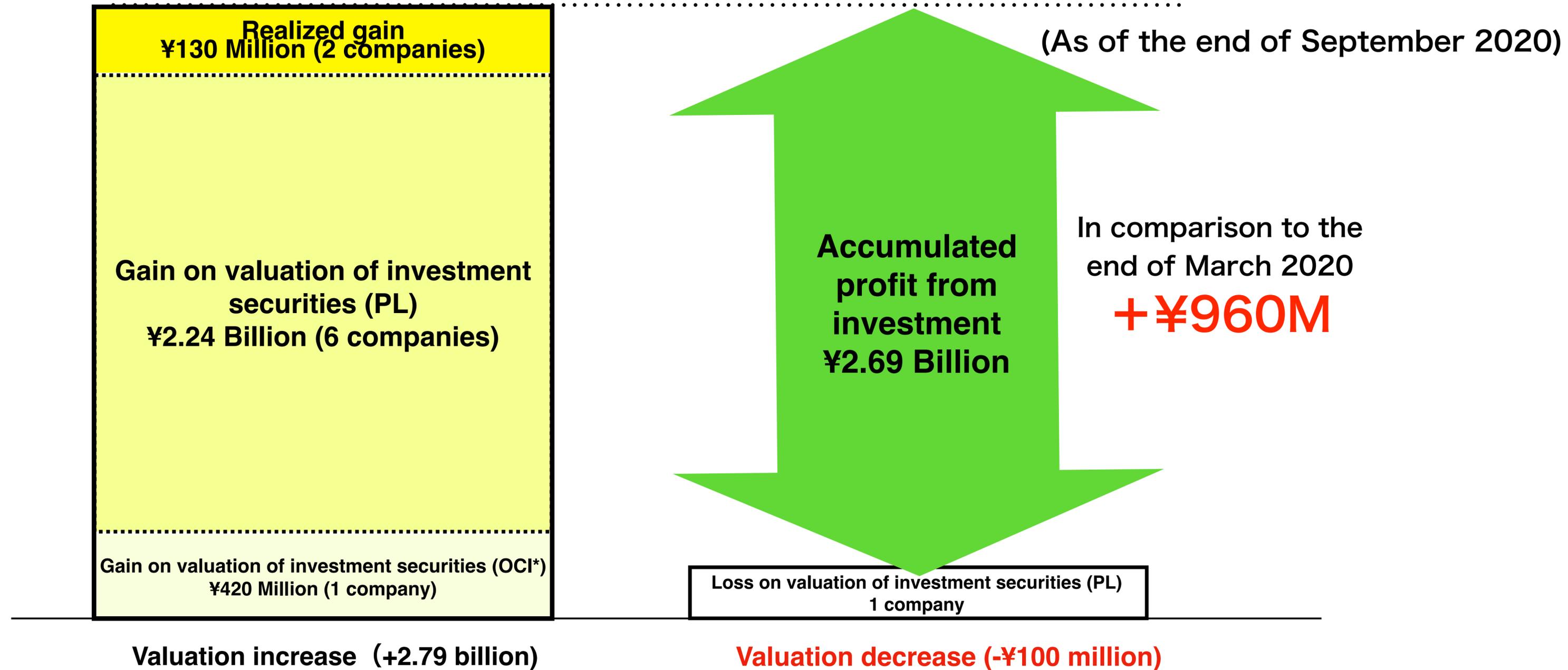
**Significantly expands the area that the robot can travel autonomously  
Realizes further automation and efficiency of cleaning and disinfection**



## C - Startup



## Result of strategical investment towards C - Start up based on business alliance



\* OCI : Profit posted in other comprehensive income instead of net income (PL)  
 (Ref) Investment with no valuation difference at this point: CYBERDYNE : 8 companies, CEJ Fund 5 companies

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