

Social Implementation of Automated Driving Service

Investigative Study on the Permanent Adoption
of Automated Driving Service in Rural Areas

Highway Industry Development Organization

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1. Goal of R&D or Study

Background

- Measure to address rural flight
 - Mobility support for elders
 - Measure to address people without access to shops
- Etc...

Growth Strategy 2020

Unmanned self-driving transport service within local areas will be made available at no less than 100 different locations across Japan by 2030

Public-Private ITS Initiative/ Roadmaps 2020

The plan is to set up such service nationwide by around 2025 so that regional communities across Japan have means of mobility available to elders, etc.”

Purpose

- Regional impact objectives
- Technical objectives
- Service operation objectives
- **Cultivation of social acceptability**
 - ⇒ Consensus formation between local residents and regional service operators
 - ⇒ Awareness promotion and public education in and around the targeted locales

Project goal

Feasibility of introduction to rural areas
Establish, widely implement, and promote a sustainable service model.



From Nov. 30, 2019

**Kamikoani-mura, Kitaakita-gun,
Akita**
(Roadside Station Kamikoani)

Iinan-cho, Iishi-gun, Shimane
(Roadside Station Akagi Kogen)

From October 4, 2021

**Miyama-shi,
Fukuoka**

From July 19, 2021

Higashiomi-shi, Shiga
(Roadside Station Okueigenji
Keiryunosato)





From April 23, 2021

 **Vehicles used: Cart-type**



person
MaxSpeed:12km/h



-  Update the service introduction manual so that it can be universally applied across similar projects.
-  Promotion of the service across wide-ranging age demographics in cooperation with educational institutions, etc.
-  Initial actualization of service maintenance and management for social implementation.
-  Set up a contact point so that it can be universally applied across similar projects.



4. Update the service introduction manual so that it can be universally applied across similar projects.

Many users are from outside the Automated Driving Service introduction areas, and it is difficult for the service to take root in the local communities.

- ⇒ Accurately understand the challenges being faced by the municipalities along with the needs of local residents, etc. so that the transport service can be delivered to those who truly need it (in terms of routes, schedule, vehicle operation method, etc.).
- ⇒ Implement it with a schedule that is coordinated with the schedules of community buses, food trucks, etc. as well as with local community events so that it becomes an essential service that is part of local people's daily living.

▼ Display image (current vehicle position)

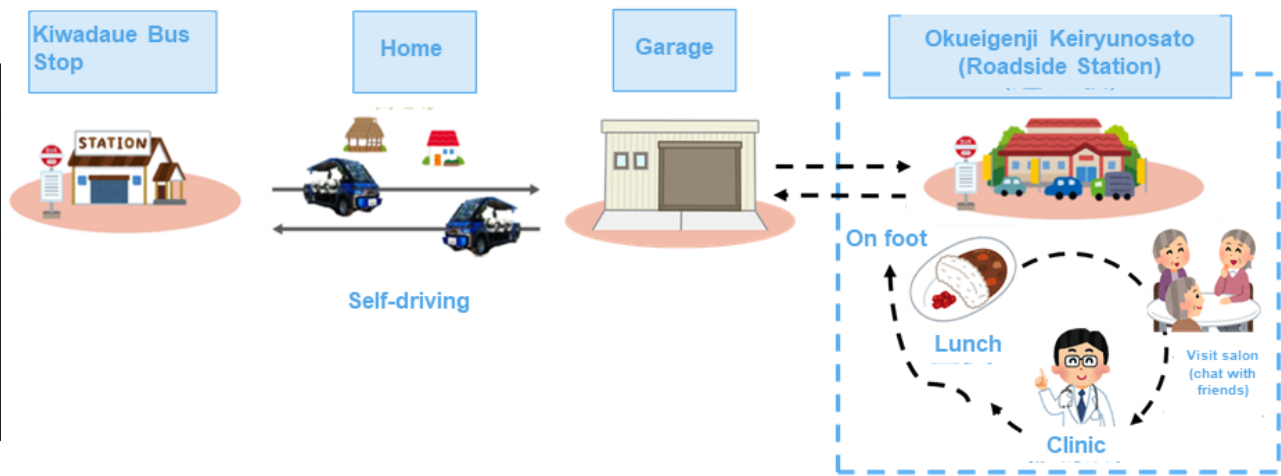


A tablet (in-vehicle terminal system) is installed in six community buses.

4. Update the service introduction manual so that it can be universally applied across similar projects.

Use of local salons in collaboration with Automated Driving Service (Higashiomi-shi, Shiga)

- "Engawa Cafe" for local residents is held at the citizen salon of the roadside station.
- Residents along the route use the Automated Driving Service to move to the roadside station to use the clinic, have lunch, and participate in the citizen's salon.



Driver calls out to a woman who are to use the service



Uses the service from the Kiwada Campsite to the self-driving vehicle garage



Walks with her friend from the garage to the roadside station



Have a cup of tea and talk with everyone at Engawa Cafe

4. Update the service introduction manual so that it can be universally applied across similar projects.

- Proposal of a model course tied up with a tourist spot (fish farm) along the road
- Transportation support during vaccinations at on-site clinics

第1弾 自動運転乗車のモデルコース!

自動運転溪流満喫コース

自動運転車両の乗車では、愛知川の溪流や周辺の山々の素敵な景色を眺めることができます。このコースでは、途中下車して、溪流沿いを散歩した後、イワナ料理をご堪能いただけます。

予約・お問い合わせ
 ■自動運転乗車：050-6862-0024
※道の駅内「道の駅」でもお申し込み可
 ■池田養魚場：0748-29-0351

コースマップ

道の駅 奥永源寺溪流の里

片道 150円

奥永源寺地域の集落の雰囲気を感じられる他、溪流や山々の素敵な景色を眺めることができます。

見える景色

養魚場に近い場所です。乗降いただけます。

池田養魚場

道の駅 奥永源寺溪流の里

自動運転を途中下車した後は、きれいな溪流沿いを散歩することができます。

池田養魚場

この自動運転溪流満喫コース限定の料理をお召し上がりいただけます!! (要予約)

池田養魚場

「谷の精霊」または「幻の魚」の異名をもつイワナ料理が味わえるレジャースポット。釣りやバーベキューなども楽しめます。

凡例

- 乗車・下車ポイント
- 自動運転車両走行ルート

行程

① じっくコース：
 登降約2時間滞在可能
 ② 満喫コース：
 敷居約1時間滞在可能

道の駅 奥永源寺溪流の里

1. 自動運転車両
 乗車 約10分

池田養魚場 付近

往路 10:25 ~ 12:30
 復路 12:47 ~ 15:47
※要予約

2. 溪流沿い散歩
 徒歩 約5分

池田養魚場

3. イワナ料理

ワクチン接種日に自動運転車をご利用いただけます!! (*予約必須)

道の駅「奥永源寺溪流の里」内の「永源寺東部出張診療所」にて実施される新型コロナウイルスのワクチン接種日に合わせ、以下の通り運行します!
 なお**予約がない場合は運行いたしません**のでご了承ください

○臨時運行日：6月接種日…3, 10, 17, 24日(木)
 7月接種日…1, 8, 15日(木)

○臨時運行便：行き…第3便(道の駅13:00着)、第4便(道の駅14:00着)
 帰り…第5便(道の駅14:50発)、第6便(道の駅15:40発)
 →各停留所の発着予定時間については裏面をご覧ください!

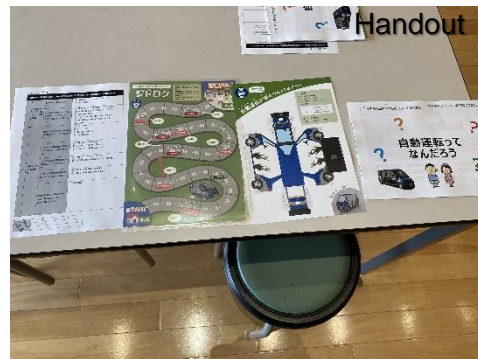
ご予約は以下へお電話いただくか、道の駅内設置の受付でも承ります。
TEL: 050-6862-0024 (事務局)



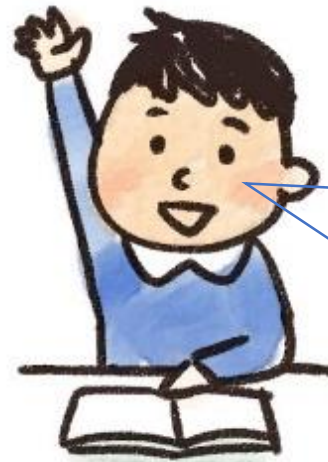
5. Promotion of the service across wide-ranging age demographics in cooperation with educational institution

Low level of understanding of Automated Driving Technology and service among people interferes

⇒ Offer educational sessions at local educational institutions (elementary schools, etc.) as to the features and necessity of Automated Driving Service , etc. so that those children can serve as a medium through which to promote awareness within families and communities.



■ Children's responses



I learned that two tests were conducted before social implementation.

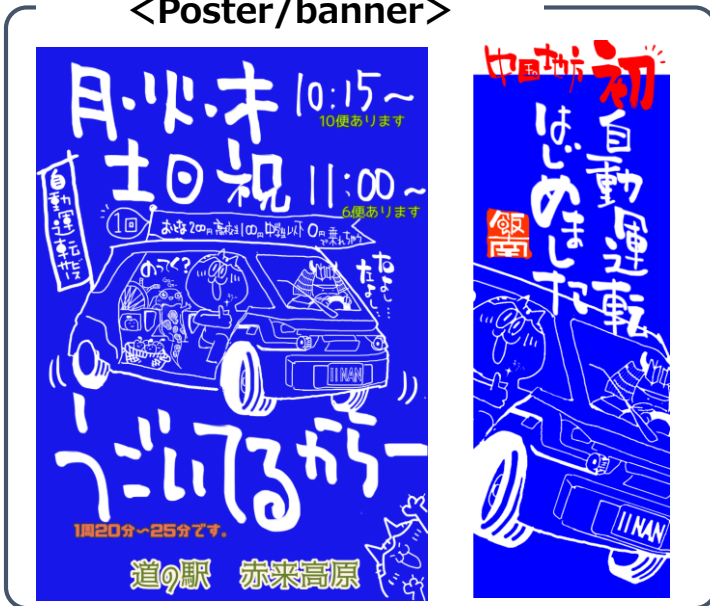


I had seen electromagnetic induction line installation work on my way to and from school, and I am glad to be able to learn how they work in today's class.

Public relations strategy led by the local community

- ⇒Poster and banner designed by the stationmaster of Roadside Station
- ⇒Public relations to familiarize children are underway based on the stationmaster's idea.
- ⇒Staff bench coats are in preparation for the coming full-scale winter season.

<Poster/banner>



▲Publicity by e-newsletter



▲Publicity through social media

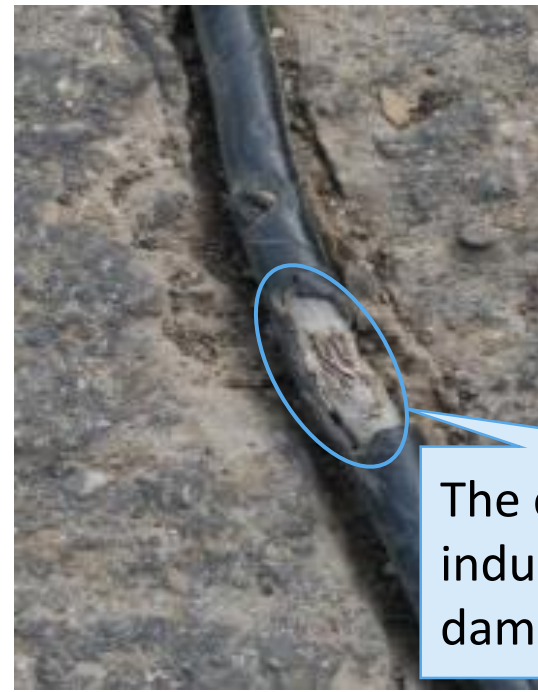


Challenge: Lack of know-how related to the maintenance and management of self-driving-adapted road infrastructure and vehicles

- ⇒ Organize information on the maintenance and management methods by chronological phase. Actively accumulate and share related know-how through information exchange with other SIP projects, etc. in preparation for the eventual social implementation.
- ⇒ Create manuals for the maintenance of guidelines and vehicles, and provide education and training to the local company, etc.



Disconnected
⇒ due to the effects of snow removal work, etc.



The coating of the induction wire was damaged



7. Set up a contact point so that it can be universally applied across similar projects.

Improving social acceptance through information sharing

⇒ Cooperate with other parties involved in SIP Automated Driving Service projects in the area of social acceptability to quantify the effects and improve social acceptability through information sharing.

⇒ **Set up a contact point for manual preparation, updating, and fielding inquiries.**

○ Creating a video



▲ Request for cooperation



窓口 <https://www.hido.or.jp/jidosapo/index.html>

▲ How Automated Driving work



