Welcome!

PIARC Webinar
COVID-19 and Road Safety
15 July, 2020
Our Speakers today

- Patrick Malléjacq - Secretary General, PIARC
- John Milton, USA - Washington State DoT, Chair of PIARC TC 3.1 on Road safety
- Rob McInerney, iRAP
- Jun Takeuchi, Japan - Technical Advisor seconded to PIARC
- Mariusz Kieć, Poland - Cracow University of Technology
- Jaime Campos Canessa, Chile - Dirección de Vialidad
- Christos Xenophontos, USA – Rhodes Island DoT, Chair of PIARC TC 1.1 on Performance of Transport Administrations
Participation in the webinar.

- Your camera and microphone must remain off.

- You can ask questions in the chat. At the end of all presentations, Christos Xenophontos will check the chat and ask questions to the panelists.

- A limited number of questions can be answered due to the large number of participants.

- Tip: Close the chat window to see the full presentations.
Introduction to the Webinar

Patrick Malléjacq
Secretary General, PIARC

#PIARCCOVID19
Basic rules for Zoom on line meetings

There will be presentations so be sure to access from a device that allows you to see visuals (i.e. a laptop or ipad).

Please mute yourselves and keep the video off during the presentations to avoid background noises and connection overload.

Use the chat functionality and ask questions at any time. We will collect them and direct them during the Q&A session.

Please be sure to have your full name and country displayed, here you find some useful information:

To change your name after entering a Zoom meeting, click on the “Participants” button at the top of the Zoom window.

Next, hover your mouse over your name in the “Participants” list on the right side of the Zoom window. Click on “Rename”.

Enter the formula Name, Surname (FR) and click on “OK”.

Patrick, Mallejacq (FR)

Use the chat functionality and ask questions at any time. We will collect them and direct them during the Q&A session.
How to ask a question, raise an issue, or share a practice?

- **This is strongly encouraged!**
- Only questions that are specific to roads or road transport

- **Use the “Q&A” button**
  - If you want to direct the question to a panelist, start with “Question to…”
  - Use English language

- You can also use the “Chat” feature of Zoom
  - It can be found at the bottom right of the main window under “…
  - Send a message to “All participants” (this is one of the “chat” options)

- That channel is monitored by Christos Xenophontos (Chair of PIARC TC 1.1)
About your name in Zoom

- We recommend that participants accurately name themselves in the Zoom application:
  - First Name Last Name Country

- This fosters interaction between participants
Participation in the Webinar

This Seminar is being recorded and will be made public on PIARC’s website and YouTube channel.
Key Concept: Focus on the short-term

The world is going through a crisis and every day counts.

This is knowledge and practice that is not yet confirmed as valid or effective.

A good idea now can save lives, improve business resilience and could minimize disruption of service.

Urgently share knowledge and practices among PIARC member countries to provide support in near real-time.

What works in one country may not work in another, but it can inspire you.

Note: PIARC is also working on the medium and long term, for when the pandemic is in a manageable state and substantially under control.
Disclaimer

Since time is of the essence, it is likely that knowledge and practice that is shared will not have been officially approved by each country’s official authorities.

“The ideas and examples shared here are for illustration only. They do not necessarily represent official policy. Ideas presented will be subject to further evaluation and use in deriving recommendations on policy and practice in due course. While care has been taken in the preparation of this material, no responsibility is accepted for any damage that may be caused.”
Our Speakers today

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• Christos Xenophontos, USA – Rhodes Island DoT, Chair of PIARC TC 1.1 on Performance of Transport Administrations
Agenda and Structure

• Brief introduction to PIARC
• Issues faced by Road Operators and Administrations

• Panelists’ Presentations
• Q&A

• Conclusion and Next Steps
Institutional Presentation of PIARC

Patrick Malléjacq
Secretary General, PIARC

#PIARCCOVID19
What is PIARC?

- PIARC is the new name of the World Road Association
- We were founded in 1909 as a non-profit, non-political association
- Our goal is to organise exchange of knowledge on all matters related to roads and road transport
- We have 124 member governments, as well as regions, groups/companies and individuals.
- It is the first global forum for the exchange of knowledge, policy and practice on roads and road transport.
PIARC's four key missions

- Be a leading international forum for the analysis and discussion of the whole spectrum of transport issues related to roads and road transport.

- Identify, develop and disseminate good practices and give better access to international information.

- Consider within our activities the needs of countries with developing economies and economies in transition fully.

- Design, produce and promote efficient tools for decision making on matters related to roads and road transport.

The Association mobilizes the experience and knowledge of 1,200 experts from more than 80 countries in 22 Technical Committees and Task Forces.
PIARC COVID-19 website


- The recordings of the Online Seminars "COVID-19 and roads"
  - 10 in English, 4 in Spanish and 3 in French so far
- The presentations of these seminars
- PIARC Technical Reports related to pandemic management
Two synthesis Notes are available

- These Notes present the emerging findings from the first Webinars.
- They are relevant for the road community and may be useful to inform planning and operational decisions that have to be made on the ground urgently.
- Available from www.piarc.org
  - Free
  - In English, Spanish and French
Key issues on COVID-19 and roads

- Ensure as far as possible the health and safety of employees and road users
- Response to impact on transportation
- Maintain activity and continuity of service
- Manage impacts on the economy and supply chains; Revive the economy after the crisis
- Relationships and collaboration with customers, users and other interested parties
- Security (including cyber security)
Thank you for your attention

Patrick Malléjacq
PIARC Secretary General
patrick.mallejacq@piarc.org
@PMallejacq

World Road Association (PIARC)
Grande Arche – Paroi Sud – 5°étage
92055 – La Défense Cedex – France

@PIARC_Roads
World Road Association PIARC

World Road Association PIARC
www.piarc.org
COVID and Road Safety, experience in the US

John Milton, PhD, PE, RSP2I, PTOE
Chair, PIARC TC.3.1 Road Safety Committee

Road Safety and COVID Webinar
July 2020
Profile

- John Milton
  - Chair, PIARC TC .3.1 Road Safety Committee
  - Washington State Department of Transportation, State Safety Engineer
  - Transportation Engineer with 32 years of road authority, research, design and operations of transportation systems
USA Travel Volume Impacts of COVID 19

- States operate with guidance from the Federal Government
- States level decisions are made through the executive authority of each State's Governor.
- 50 states + 2 territories
Most states are under some form of stay at home orders

Rural states in general are less restrictive

Washington and northeastern states most aggressive response to COVID*

* [www.usnews.com](http://www.usnews.com), 17 March 2020
United States 12 June 2020

- Most states begin reopening in June
- July Coronavirus surge
- Some states are beginning to shut down due to surge
European and US comparisons
Faster Driving

California decline 50% in fatalities and serious injuries

Minnesota and Massachusetts have doubled compared to last year

Nevada and Rhode Island pedestrian crashes increasing

Walking and biking increase as transit decreases 73%
Bicyclists and pedestrians above baseline

Average of data from selected sites: July 5, 2020

Bicyclist

19%

Pedestrian

49%
Traffic remains below baseline

- Dropped in volume in major counties between -10% to -22% and one county -1%
Washington State speed increases

- Speeds up 23-43% during reopening.
- Significant Speed increase in many spot locations.
Overall crashes decreased

All crashes (all severities)

Multivehicle crashes decreased

Multivehicle crashes
Run off the road and opposite direction crashes increased significantly

Fatal and serious injury lane departure crashes

Single vehicle run off road crashes increased significantly

Single vehicle run off the road fatal and serious injury crashes
Fatal and serious injury fixed object crashes increased significantly

Single vehicle fixed object fatal and serious injury crashes increased significantly
Opportunities PIARC Road Safety Manual

- Safety Management through Safe Systems (Chapter 4)
- Use of Safety Data (Chapter 5)
- Monitoring, analysis, and evaluation – Chapter 12
  - Drop in traffic due to COVID has shown an increase in run off road and fixed object crashes
  - Crashes appear to be occurring on local roads that have less available clear zone.
Opportunities PIARC Road Safety Manual

- Designing for Safe Behavior (Chapter 8)
  - Speed Management
  - Roadside fixed object (Chapter 9)
Thank you for your attention!

John Milton
Chair, TC.3.1 Road Safety
Washington State DOT, USA
miltonj.wsdot.wa.gov
@JohnMiltonPhDPE

World Road Association (PIARC)
Grande Arche – Paroi Sud – 5°étage
92055 – La Défense Cedex – France
COVID-19 Stimulus to Save Lives

Rob McInerney
iRAP CEO

Road Safety Webinar
July 2020
Profile

- Rob MCINERNEY
- CEO of iRAP
- TC C1 – Road Safety Committee English Speaking Secretary 2015-2019
- Civil Engineer with 25 years of road authority, research, industry and international development experience
COVID-19 Stimulus to Save Lives

- PROTECTING LIVES & LIVELIHOODS
- GLOBAL POLICY TARGETS
- BUSINESS CASE FOR INVESTMENT
- CELEBRATING SUCCESS
IRAP GLOBAL ROAD AGENCY PARTNERSHIPS

100+ Countries
1,000,000+ kilometres of assessments
us$75bn+ investment made safer
Globally, COVID-19 infections have led to a significant number of cases and fatalities. As of June 30, 2020, the World Health Organization reported:

- **Total confirmed cases per day:** ≈55,000
- **Lives lost per day:** ≈2,800

These figures are subject to daily fluctuations and are an average for the period.

A breakdown of the typical number of injuries from road trauma is as follows:

- **Brain Injuries:** 7,500+
- **Spinal Injuries:** 1,000+
- **Fractures:** 25,000+
- **Internal Injuries:** 9,000+
- **Degloving:** 900+

The effects of COVID-19 on health care systems worldwide are substantial, with 80% of cases recovering without treatment and 20% requiring hospital care. Recovery times range from 2 weeks for mild cases to 6 weeks for severe cases, and fatal outcomes are estimated at 1 in 20 cases.


**IMMEDIATE ROAD SAFETY IMPACTS**

- 1,500,000+ speeding fines in Delhi during 3 month lockdown

Source: Google Community Report (8th July 2020)

Source: https://www.thehindu.com/news/cities/Delhi/traffic-violations-rise-on-empty-roads/article31884769.ece
PROTECTING LIVES AND LIVELIHOODS
INVESTMENT OPPORTUNITY FOR ROAD AGENCIES

• Road trauma impacts hospital capacity
• Road trauma is preventable
• Road solutions are proven and cost-effective
• Treatments are quick to plan and build
• Treatments can create jobs country-wide
THE 2030 TARGETS

Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.
WHERE TO INVEST BASED ON CRASH HISTORY

SAVE LIVES

SAVE MONEY

CREATE JOBS
WHERE TO INVEST BASED ON ROAD USER NEEDS

How does my city compare to others?

Pedestrian Star Ratings (before changes were made)

- 1 star
- 2 stars
- 3 stars
- 4 stars
- 5 stars
- N/A

SAVE LIVES
SAVE MONEY
CREATE JOBS
### The Return on Investment

<table>
<thead>
<tr>
<th>Treatment</th>
<th>BCR</th>
<th>People saved</th>
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</thead>
<tbody>
<tr>
<td>Roadside barriers</td>
<td>8</td>
<td>4,057</td>
</tr>
<tr>
<td>Traffic calming</td>
<td>14</td>
<td>1,609</td>
</tr>
<tr>
<td>Footpaths</td>
<td>5</td>
<td>2,750</td>
</tr>
<tr>
<td>Delineation</td>
<td>12</td>
<td>6,202</td>
</tr>
</tbody>
</table>

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**SAVE LIVES**

**SAVE MONEY**

**CREATE JOBS**

[https://www.vaccinesforroads.org/business-case-for-safer-roads/](https://www.vaccinesforroads.org/business-case-for-safer-roads/)
SUCCESS: 3-STAR OR BETTER FOR ACTIVE ROAD USERS

SAVE LIVES
SAVE MONEY
CREATE JOBS
### SUCCESS: 3-STAR OR BETTER FOR CHILDREN

<table>
<thead>
<tr>
<th></th>
<th>Pre-modification</th>
<th>Post-modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ket Doan</td>
<td>★</td>
<td>★★★★</td>
</tr>
<tr>
<td>Mach Kiem Hung</td>
<td>★★</td>
<td>★★★★</td>
</tr>
<tr>
<td>Pham Van Chi</td>
<td>★★★</td>
<td>★★★★⃣</td>
</tr>
<tr>
<td>Hung Vuong</td>
<td>★★★</td>
<td>★★★★</td>
</tr>
</tbody>
</table>

- **SAVE LIVES**
- **SAVE MONEY**
- **CREATE JOBS**

[https://www.starratingforschools.org/](https://www.starratingforschools.org/)
SUCCESS: 5-STAR CITIES FOR ALL ROAD USERS


SAVE LIVES
SAVE MONEY
CREATE JOBS
SUCCESS: 3-STAR OR BETTER FOR MAJOR HIGHWAYS

SAVE LIVES

SAVE MONEY

CREATE JOBS

Concessão de 1.273 kms de rodovias entre Piracicaba e Panorama na divisa com MS prevê investimentos de R$ 14 bilhões

Edital prevê mais de 600 kms de duplicação e implantação de novas pistas. Concessão terá um modelo inédito de desconto progressivo no pedágio conforme o uso, além de outras inovações.
SUCCESS: RESULTS BASED FINANCING FOR THE 2030 TARGETS

2030

Efficiency
Scale
Cost

RESULTS BASED FINANCING

SAVE LIVES
SAVE MONEY
CREATE JOBS

% of travel 3-star or better
RESOURCES READY TO HELP

https://roadsafty.piarc.org/en

https://www.vaccinesforroads.org/

https://www.who.int/roadssafety/publications/en/
COVID-19 STIMULUS TO SAVE LIVES

https://www.vaccinesforroads.org/

SAVE LIVES

SAVE MONEY

CREATE JOBS
Thank you for your attention!

Rob McInerney
CEO iRAP
rob.mcinerney@irap.org
@iRAPRob

https://www.irap.org/
https://www.vaccinesforroads.org/
https://vida.irap.org/
https://www.starratingforschools.org/
https://roadsafety.piarc.org/en

Image Credit: Revista Vial (Road Magazine)
COVID-19 Impact on Transportation in Japan

Jun TAKEUCHI
Japan

Webinar
July 15, 2020
Profile

Jun TAKEUCHI
- Technical Advisor at the PIARC General Secretariat from November 2019
- Director of Human Resources Division and International Affairs Division, Central Nippon Expressway Company Limited (NEXCO-Central), Japan
- Civil engineer
Confirmed cases in Japan

Confirmed cases (by prefecture)

Confined cases (daily total)
(As of July 5, Deaths=976)

- Cut the peak of newly infected cases and prevent the breakdown of medical system, through the approach called “Avoid the Three Cs”

*3Cs: Closed spaces, Crowded places, Close-contact settings

https://mhlw.gsi.go.jp/corona/index-e.html#situation
https://www.mhlw.go.jp/stf/newpage_12269.html
Declaration of State of Emergency (April 7, and April 16, 2020)

- April 7, 2020
  Effective in **7 prefectures**: Tokyo, Kanagawa, Chiba, Saitama, Osaka, Hyogo and Fukuoka

- April 16, 2020
  Effective in **all 47 prefectures**

- Overview of the State of Emergency
  - The Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response does not provide curfew.
  - In case of Tokyo, **residents are strongly requested to stay home**, except essential activities such as receiving medical treatment, buying food, and going to work.
  - Private companies are requested to refrain voluntarily from their businesses, and however **transport companies are requested to continue their services**.

- May 14, May 21
  The number of prefectures that State of Emergency applied decreased to 8, and then, 5.

- May 25
  Lifting of the state of emergency was declared.
Road Administration Policy for Realizing “New Normal”

With COVID-19:
Road administration policy to prevent the spread of infection and maintain socio-economic functions

1. Stay-at-Home request and Use restriction of road facilities
   - Request Closure of Restaurants in Rest Areas
     - Temporarily closed at 133 locations (As of April 28)
   - Close Down Parking Areas
     - Temporarily closed parking areas that have been used mainly by tourists with little impact on freight traffic
     - Roadside-station temporarily closed and reduced usable areas at 55 locations
     - Compact parking areas temporarily closed at 72 locations (As of May 2)
   - Stop Holiday Discount for Expressway
     - Stop holiday expressway discount from April 29 to June 14 to minimize wide area movement
   - Publicize the Change in Traffic Volume
     - From April 25 to May 6, expressway traffic decreased by 30% compared to 2019

2. Road Maintenance and Operation
   - Road Management
     - Continue Road Maintenance & Management, Expressway Toll Collection
     - Freight Traffic
     - Continue operating Gas Station, Shower Service, etc. for drivers at Rest Areas as usual
   - Roadside Stations
     - Provide takeout Meals and sell handmade masks

Past achievement

- Temporary Use of Sidewalk as Countermeasure for 3Cs* at Restaurants’ Reopening
- Continuous Monitoring and Quick Publication of Travelling History of Vehicles (ETC2.0 data)
- Establish Toll System to Control Traffic Volume in Case of Emergency (on toll roads)

*3Cs: Closed spaces, Crowded places, Close-contact settings

Preparation towards the coming COVID-19 epidemic

- Digitalization of Maintenance Management
  - Measure/monitor road structures
  - Use remote-control system (remote-control gate)
- Online Application for Permission for Road Occupation, Special Vehicle
- Promoting Bicycle Commute
  - Encourage companies, organizations
  - Develop cycling space
  - Expand shared bicycles
- Automated Toll Collection (Only vehicles with ETC are available)
- Promoting Cashless/e-Commerce at Roadside Station
- Increase the Number of Parking Lots, and Introduce New Parking Reservation System*
  - For Double Articulated Truck
- Reinforce Function as Disaster Prevention Base at Roadside Station
  - Certified Roadside Station for Disaster Prevention, in terms of Communication Facility [5G] and Stock of necessary materials

Post-Covid-19:
Role of Roads as Infrastructure to Support New Lifestyle and Socio-economic Activities

- Innovation is required for Roads as Infrastructure to support new lifestyle and socio-economic activities after Covid-19
- Regarding the roles of roads to support “New Normal,” the vision of road administration policy, “2040: Scenery of Roads are Changing” (proposed by the Road Working Group, Policy Council for Infrastructure) raised questions and started discussion
- Suggestions on post Covid-19 road administration policy are invited from road users, private companies, universities, etc.
① Stay-at-Home request and Use restriction of road facilities <Past achievement>

- Request citizens;
  - To refrain as much as possible from moving to other prefectures for non-urgent and non-essential homecoming visits or trips
  - To restrict the use of facilities that may cause infections to spread. (Rest Areas on Expressways, Roadside Station)

- Stay-at-Home request

- Stop Holiday Discount for Expressway

-Stop holiday expressway discount from April 29 to June 14 to minimize wide area movement

<Request on VMS>
<Request on Digital Signage (Expressway Rest Area)>

<NEXCO East. Press Conference Material>
Stay-at-Home request and Use restriction of road facilities <Past achievement>

- Change in Traffic Volume on Expressways

  - Compared to the Golden Week (Early May) holiday season in 2019, the passenger car traffic drastically decreased by around 80%, while the truck traffic decreased by around only 20% during a specific period.

Change in Weekly Traffic from the previous year in Major Expressways Nationwide

As of June 9, 2020
Stay-at-Home request and Use restriction of road facilities <Past achievement>

- Change in Traffic Volume on National Highways

- The truck traffic has not been severely affected, as the one on expressways has not been.
- The decrease in passenger car traffic has not been larger than that in truck traffic, but not as large as the one on the expressway.
Toll revenues of expressway companies decreased by approximately 10% in March and decreased by approximately 1/3 in April (3 NEXCO Companies: preliminary figure).
Keep activities necessary to maintain daily life and economies for citizens, such as road management, freight traffic, and essential services for daily lives.

**② Road Maintenance and Operation  <Past achievement>**

- **Road Management**  
  <for road safety by keeping the level of services>
  - Continue Road Maintenance Management, Expressway Toll Collection

- **Freight Traffic**  
  <for safe driving related to the number of accidents>
  - Continue Operating Gas Station, Shower Service, etc. for drivers at Rest Areas on Expressways

- **Roadside Stations**  
  - Provide takeout Meals and Sell handmade masks

*Confirmed infection of 9 Toll Collectors (As of May 11)*
Stay-at-Home request and Use restriction of road facilities <Preparation towards the coming COVID-19 epidemic>

- **Temporary Use of Sidewalk as Countermeasure for 3Cs* at Restaurants’ Reopening**

If restaurants apply for permission of takeout and occupation of road space in collaboration with local governments, the permit criteria will be loosened.

- MLIT* decided to loosen the permit criteria for temporary use of sidewalk for restaurants as an urgent measure to support businesses that suffer from COVID-19 influence, if residents or organizations apply for the permission in collaboration with local public organizations. (MLIT: Ministry of Land, Infrastructure, Transport and Tourism)
- MLIT requested local public organizations to apply for it with residents, etc.

### Outline of this urgent measure

<table>
<thead>
<tr>
<th>Contents</th>
<th>Lead organization</th>
<th>Location</th>
<th>Road Occupation Fee</th>
<th>Occupation Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open restaurants temporarily as a countermeasure against COVID-19</td>
<td>Collective occupation<em>¹ by a local public organization, or related organization</em>²</td>
<td>A location that does not affect road structure or traffic significantly</td>
<td>Exemption (If you cooperate with cleaning around facility)</td>
<td>Until November 30, 2020</td>
</tr>
<tr>
<td>Correspond to 3C avoidance and New Lifestyle establishment</td>
<td>*¹: Application on an individual shop basis is not acceptable. Request the local public organizations.</td>
<td>*On the sidewalk, space is secured for pedestrians: 3.5 meters and more for locations with heavy traffic, 2 meters and more for other locations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set up a facility temporarily for takeout, sidewalk seating, etc.</td>
<td>*²: Local council, a private organization supported by local public organizations, etc.</td>
<td>*Able to set up a facility on the road in front of the restaurants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperate with cleaning around a facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*MLIT*: Ministry of Land, Infrastructure, Transport and Tourism

*3Cs*: Close contact, Congestion, Crowded space

*Location*: A location that does not affect road structure or traffic significantly

*On the sidewalk, space is secured for pedestrians*: 3.5 meters and more for locations with heavy traffic, 2 meters and more for other locations

*Able to set up a facility on the road in front of the restaurants*
1. Introducing CCTV AI analysis has enabled the expansion of constant observation areas, and the promotion of machine observation with mobile traffic counter and video dispensed with traditional manual observation, leading to efficient traffic surveys.
2. With ETC2.0 data, travel speed surveys have been conducted under constant observation in directly-managed and locally managed roads.

**Promotion of machine observation**
**Discontinuance of manual observation**

- Roadside Traffic Counter (constant observation)
- Manual observation
- CCTV <AI camera> (constant observation)
- Mobile Traffic Counter (Machine observation)
- Video observation (Machine observation)

**Data collection**

- Roadside Unit (RSU) (as of April 2018)
  - Expressway: Approx. 1,700
  - Directly managed highway: Approx. 2,000
- Onboard Unit (as of September 30, 2018)
  - Approximately 3.12 million units

**Data Processing**

- Driving speed
- Driving route
- Sudden braking

**Data: Location, Acceleration, OBU ID**
With a view of development at locally managed roads, it will be positively utilized while examining the costs, workability, etc.
1. Promote Introduction of Bicycle Commute in Private Companies, Organizations
   - To widely publicize efforts on bicycle commute by organizations and expand bicycle use in commute at work, it will certify the first “Declared Company” under the “Bicycle Commute Promoting Company” Declaration Project in July 2020. Then, it will plan to publicize the certified company and its efforts.

2. Promote Development of Bicycle Lanes in Central Tokyo
   - In FY2020, approximately 17 km of exclusive bicycle lanes, etc. will be developed in national highways and major prefectural roads in Central Tokyo. Moreover, the Cycling Space Development Plan will also be built for central Tokyo by this fall and will be implemented in around 3 years.
   - Similar development plans will be built and implemented nationwide.

3. Expand Shared Cycle (supporting system of bicycle commute)
   - Following approaches have been promoted to improve shared cycle’s convenience:
     ① Considering deregulations and clarification of rules on the development of cycle ports, it supports establishing cycle ports on highly convenient locations such as roads, etc.
     ② Considering standardization of the specification and installation criteria for guideboards, it promotes installment of guideboards at railway stations, etc.
2. Road Maintenance and Operation  <Preparation towards the coming COVID-19 epidemic>

• Increase the Number of Parking Lots

- In order to mitigate congestion in at rest areas on expressways, the number of parking lots will be increased and the efforts to level the use of them will be promoted.

1. Increase the number of parking lots (FY2018 – FY2020)

- Increase parking lots by reviewing the layout of existing parking areas
- Create convertible parking lots that both trucks and passenger cars can use flexibly and efficiently

2. Promote to level the use of parking lots (from FY2020 and onward)

- With ETC, the new system capturing real-time parking availability by vehicle types was developed in all rest areas in the Tomei and the Shin-Tomei expressways
- Using forecast technologies with AI, providing detailed information of parking availability, congestion level of rest areas on information boards and website has been considered

<table>
<thead>
<tr>
<th>Number of parking lots added in 3 NEXCO Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2018 (26 locations)</td>
</tr>
<tr>
<td>approx. 520 lots</td>
</tr>
</tbody>
</table>

(image of convertible parking lots)
1. Develop off-road parking (by March 2021)
   - Provide parking lots for vehicles with reservation outside Hamamatsu inasa IC, almost halfway between Tokyo and Osaka
   - Manage entrance and exit at the gates compatible with ETC2.0

2. Introduce Reservation System at Rest Areas (FY2020 onward)
   - Develop Parking Reservation System at the following Rest Areas (SA):
     • Ashigara SA (Inbound to Tokyo)
     • Shizuoka SA (both directions)
     • Tsuchiyama SA (both directions)
   - Manage parking of vehicles with reservation using ETC2.0 RSU, information board, monitoring camera, etc.
### Objectives/Purpose

- **Social issues**, such as efficiency, safety, and environmental load of travel, are solved by **“evolving” roads by entirely using digital technologies**.
- Since ancient times, roads have been the center of exchange (i.e., playground, small talk). **“Return” the function as communication space to roads**.
- **“SDGs” and “Society 5.0”** will aim at achieving the **“Human-centered Society”**.
- The essence of road administration policy is to **“achieve the happiness of people”**.
- Solve the issues by **“evolving” roads by entirely using digital technologies**.
- Since ancient times, roads have been the center of exchange (i.e., playground, small talk).
- “Return” the function as communication space to roads.

### Basic Principle

1. **No More Rush Hours in Commute**
   - Obligatory commute dramatically decreases by dissemination of telework.
   - Constraint in commute distance disappears and moving away from the city center increased.

2. **Park-like Roads with Full of People**
   - Recreational trips and stays such as travel and walking increase.
   - Roads attract people as amenity space.

3. **Automated & Unmanned Travel of People & Goods**
   - Dissemination of automated driving services makes lifestyle with a car a thing of the past.
   - Penetration of e-commerce increases small-lot deliveries, and make unmanned freight traffic common.

4. **Cities Change with Mobile Shop/Service**
   - Restaurants and supermarkets move in response to customers, and open roadside.
   - In rural areas, small shops provide residents with daily services.

5. **From “Roads that Suffer” to “Roads to Support”**
   - In response to disaster, road network secures connection in transport/communication/electricity, and supports lifesaving and restoring devastated areas.

### Changing Sceneries of Roads ~ Future Images in Five Ways ~

1. **No More Rush Hours in Commute**
   - Obligatory commute dramatically decreases by dissemination of telework.
   - Constraint in commute distance disappears and moving away from the city center increased.

2. **Park-like Roads with Full of People**
   - Recreational trips and stays such as travel and walking increase.
   - Roads attract people as amenity space.

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**2040: Changing Sceneries of Roads ~ Roads Leading to Happiness of People ~**

Through road administration policy, the vision, that proposes the Society in Japan to achieve in 2040 and the future direction of policy, is established.
Ref. Efforts for Automated Driving

**Government objective**

**Designated Area on Ordinary Roads**
- Unmanned driving service in a designated area (level 4) by 2020
- Same as above (increased areas, scope, etc.) by 2025

**Platooning on Expressways**
- Commercial Platooning System followed by manned vehicle by FY2021
- Commercial Platooning System followed by unmanned vehicle from FY2022 onward

### Support by Infrastructure for Self Positioning

- Vehicle-infrastructure cooperative safe driving support with electromagnetic induction line
- Infrastructure support for accurate stopping with a magnetic marker at the bus stop

### Secure Driving Space for Automated Driving

- A uniform design of road marking for a driving path of automated vehicle
- Hitachi BRT (Hitachi City, Ibaraki)
- In light of the local needs, dedicated structure with a median fence to avoid entrance from other lanes

### Secure Exclusive Driving Space for Commercial Platooning

- To secure exclusive driving space for the vehicle to assure safety, and avoid confusion with general vehicles

### Support Countermeasure for Low GPS Positioning Accuracy

- The system can obtain location beacon and location data for self-positioning
- Install magnetic markers to areas with low accuracy of GPS such as tunnels, underneath elevated structures, etc.

### Build Freight Hubs

- Develop freight hubs with areas for platooning/separation

### Develop Support Facility for Merging

- Until a dedicated space is secured, the technology such as merging assistance system at junction or ramp metering will be reviewed

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Advisory Committee on Road Space for Automated Driving. Preliminary Report (Nov. 2019)
Road Administration Policy relevant to Road Safety

- With Corona
  - Past Achievement
    - Stay-at-Home request and Use restriction of road facilities
      - Change of Traffic Volume
    - Road Maintenance and operation
      - Road management
      - Freight
  - Preparation towards the coming COVID-19 epidemic
    - Road Maintenance and operation
      - Digitalization of Maintenance Management
      - Promoting Bicycle Commute
Thank you for your attention!

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Impact of COVID-19 on Road Safety in Poland

Mariusz Kieć, PhD
Cracow University of Technology, Poland

PIARC COVID-19 Webinar on Road Safety
15 July 2020
Profile – Mariusz Kieć

- PhD in Faculty of Civil Engineering
- Traffic Engineering (Road Design and Road Safety)
- Assistant Professor at Cracow University of Technology, Poland
Overview of Presentation

- COVID-19 in Poland
- Issues and problems
- Changes in road users’ behavior
- Changes in road safety (frequency and severity of crashes)
- Measures to mitigate the occurrence of COVID-19
- What is needed (policy, measures, data, research)?
COVID in Poland

- **04.03.2020** – the first case of coronavirus in Poland
- **12.03.2020** – closure of schools, universities
- **15.03.2020** – restrictions on travel and movement including border closures, closure of workplaces
- **01-02.04.2020** r. social distancing 2m, further restrictions on travel, limiting the use of transport space in public transport modes (50% of seating places)
- **20.04.2020** – I stage of the abolition of restrictions
- **04.05.2020** – II stage of the abolition of restrictions (opening shops)
- **18.05.2020** – III stage of the abolition of restrictions (opening of restaurants and bars, increasing the use of public transport)
Problems

- Dynamic character of pandemic
- Changes in road infrastructure to improve road safety require several years
- Traffic behavior can be controlled and improved faster
- Changes depend on public acceptance and policy
- In a period of dynamic change, the policy is crucial (e.g. speed management, police enforcement, social campaigns, changes in traffic management without infrastructure changes)
- Increase of speed
- The increase in the share of vulnerable road users
- The decrease in the use and share of public transport
Changes of road users behaviour (i)

- reduction in traffic volumes have been reported across Europe up to 75% (Spain) and 85% (GB) (ETSC) → Lower exposure to the risk

Results from the graphs:

**Cracow (urban roads) - workdays**
- March: -41%
- April: -32%
- May: -22%

**Cracow (urban roads) – weekend days**
- March: -58%
- April: -56%
- May: -38%

**PL (rural roads)**

01/03/2020 – 31/05/2020
- March: -37%
- April: -45%
- May: -17%
- HV: -20%
- Share of HV: +6%


Changes of road users behaviour (ii)

- Traffic volume decreasing → speeding increasing affecting severity of crashes
- The number of overspeeding increased by 32.9% in the spot speed monitoring system and 46.5% in section speed monitoring
- Increase in the share of higher exceedances by 29% (over 50 km/h), 855 per month.

Changes of road users behaviour (iii)
Changes of road users behaviour (iv)
Changes of road users behaviour (v) - Cracow

Lockdown

- The decrease in the number of public transport passengers
- Bicycle traffic decreases proportionally the least
- Pedestrian traffic was very low

After Lockdown

- Increase in share of vulnerable road users
- Number of passengers greater than acceptable
- Increase of passenger cars traffic in the city center
- Many narrow sidewalks to keep social distance
Changes in road safety (number and severity of crashes) (i)

- Average 36% drop in road fatalities in April 2020 (EU-25, ETSC)
- Average 39% drop in the number of crashes and average 25% drop in road fatalities in March-May 2020 (Poland), In the same time traffic was lower by 33%
- The average increase in the severity of accidents was 21%
- The lowest number of accidents and casualties was observed in the end of Lockdown
Changes in road safety (number and severity of crashes) (ii)

Fatalities March-May 2019=6.5/day
Fatalities March-May 2020=4.8/day
-25%

End of Lockdown

-24%
Changes in road safety (number and severity of crashes) (ii)

Severity of Crashes {Fat./100 crashes]

Cumulative ratio 2020/2019

Average ratio:
Crash=0.9, Fatal=0.84, Inj.=0.87
Measures to mitigate the occurrence of COVID-19

- New speed limits applying to all roads (02/04/2020 initiative of experts to reduce speed limits by 10 km/h and 20 km/h for motorway),
- Speeding enforcement
- Traffic management measures for vulnerable road users to provide more space on the road and eventually create their dedicated lanes
Measures to mitigate the occurrence of COVID-19 – Cracow (i)

- supplementing bicycle routes with temporary or permanent sections to provide access to the city center,
- bicycle paths and bicycle lanes on the road to expand the actual bike network
- More space for pedestrian in the shared spaces or in the dedicated path
Measures to mitigate the occurrence of COVID-19 – Cracow (ii)

- The widening of bicycle paths is necessary to provide safety, the current sidewalks shared with bicycle traffic are too narrow.
What is needed? (i)

- Policy, road authorities activities have an expert character,
- Exchange of observations between countries to adapt activities more quickly based on other experiences,
- Providing access to reliable data, which is limited and time-consuming in the case of crash and traffic data, despite many ITS,
- Reliable assessment of COVID's impact on road safety in order to develop policy programs and measures is necessary. It is difficult because the pandemic period was relatively short and consisted of several stages,
What is needed? (ii)

- The development of road safety assessment methods based on short-term periods (various COVID-19 phases) are necessary, the proper assessment will allow quick response and adaptation of mitigation measures to the changing situation.
- Development of methods related to surrogate safety measures, big data application to faster response and apply a proactive approach to road safety.
- Road safety assessment related to the change in behavior of road users (change of mode transport) requires consideration of the non-linear of risk exposure.
- The increased role of random factors in accident prediction models.
- Stronger influence of the human factor (for example additional stress due to pandemic).
Thank you for your attention!

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COVID-19 and roads in Chile

Jaime Campos Canessa
Head of the Road Safety Department – Road Directorate

#PIARCCCOVID19

July, 15th 2020
Jaime Campos Canessa

- Head of Road Safety Department (Ministry of Public Works)
- Civil Engineer (Universidad de Chile)
- International Master in Traffic, Transport and Road Safety (EADIC)
- Road Safety Officer (UNOPS)
- Road Safety Auditor (International Road Federation)
- Road Safety Auditor (IVIA and Mexican Transport Institute)
- Corresponding member of PIARC since 2016
- 12 years of professional experience
Presentation Index

- Chile’s roads data
- Context of road safety in Chile
- Evolution during COVID-19
- Current roads operation
- How Road Directorate works
- Conclusions
Data on roads in Chile

- **85,709** km under the responsibility of the Ministry of Public Works
- **17,372** km of paved road network (20 %)
- **3,309** km roads under concession (4 %)
- **15,382** km basic solutions (18 %)
- **49,646** km unpaved (58 %)
Road Safety Context in Chile

- Between 9 and 10 deaths per 100,000 inhabitants
  Motorized Users (Light 42%, Heavy 6%)
  Vulnerable Users (Pedestrians 36%, Motorcyclists 9%, Cyclists 6%, Other 1%)

- Number of Traffic Accidents
  84% Urban
  16% Rural

- Deaths in Traffic Accidents
  38% Urban
  62% Rural

- Collisions, Run-off-road, Rollovers, Run over crashes
## Evolution during COVID-19

### 5 DE JULIO

**Personas contagiadas, activas y recuperadas**

<table>
<thead>
<tr>
<th>Casos activos</th>
<th>Casos recuperados</th>
</tr>
</thead>
<tbody>
<tr>
<td>28,194</td>
<td>261,032</td>
</tr>
</tbody>
</table>

**Total de casos**

- 2,852 Con síntomas
- 438 Sin síntomas
- 395 No informados

**Casos diarios**

- 3,685

**Personas fallecidas**

- Nuevos fallecidos: 116
- Total personas fallecidas: 6,308

*Source: Secretaría de Salud, Autoridad de Salud.*
Evolution during COVID-19 (urban areas)

Reduced Traffic  –  Increased Speed

**FLUJO VEHICULAR**

- **48%**
  - MARZO 2020
  - SEGUNDA QUINCEÑA

- **65%**
  - ABRIL 2020
  - PRIMERA QUINCEÑA

**VELOCIDADES PROMEDIO**

- **PERÍODO NORMAL**
  - VALPARAÍSO: 24.1 km/h
  - RM: 21.2 km/h
  - O’HIGGINS: 14.4 km/h
  - CONCEPCIÓN: 26.7 km/h

- **MARZO - ABRIL 2020**
  - 45.5 km/h
  - 35.6 km/h
  - 27.3 km/h
  - 37.6 km/h

(*) Fuente: Comparación flujos vehiculares entre 7 y 10 de la mañana con mismo periodo del año anterior; Región Metropolitana (UOCT)

Fuente: Unidad Operativa de Control de Tránsito (UOCT)
Rural Accident trends (January – June)

**Fatalities:**
- 2018 (519)
- 2019 (534)
- 2020 (511)

**Year 2020:**
- Collisions (36%), Run-off-road (23%), Run over (23%), Rollovers (16%)
Evolution during COVID-19

- Reduced pollution – smog and noise
- Avoidance of public transport (mandatory use of mask)
- Increase commercial traffic
- Increased use of:
  - Private cars
  - Bicycles
  - Walking
Current Roads Operation
Evolution during COVID-19

You might expect something like this...
Current Roads Operation

- Weak quarantine enforcement of the Carabineros de Chile (National Police):
  - Excessive operating speed
  - Traffic violations
- Excessive use of roads during long holidays
- Poor emergency response to traffic accidents
Current Roads Operation

Traffic jams on long holidays

Gran congestión vehicular para cruzar cordón sanitario de la Región Metropolitana

Atochamiento en salida sur de Santiago marca inicio de cordón sanitario en RM y Gran Concepción por fin de semana largo

Según reportes desde la zona de Piñar, las cenizas fueron acumuladas por cerca de 6 kilómetros, lo que se registró no solo por el tráfico vehicular sino por las condiciones climáticas que se registraban.
Current Roads Operation

- **Sanitary blockades**: stations of the health authority, the armed forces and the police, which ensure that no one enters or leaves an area. The only way to pass through one of them is to obtain a permit for a funeral or medical treatment in another city.

- **Health customs**: stations of the health authority, the armed forces and the police, where temperature controls are carried out, where travelers do not have to be quarantined and where the health passport is checked.

- **Body temperature controls**.

- **To ensure no one enters or leaves an area, without a permit.**
How Road Directorate works
Road Directorate’s adaptation measures

- Teleworking
- Digital signature (mop.febos.cl)
- Digital files (TransferMop)
- Organization of professional tasks (tareas.mop.gov.cl)
- Virtual meetings (Webex, Meet, Zoom)
- Webinars
Saving Lives and Stimulating the Economy…

Intelligent Transportation Systems (CATI)
Facilities for vulnerable users
Teleworking
Conclusions

- Changes in urban and interurban transportation modes (increased use of motorcycles and bicycles)

- Large-scale international (virtual) events allow the sharing of best practices and experiences in road safety (school zones, urban crossings, basic roads, etc.).

- Better enforcement will promote better road safety practices (road casualties’ reduction).

- Increase rest areas and provide exclusive lanes for freight transport drivers.

- Economic reactivation through roads.
Thank you for your attention!

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Questions and Answers

Moderated by Christos Xenophonitos
Rhodes Island DoT (USA)
Chair of PIARC TC 1.1 on Performance of Transport Administrations
Our Speakers today

- Patrick Malléjacq - Secretary General, PIARC
- John Milton, USA - Washington State DoT, Chair of PIARC TC 3.1 on Road safety
- Rob McInerney, iRAP
- Jun Takeuchi, Japan - Technical Advisor seconded to PIARC
- Mariusz Kieć, Poland - Cracow University of Technology
- Jaime Campos Canessa, Chile - Dirección de Vialidad
Conclusion and Next Steps
Disclaimer

Since time is of the essence, it is likely that knowledge and practice that is shared will not have been officially approved by each country’s official authorities.

“The ideas and examples shared here are for illustration only. They do not necessarily represent official policy. Ideas presented will be subject to further evaluation and use in deriving recommendations on policy and practice in due course. While care has been taken in the preparation of this material, no responsibility is accepted for any damage that may be caused.”
Next steps

▪ We publish video recordings and presentations from our webinars

▪ Further PIARC webinars are planned, in English, Spanish and French

▪ Wrap-up webinar in English on 29 July

▪ An in-depth report is scheduled for September

Summary Terms of Reference

- To explore rapid sharing of knowledge and practice between PIARC members in respect of COVID-19 & associated socio-economic crisis
- To propose and implement short-term actions to support PIARC members and transport professionals in mitigation and response
- To track the course of COVID-19 over time and advise on further actions to be taken by PIARC and others during the crisis and into the recovery
- To advise on medium- and long-term implications of COVID-19 on the roads and transport sector and how these should be tackled and studied

Currently established to 1st December 2020, extendable as required
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PIARC Webinar
COVID-19 and Road Safety
15 July 2020

Thank you very much for your attention!

Visit the PIARC & COVID-19 page
#PIARCCCOVID19