



# COVID-19 Online Discussion Session

Impact of COVID-19 on urban transport

3 June 2020, 13 h (Paris time)

### **Our Speakers today**

- Patrick Malléjacq Secretary General, PIARC
- Dipl Ing Tommaso Bonino, SRM, Bologna, Italy
- Prof. Lei Zhang, USA, Univ. of Maryland, USA
- André Broto, Strategic Theme Coordinator for PIARC Theme 2- Mobility
- Andrea Simone, Chair, PIARC Technical Committee 2.1 on Mobility on urban areas
- Karen Vancluysen, Secretary General, POLIS Network
- Dionisio Gonzalez, Director of Advocacy and Outreach, UITP



### **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)



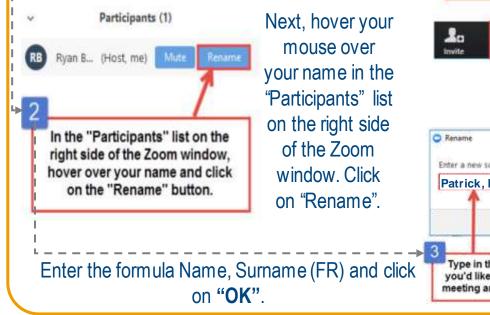
Please mute yourselves and keep the video off during the presentations to avoid background noises and connection overload



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

#### 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.



After launching the Zoom meeting, click on the "Participants" icon at the bottom of the window.



PIARC

### Participants' microphones and cameras must be turned off.

### How to ask a question, raise an issue, or share a practice?

- This is strongly encouraged!
- Use the "Chat" feature of Zoom (bottom right of the main window)
   Send a message to "All participants" (this is one of the "chat" options)
   Note: only questions that are specific to roads or road transport
- That channel is monitored by Christos Xenophontos (Chair of PIARC TC 1.1)
- Christos will raise the questions to relevant panelists



### 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



### This session is being recorded

The resulting video will be shared on www.piarc.org



### **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."



### Key Concept: Focus on the short-term. The world is going through a crisis and every day counts.

- Share knowledge and current practice between PIARC members urgently in order to support responses to the pandemic in near real-time.
- Such knowledge and current practice are not yet confirmed as valid or effective, and what works in some parts of the world may not be relevant elsewhere.
- However, inspiration can be found anywhere, and a good idea now could save lives, improve business resilience and could minimize disruption of services.
- Note: In parallel, PIARC is planning medium- and long-term actions for when the pandemic is in a manageable state and substantially under control.



### **PIARC COVID-19 Response Team**



#### **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 1<sup>st</sup> December 2020, extendable as required

#### **Current Membership**

- Patrick Mallejacq, Secretary General, PIARC (Chair) (FR)
- Christos Xenophontos, Rhode Island DOT, TC 1.1 Chair (USA)
- José Manuel Blanco Segarra, Ministerio de Transportes, Movilidad Y Agenda Urbana, TC 1.1 Spanish Secretary (ES)
- Jonathan Spear, Atkins Acuity, TC 1.1 WG 2 Leader (UAE/UK)
- Valentina Galasso, Deloitte Consulting, TC 2.4 Chair (IT)
- Yukio Adachi, Hanshin Expressway Engineering Co, TC 1.5 Chair (JP)
- Saverio Palchetti, ANAS S.p.A., TF 3.1 Chair (IT)
- Caroline Evans, Arcadis Australia Pacific, TC 1.4 Chair (AU)
- Martin Ruesch, Rapp Trans Ltd., TC 2.3 Chair (CH)
- Andrea Peris, Paraguay National Committee (PY), Comm. Commission

#### For more information, contact info@piarc.org



### **Agenda and Structure**

- Brief introduction to PIARC
- Issues faced by Road Operators and Administrations
- Panelists' Presentations
  - COVID-19 'PHASE >1': Urban Mobility Beyond Public Mass Transport ...
  - An Interactive COVID-19 Impact Analysis Platform for Situational Awareness and Decision Support
  - Impact of the COVID-19 crisis on transport in large metropolitan areas in the short and medium term
  - Create livable urban spaces and COVID-19 Crisis Response: the case of Milan and Bologna in Italy
  - Opportunities and threats for urban mobility in the aftermath of COVID-19
  - Cities For People: Building Back Better Through Sustainable Urban Mobility Strategies
- Q&A
- Conclusion and Next Steps



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# Introduction 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



### **PIARC's Four key missions**

- Be a leading international forum for analysis and discussion of the full spectrum of transport issues related to roads and related transport;
- Identify, develop, and disseminate best practice and give better access to international information;
- Consider within its activities the needs of developing countries and countries in transition fully; and
- Design, produce, and promote efficient tools for decision making on matters related to roads and related transport.
- The Association mobilizes the expertise of its members
- Through operations guided by a 4-year Strategic Plan



# COVID-19 Issues faced by Road Operators and Administrations







# PIARC has tentatively structured the situation around Six Key Issues

- Issue 1: Ensuring employees' health and safety in general
- Issue 2: Maintaining activity and business continuity
- Issue 3: Impact on transportation
- Issue 4: Business Relations
- Issue 5: Customer and stakeholder relations and joint working
- Issue 6: Security

### They were presented in more detail during our previous webinars.



### **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 <u>www.piarc.org</u>
  - Free
  - In English, Spanish and French









Transport demand will be affected?

### COVID-19 'PHASE >1': URBAN MOBILITY BEYOND PUBLIC MASS TRANSPORT ... Tommaso BONINO

Online ...

June 2020



#### by Tommaso BONINO

- Technical Manager at **SRM** Reti e Mobilità Bologna, Italy
- Member of the **UITP** "Organising Authorities Committee".
- Member of the Federmobilità "Comitato tecnico".
- Member of the **PIARC** international committee TC 2.1, "Mobility in urban areas".



World Road Association • Association mondiale de la Route • Asociación Mundial de la Carretera • www.piarc.org

RETI E MOBILITÀ

"The COVID-19 health crisis has led to thousands of Londoners losing their lives with grief, anxiety and anguish touching too many lives. Many businesses and livelihoods have been adversely affected. It has also had a profound impact on **public transport** in London – and will continue to do so long into the future.

#### [...]

In London, we are examining very carefully how, when the time is right, we could gradually restore services to as close to pre-COVID-19 levels as possible, safely, within the constraints imposed by staff sickness, shielding and self-isolation. But I want to be honest – **no one should expect to see a swift return to how it was before the crisis**. The likely requirements for social distancing will simply make this impossible.

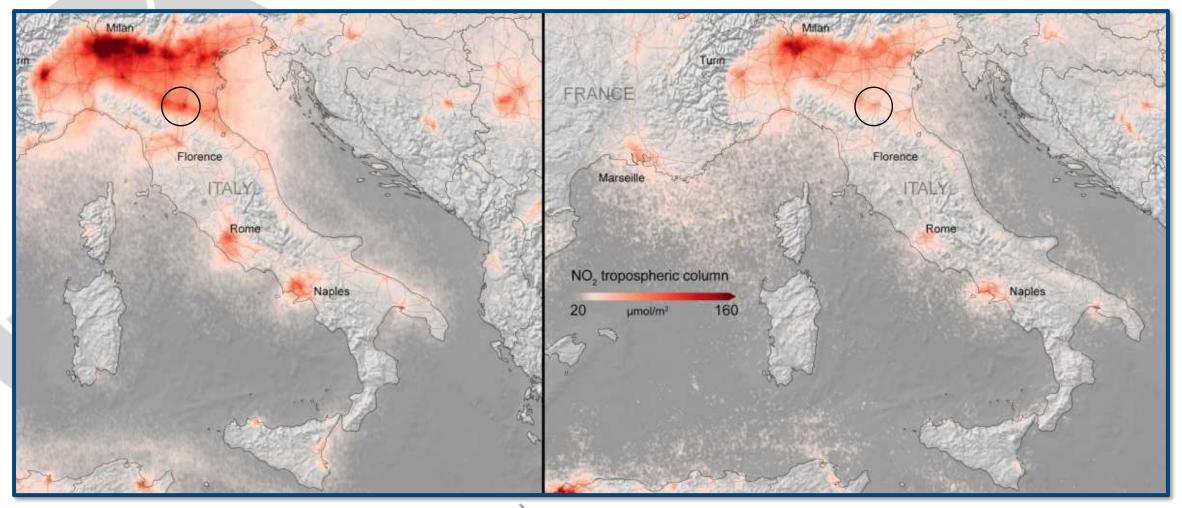
It's an inescapable fact that **no mass transport system** of the scale we have in London **can operate at full capacity while maintaining social distancing** at all times; even with Tube ridership standing at just five per cent at the moment, there are times when passengers struggle to keep their distance.

[...] crucially, the Government must agree a proper funding package for TfL. One of the many consequences of the lockdown is that despite TfL being in a strong financial position before the crisis, it is now facing an **unprecedented financial crisis**. [...] London is the only major city in Western Europe that runs without a Government grant for day-to-day transport operations: we are in constructive talks with ministers about the urgent financial support TfL needs, but time is running out".

(Sadiq KHAN, Mayor of London, UK) OBILITA

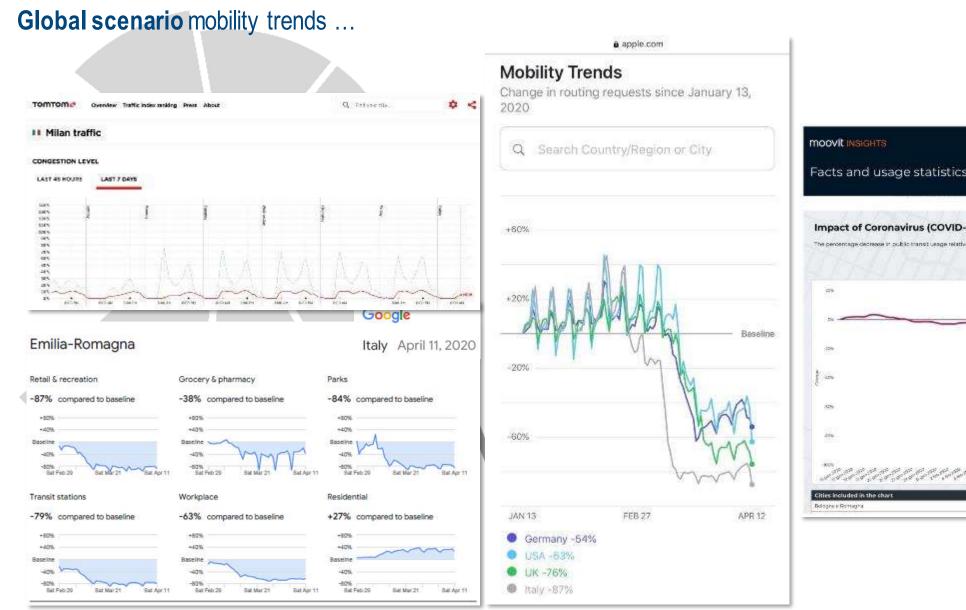
PIARC

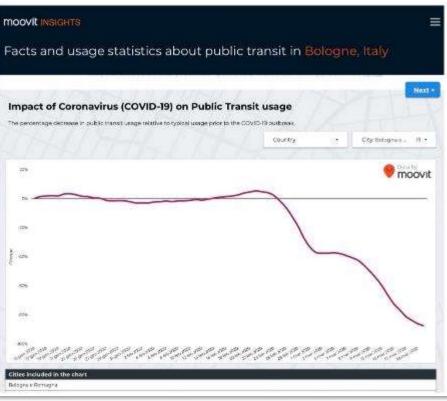
#### No mobility, no issues!



### RETI E MOBILITÀ

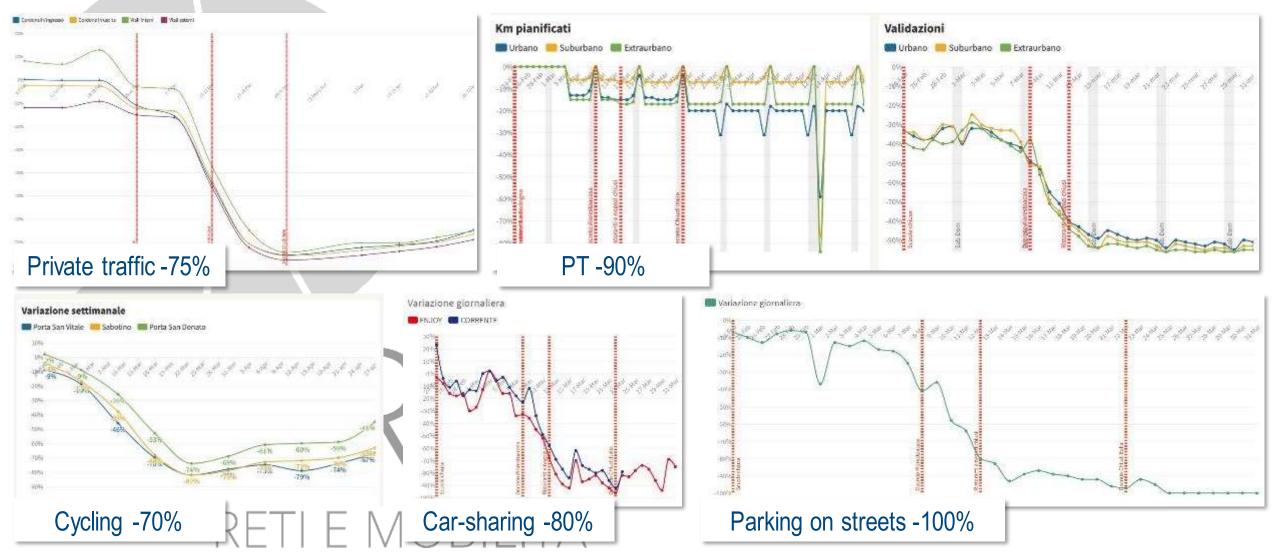








#### Local scenario mobility trends ...



PIARC

#### First: focus on PT. Data.

«Phase 1» working: 53%; smart-working: 34%; means 35% on SUMP data:

PT loosing 88% of users, 80% AM-peak (**20% remains**); 87% PM-peak

Smart working	
No	12,7%
Sì, il 10%	7,1%
S), più del 30% in smartworking	8,9%
Sì, più del 50%	19,6%
Sì, più del 70% in smartworking	
Tutti in smartworking	25,4%
con il presidio del 10% dei lavoratori totali	26,3%

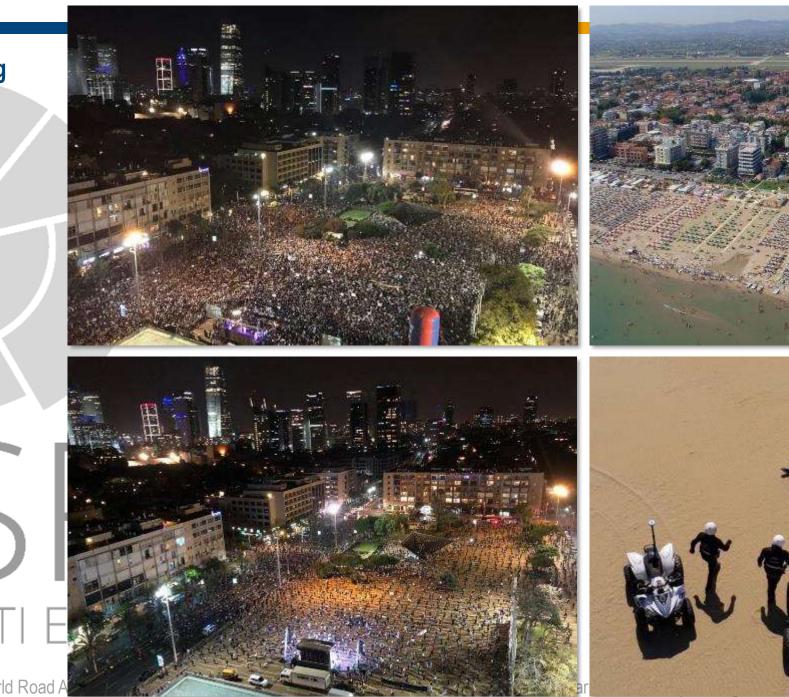
Urban bus Bologna	pre COVID-19			during COVID-19 35%			
Trip purpose	2h peek AM	2h peek PM	24h day TOT	2h peek AM	2h peek PM	24h day TOT	
Going to work	22.831	9.929	57.552	7.991	3.475	20.143	
Shopping, errands	3.941	8.464	51.154	-	-	-	
Going to school/university	10.757	2.071	29.110	-	-	-	
Sports/freetime	487	4.391	17.581	-	-	-	
Visiting relatives/friends	526	1.689	10.828	-	-	-	
Health/selfcare	1.498	1.249	9.309	-	-	-	
Work transfer	996	1.537	6.650	348	538	2.327	
Accompanying adults	-	-	2.156	-	-	-	
Others	745	739	1.849	-	-	-	
Bureaucratic procedures	-	76	1.267	-	-	-	
Accompanying pupils	266	-	1.092	-	-	-	
Totale complessivo	42.047	30.146	188.548	8.339	4.013	22.471	



Mobilità



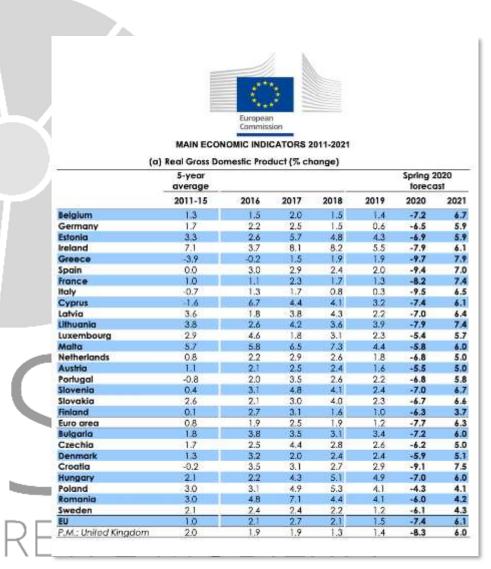
#### Social/sanitary distancing is not over at all ...

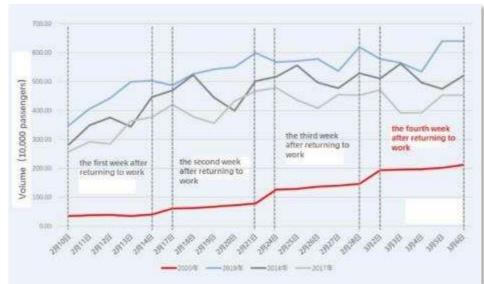


World Road

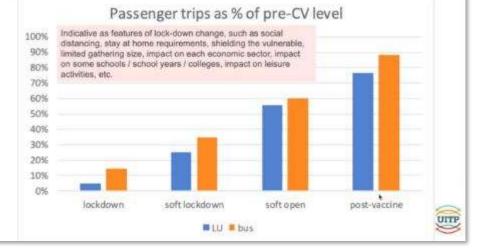
#### Social/sanitary distancing

is not all ...





#### IMPACT ON PASSENGER NUMBERS

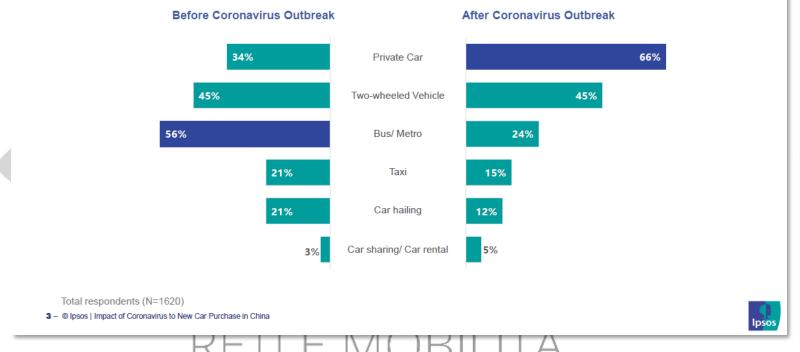


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#### Social/sanitary distancing

is not all ...

### CONSUMERS TEND TO USE MORE PRIVATE CARS AND LESS PUBLIC TRANSPORTATION



#### SNEWS CORONAVIRUS POLITICAL IMPACTS

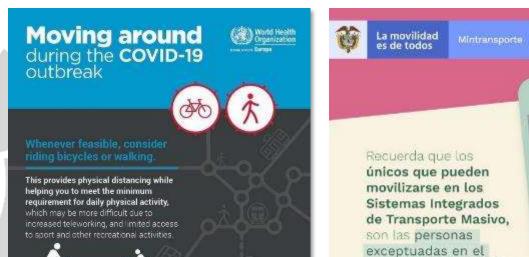
### New York City breaks record: 58 straight days with no pedestrian deaths

This is the longest stretch since NYC began tracking pedestrian deaths in 1983.





# Social/sanitary distancing in public transport ...







#### Mohamed Mezghani @MedMezghani · 24m

In #HongKong, safe distancing is not imposed in public transport but MTR operates with peak hour schedule all day long to avoid crowded trains. Some travellers prefer buses, perceived safer because they run in non-confined environment, though disinfection standards are the same.





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are

#### Mohamed Mezghani @MedMezghani 15h

Could someone explain why is it commonly accepted in most Asian public transport systems to lift the social distancing condition without even making masks compulsory while in Europe, politicians want to have both distancing and masks compulsory. Isn't it the same virus?

decreto 457 de 2020.





Mohamed Mezghani @MedMezghani · 2h Physical distancing in public transport may mean the end of sustainable mobility



Physical distancing in public transport may mean the end of sustainable mobility linkedin.com **Social/sanitary distancing** in public transport ...



#### SONDAGGIO RAPIDO

How do you estimate your max. capacity with safe distance requirements?

Risultati sondaggio:

1. Less than 20%	12%
2. 20-30%	32%
3. 30-40%	18%
4. 40-50%	19%
5. more than 50%	20%

#### SONDAGGIO RAPIDO

1. Do you see the safe distancing (1,5m) as feasible in your PT network?

Risultati sondaggio:

1. Not at all	48%	
2. Only outside vehicles	39%	
3. Yes, everywhere	13%	





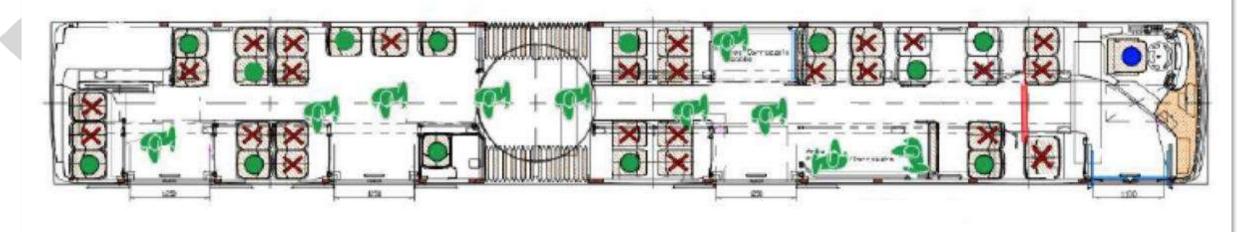
### Essential **interventions** in public transport:

- sanitization;

- ...

- driver protection;
- information and restraint;
- space onboard and seats management;







### Essential **interventions** in public transport:

- ...;- in&out directives;
- controls.

### Seguire le regole è una sana abitudine.



Usa sen la masc Always u: face masi Una sana abitudine.



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### Re-shaping local infrastructures ...



1

"Milan is to introduce one of Europe's most ambitious schemes reallocating street space from cars to cycling and walking, in response to the coronavirus crisis." theguardian.com/world/2020/apr...



Milan announces ambitious scheme to reduce car use after Io... Coronavirus-hit Lombardy city will turn 35km of streets over to cyclists and pedestrians theguardian.com

26.1K 1:38 PM - Apr 21, 2020











Interruzione della strada alle auto



#### Re-shaping local rules (1) ...



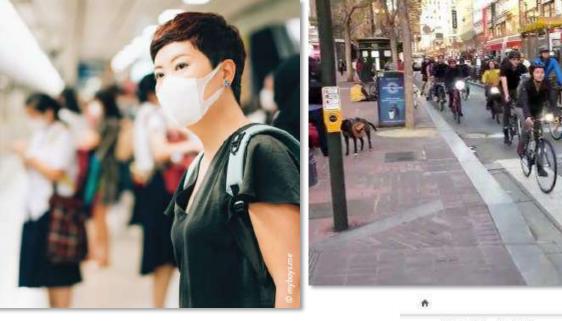
Rosa Alarcon / 🤎 @rosaalarcon

Barcelona tiene que prepararse para la fase del desconfinamiento, la movilidad será uno de los principales retos. (Fil

#### Traduci il Tweet



8:34 PM - 25/04/20 - Twitter for iPhone







Bußgeidkatalog April 2020

₩ f 2

-

28.04.2020, 13:15 Uhr

#### Fahrverbot ab 21 km/h zu schnell

Rasen, falsch parken, eng überholen: Autofahrer, die das Gesetz missachten, müssen mit härteren Bußen rechnen. Schneller verhängte Fahrverbote inklusive.

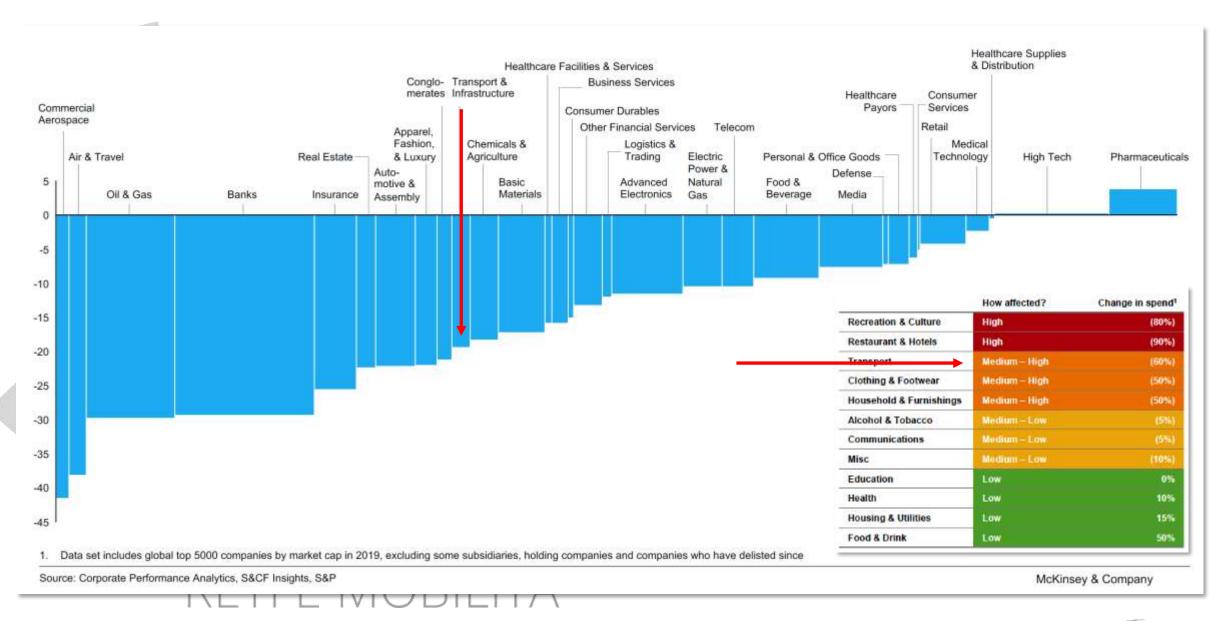
DER TAGESSPIEGEL



Basseren Schutz für Radfahrer verspricht die ernouerte StVD. oorte Autoweete eteupowree.

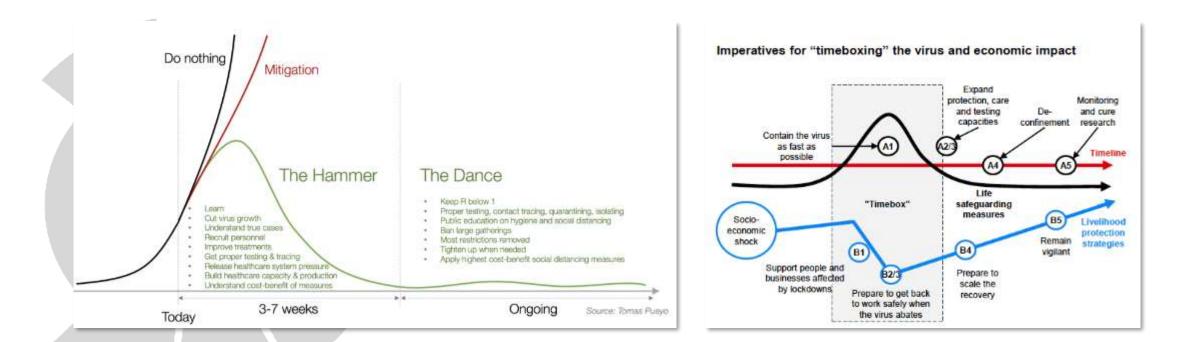


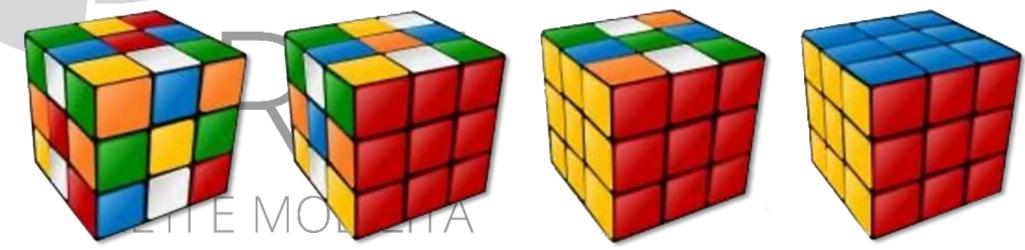






PIAR









# Thank you for your attention!



#### **Tommaso BONINO**

SRM – Reti e Mobilità, Technical Manager

tommaso.bonino@srmbologna.it



PIARC Webinar June 3, 2020





# data.covid.umd.edu

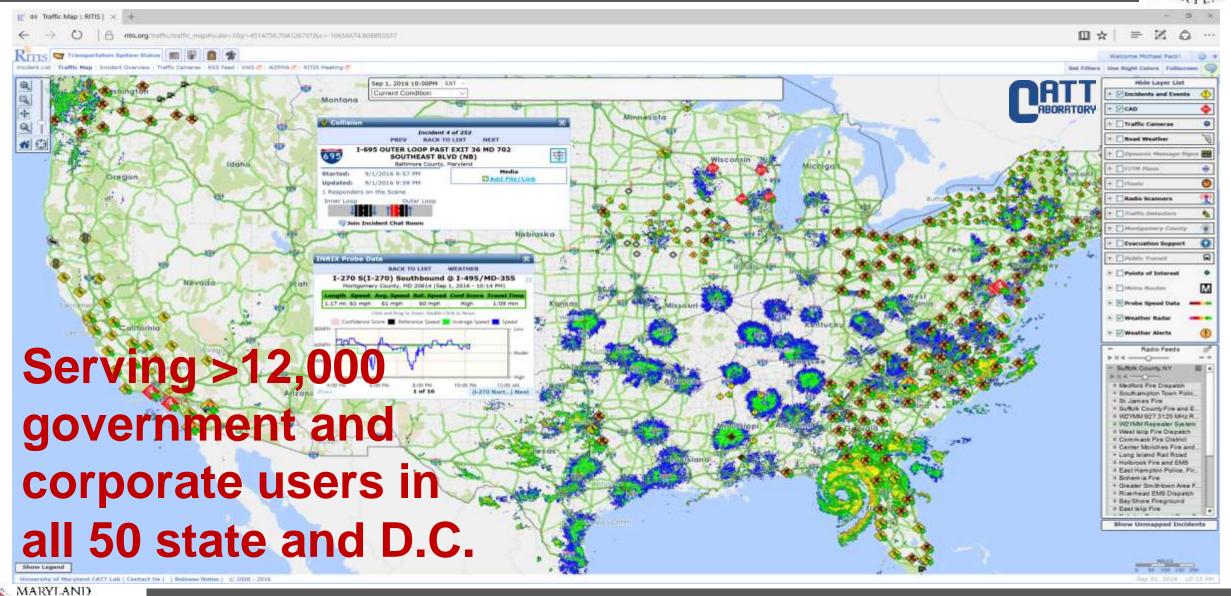
## An Interactive COVID-19 Impact Analysis Platform for Situational Awareness and Decision Support

#### Lei Zhang

Herbert Rabin Distinguished Professor of Civil Engineering Director, Maryland Transportation Institute University of Maryland Email: <u>lei@umd.edu</u>; Institute website: <u>mti.umd.edu</u>



#### Leader in Transportation and Mobility Data

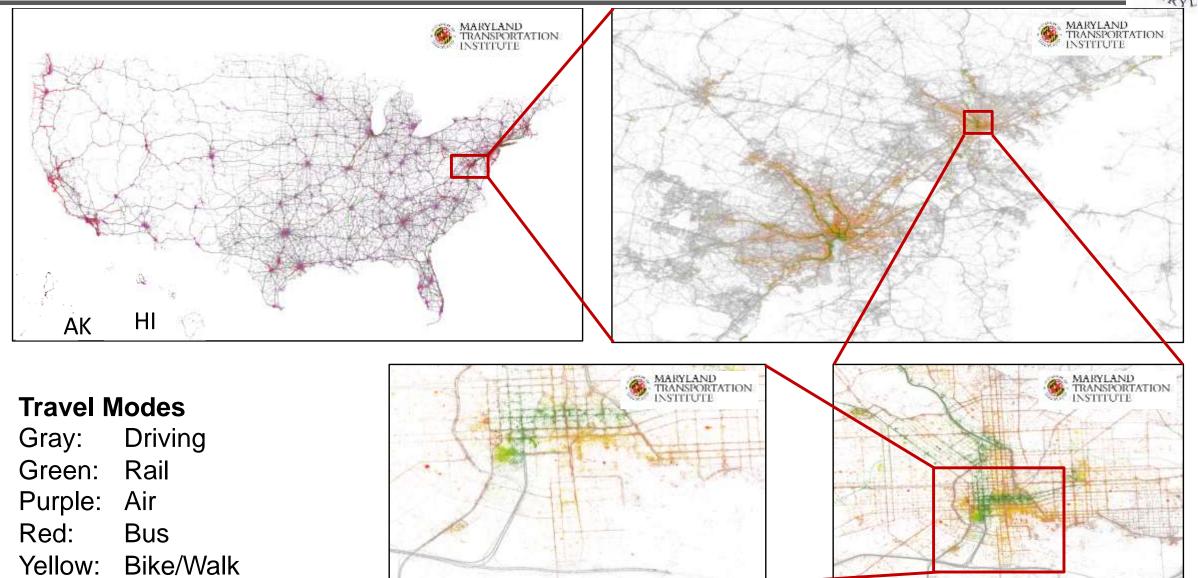


**FRANSPORTATION** 

INSTITUTE

## Anonymized Data from >50% of Mobile Devices

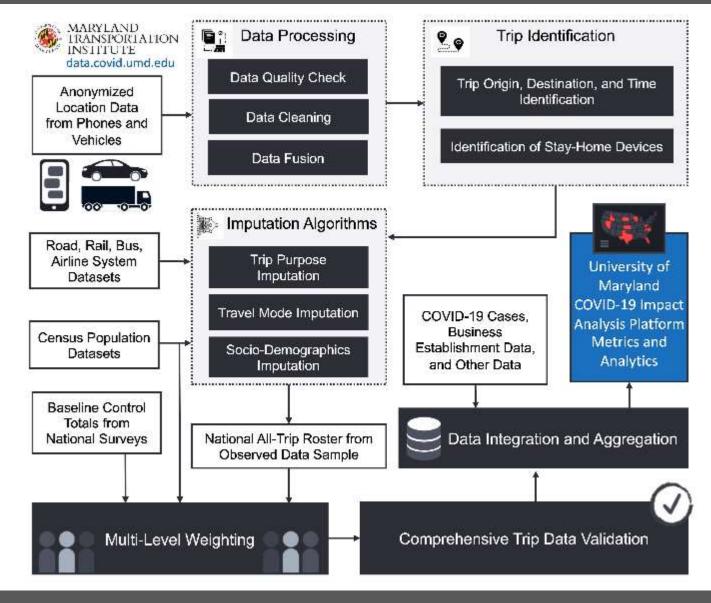




## Methodology



Methodology for Mobile Device Data Processing, Imputation, and Weighting



### **Public COVID-19 Platform and Media Coverage**



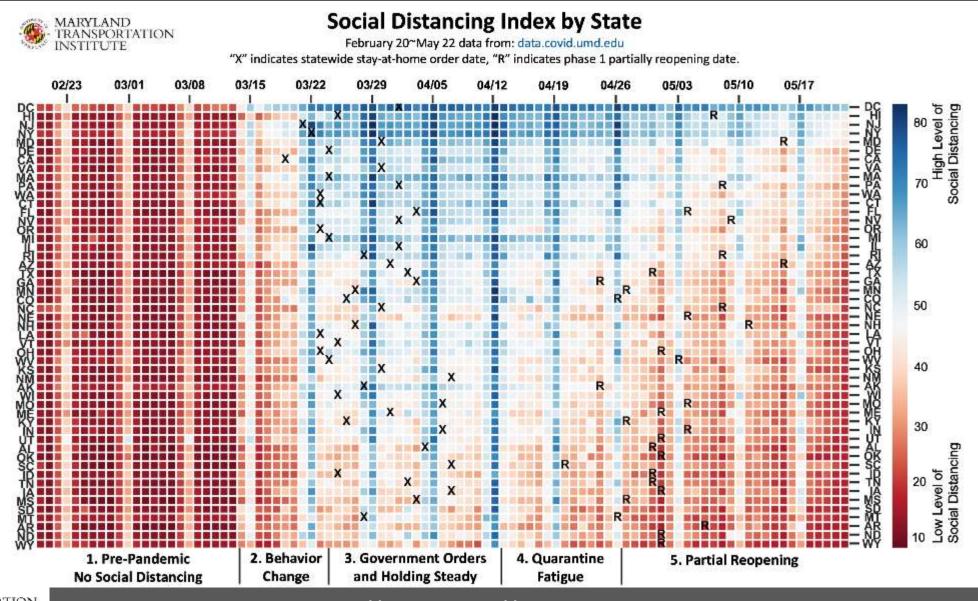


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### **Social Distancing Index based on Mobility Metrics**

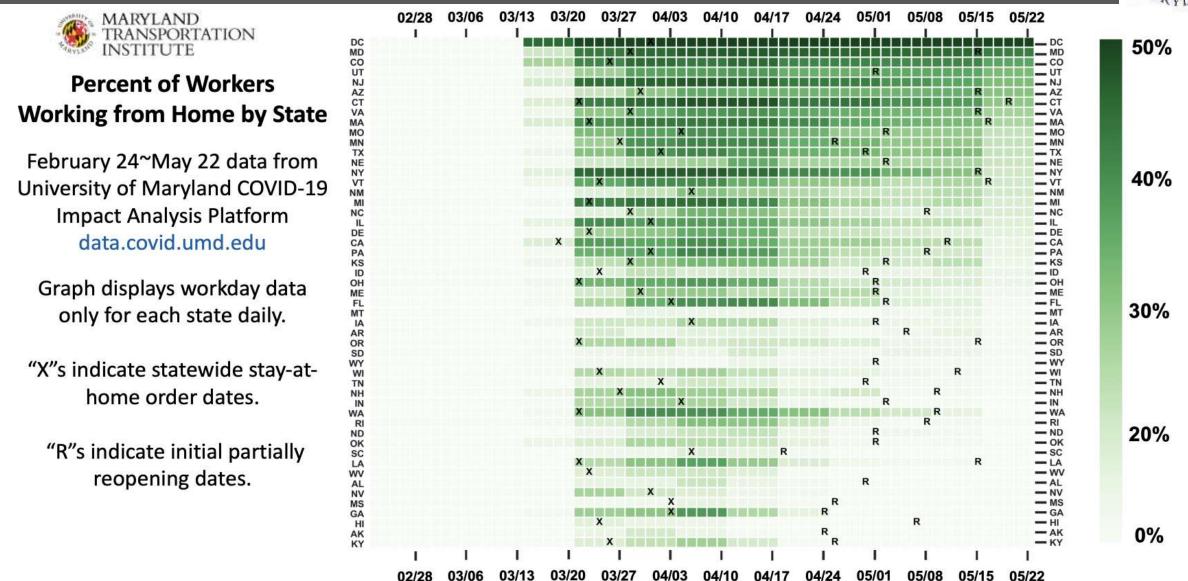






# 38 Metrics on Mobility, Health, Economy, and More





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## Society and Economy Reopening Assessment (SERA)

State	% hospital bed utilization	% ICU utilization	Testing capacity	#days: decreasing COVID cases	#days: decreasing ILI cases	# contact tracing wor ker s/1000 people
AL	47.1	8.61	7.8	0	84	0.025
AK	38	3.63	1.8	0	14	NA
AZ	51.4	8.34	10.6	0	35	NA
AR	43.5	7.11	6.7	0	35	0.066
CA	54	11.42	7.7	0	35	NA
со	46.6	22.08	21.1	0	42	NA
СТ	60.8	58.8	28.7	0	42	0.006
DE	67.5	36.74	21.8	3	35	NA
DC	66.1	22.6	22	0	35	0.093
FL	58.6	10.96	8.6	0	49	0.023
GA	54.6	17.18	16.2	0	35	NA
HI	56.7	5.48	2	1	49	0.021
ID	37.1	8.86	6.9	1	7	NA
IL	46	29.58	19.7	0	35	NA
IN	47	17.27	18.7	0	35	NA
IA	30	18.93	17.3	0	0	0.011
KS	38.2	6.67	13.5	0	0	0.003
KY	46.6	5.11	8.3	1	84	NA
LA	49.2	26.57	17.1	0	84	0.015
ME	52.8	7.89	5.4	0	35	0.011
MD	67.5	35.32	19.4	0	35	0.041
MA	66.2	63.63	22.2	0	35	0.05
MI	46	31.74	22.2	1	14	0.013
MN	38.1	7.14	7.7	0	0	0.018
MS	43.4	13.28	10.1	0	0	0.06
мо	49.9	7.1	9.5	0	56	0.002
MT	46.6	2.39	3.2	1	49	0.113
NE	29.3	10.74	15.6	0	112	0.168
NV	55.2	10.09	12	0	21	0.026
NH	58	15.11	9.7	0	70	0.052
NJ	65.9	136.12	47.2	1	35	0.034
NM	42.3	14.32	5	1	42	0.038
NY	63.5	141.57	33.2	0	35	0.029
NC	53.8	8.09	8.2	1	35	NA
ND	36.5	4.01	3.7	4	35	0.329
OH	50.4	9.89	13.3	0	0	0.059
ок	40.6	5.02	5.9	0	0	0.038
OR	48.8	5.97	4.4	0	35	0.024
PA	54.5	23.4	20.7	0	35	0.012
RI	52.8	47.2	13.4	0	84	0.095
SC	53.9	9.22	10.5	0	14	0.039
SD	28	11.56	14.5	0	77	0.102
TN	48.1	9.87	6.4	0	35	0.004
тх	47.7	6.6	8.3	1	35	0.04
UT	41	13.27	4.3	0	35	0.013
VT	61.3	11.26	5.4	0	84	0.077
VA	54.9	16.47	16	0	42	NA
WA	55.8	16.74	7.4	0	49	0.093
wv	46.1	3.21	2.4	1	56	NA
WI	41.3	9.08	9.2	0	42	0.045
WY	37	3.85	5.8	5	0	0.017
Passed Narrowly passed Failed						

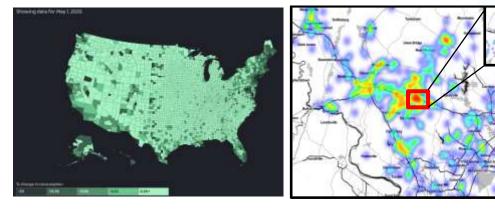


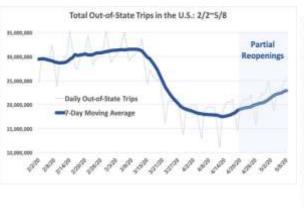
- Recognizes reopening is a political • decision that needs decision support;
- Uses 16 metrics to comprehensively ulletevaluate reopening readiness;
- Key health factors are checked • against established gating criteria;
- Compares a state or county with the • rest of the nation to see if it is more or less ready for reopening;
- Plots daily trend to see if a state or ۲ county is doing better or worse over time for each reopening factor.
- Assessment with all data in one lacksquareplace and done within a minute.

#### **Data and Platform Use Case Summary**



- Reopening decision support
- Traffic and travel behavior monitoring
- Miles traveled and revenue analysis
- POI visit trends
- Input for epidemic modeling
- Hotspot monitoring for all POIs
- Outbreak prediction and early waning
- Real-time community contact tracing
- Local containment strategies
- External trips and imported cases
- Economic and job impact tracking
- Monitor economic recovery progress











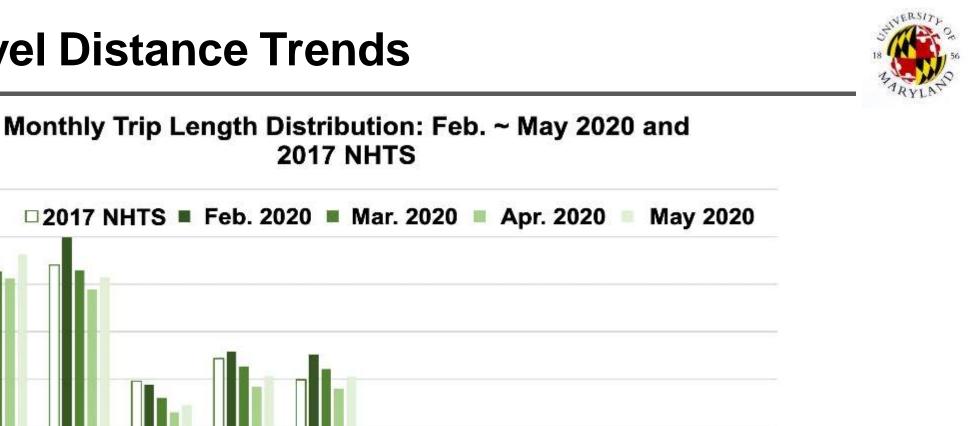
Department of Transportation

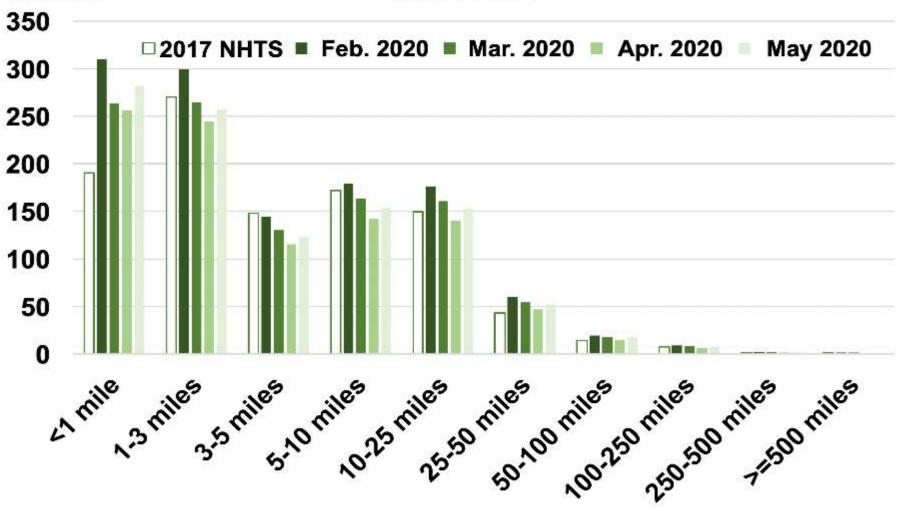
Travel monitoring: daily #trips by distance bands by state and county.

- Center for Disease Control Integrate mobility and social distancing data into epidemic models for prediction of future cases and death.
- Department of Veterans Affairs
   Use SERA tool and its metrics to help determine when to reopen certain VA facilities in specific states and counties.
- Department of Treasury and Federal Reserve Bank Use mobility and economic metrics on platform for economic and financial impact analysis.



Millions



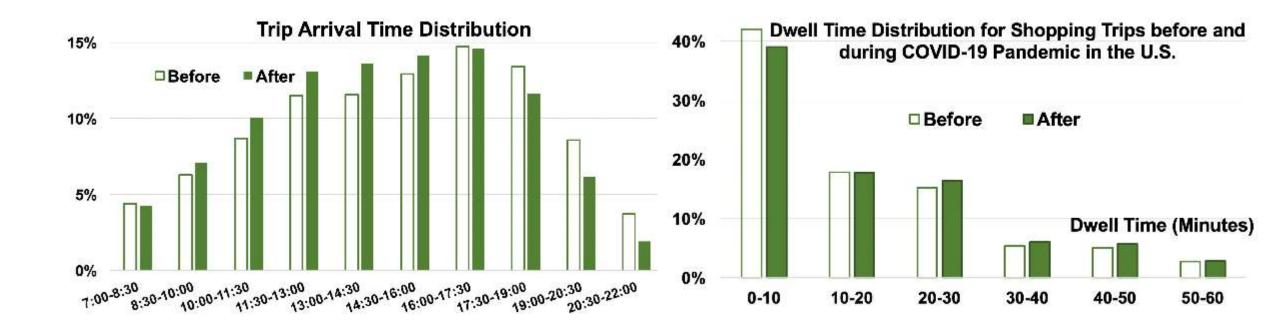




#### **Activity Duration and Time Use Trends**



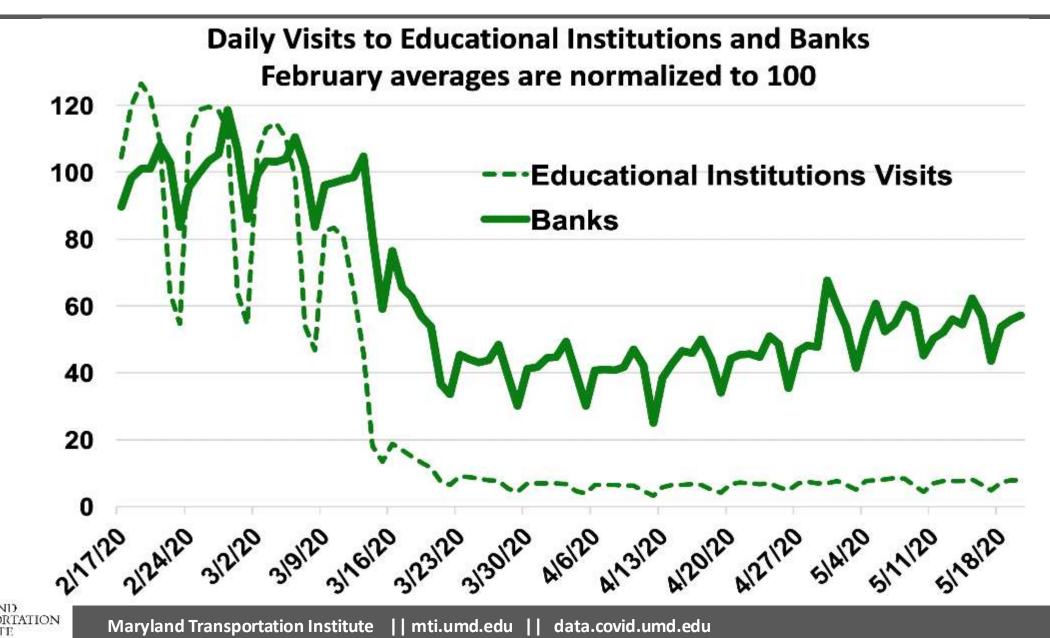
Arrival time and activity duration distributions for shopping trips





#### Point of Visit Trends by POI Category and Location

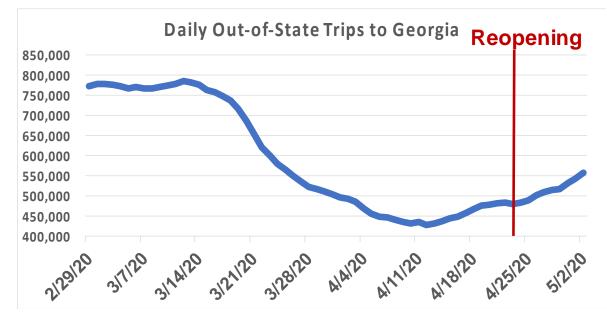






#### Example: Following 4/24 partial reopening in Georgia

% staying home: down by 32%. Distance traveled/person: up by 19%. # non-work trips: up by 24%. Out-of-state trips to GA: up by 13%.



Travel to Georgia by State: Top 10 States				
State	Daily Trips After Reopening	% change		
AL	140,910	14%		
SC	135,707	12%		
TN	118,606	11%		
FL	97,483	17%		
NC	27,748	11%		
КҮ	5,217	10%		
MS	3,962	10%		
VA	2,768	11%		
тх	1,599	10%		
IL	1,446	-4%		
All States	546,159	13%		



## **Correlation b/w Imported Cases and COVID Cases**

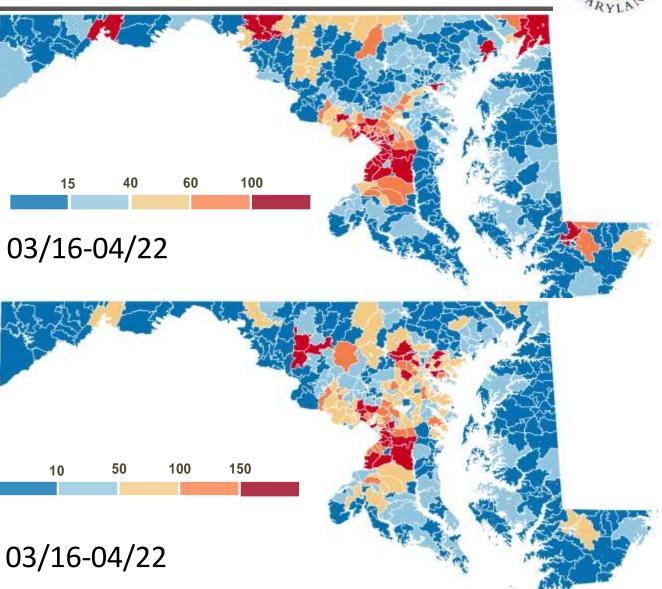


#### Number of Imported Cases by Out-of-State Travel to Maryland

#### **Prince George's County**

County	imported COVID cases
Prince George's County, Maryland	225335
Balamare County, Nary and	16551
Baltmore city, Maryland	12,683
Monigomery County, Maryland	11,702
Anne Ar undel County, Maryland	00.256
Howard County, Maryland	CERS
Harford County, Maryland	4056
Frederick County, Maryland	1055
Cecil County, Maryland	3,285
Carroll County, Maryland	958
Charles County, Maryland	. 2999
washington County, Paryland	2,/24
wicom co County, Maryland	1779
Calvert County, Maryland	5490
St. Mary's County, Maryland	1.253
Queen Anne's County, Maryland	1,199
worcester County, Maryland	5.TT
Caroline County, Maryland	546
Talact County, Naryland	850
Borchester County, Maryland	769
Allegany County, Maryland	629
Somerset County, Maryland	519
Kent County, Maryland	113
Garrett County, Maryland	26

Number of Confirmed COVID-19 Cases in Maryland



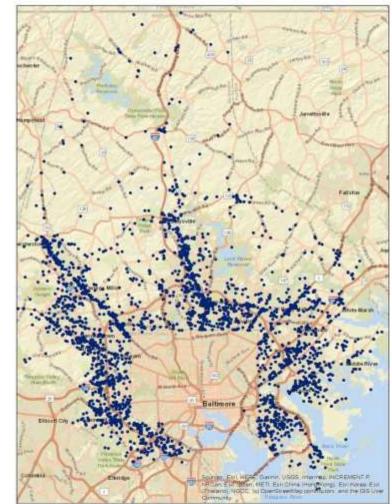


#### **Hotspot Monitoring and Outbreak Warning**

#### Baltimore County, MD

- For hotspot monitoring, the platform uses anonymized data to automatically monitor daily visits to more than 6,000 locations.
- For outbreak risk prediction, the platform uses number of visits, origins of visits, and COVID infection rates at origins together to predict high-risk locations for new outbreaks and suggest preventative measures.

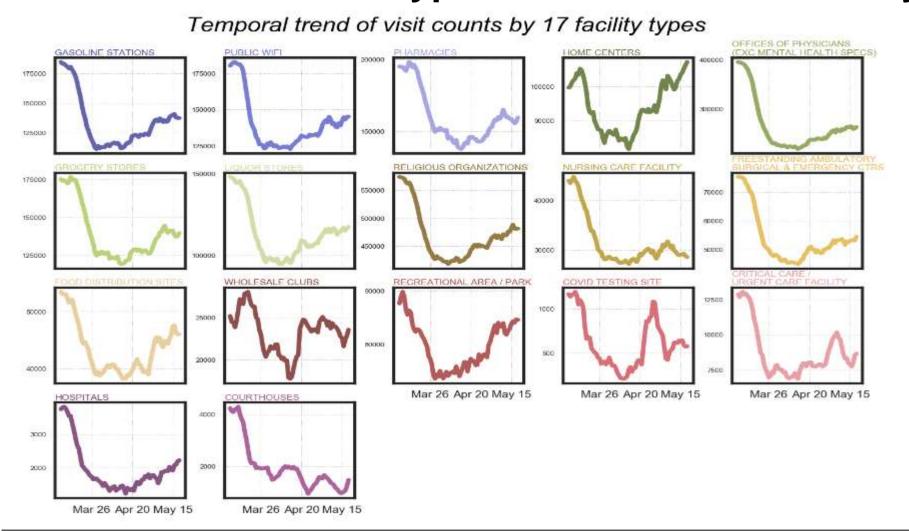






#### **POI Visit Trends for Outbreak Risk Prediction**

Daily visits to selected POI types in the Baltimore County

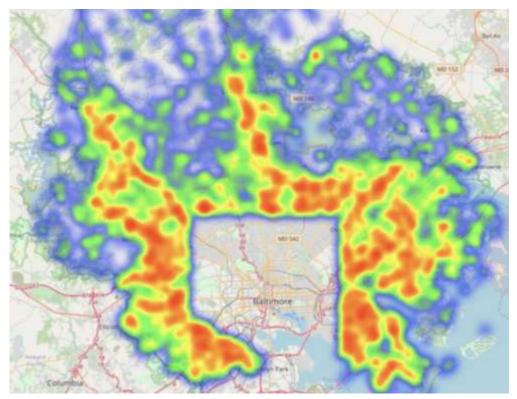




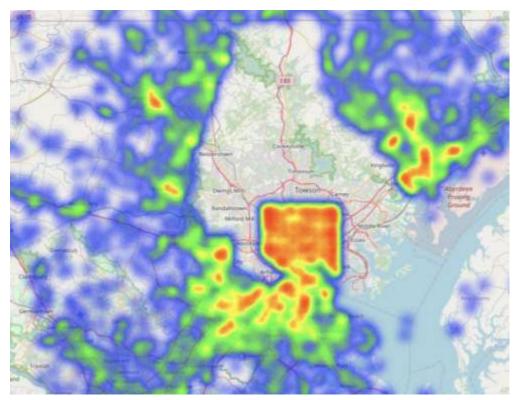
#### **External Trip Analysis for Outbreak Risk Prediction**



Out of County trip end hotspots for Baltimore County



#### **Trip Destinations**

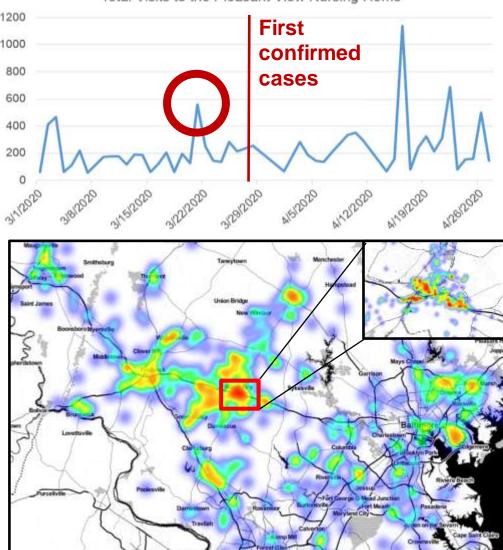


#### **Trip Origins**



## **Contact Tracing and Local Containment**

- Minutes after a new outbreak, we can use privacy-protected mobile device data to conduct aggregate, communitylevel contact tracing and recommends localized quarantine areas. This complements traditional, individuallevel contact tracing that takes much longer to complete.
- For instance, the pleasant view nursing home outbreak appeared to be correlated with non-employee visits 10 days before the outbreak.



Total Visits to the Pleasant View Nursing Home

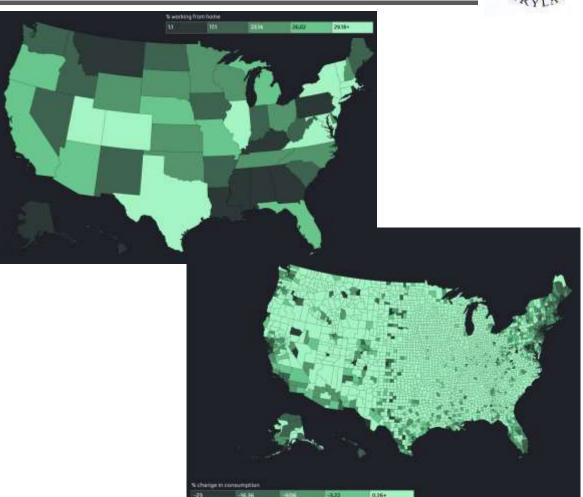




#### **Economic/Job Impact and Policy Decision Support**



- Change in consumption, % working from home, and number of visits to individual business types.
- Monitor economic recovery progress and provide decision support.
- Guide the design and implementation of economic stimulus policies for effectiveness.

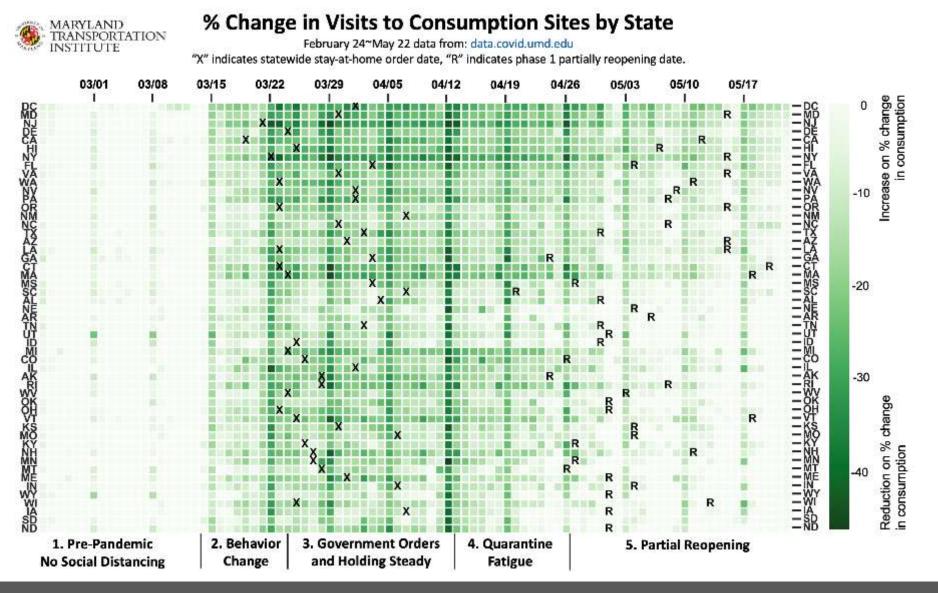


% working from home by state and county-level impact of COVID-10 on retail trade, hotel, food and drink, entertainment, and recreation businesses.



#### **Changes in Visits to Consumption Sites**









- Trips by travel modes (air, rail, bus, driving, walk, bike, and other)
- Origin destination travel patterns
- Daily/weekly updates on economic and job impact for each county by economic sector including job loss/gain by sector
- Integration of mobility data, travel model, and epidemic model for public health policy scenario analysis, reopening scenario analysis, optimization, and decision support







Impact of the COVID-19 crisis on transport in large metropolitan areas in the short and medium term

#### André BROTO

ST2 Coordinator Chair of PIARC France Paris

3 june 2020

## Summary

- Perimeter : why « transport in large metropolitan areas » ?
- Mobility trends in France in the last decades
- From Lock Down to re-opening
- From Lock Down to a new mobility ?
- What about the rôle of « ST 2 Mobility » ?





## Perimeter : why « transport in large metropolitan areas » ?

- Urban areas can not survive without their hinterland : they need goods and workforce coming from the periurban or rural areas
- People living in periurban or rural areas need an efficient access to the services delivered by cities (jobs, education, culture, welfare, ...)

All those people use transport facilities within the urban area / City

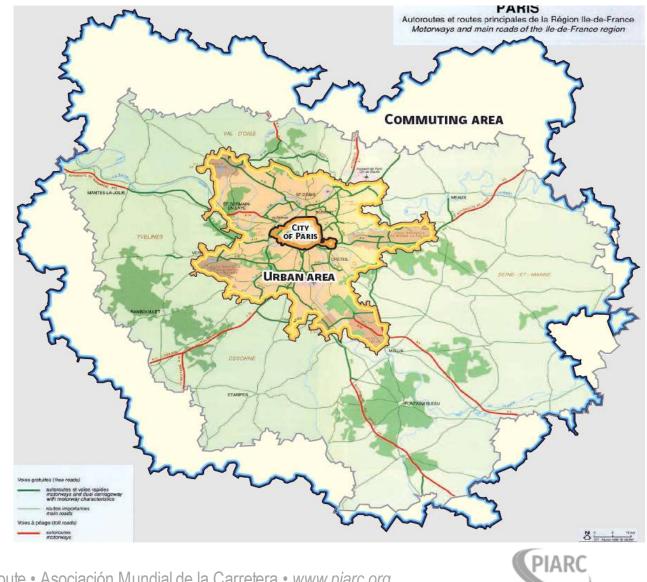




#### An example : Paris and its hinterland

#### Paris

- 86 km<sup>2</sup>
- 2,2 million inhabitants
- « Ile de France » region
  - 12 000 km<sup>2</sup>
  - 12 million inhabitants
- The commuting area of Paris is bigger than the Ile de France region

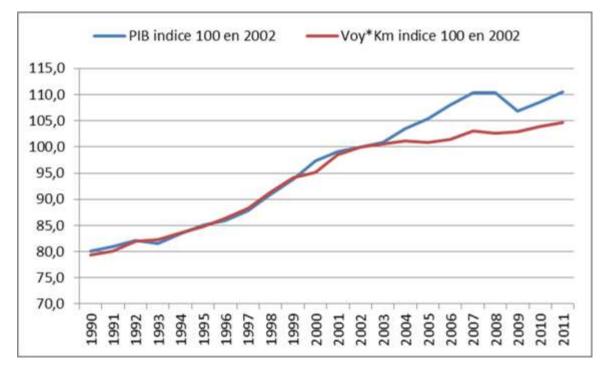


## Mobility trends in France in the last decades





#### Mobility trends in France from 1994 to 2008



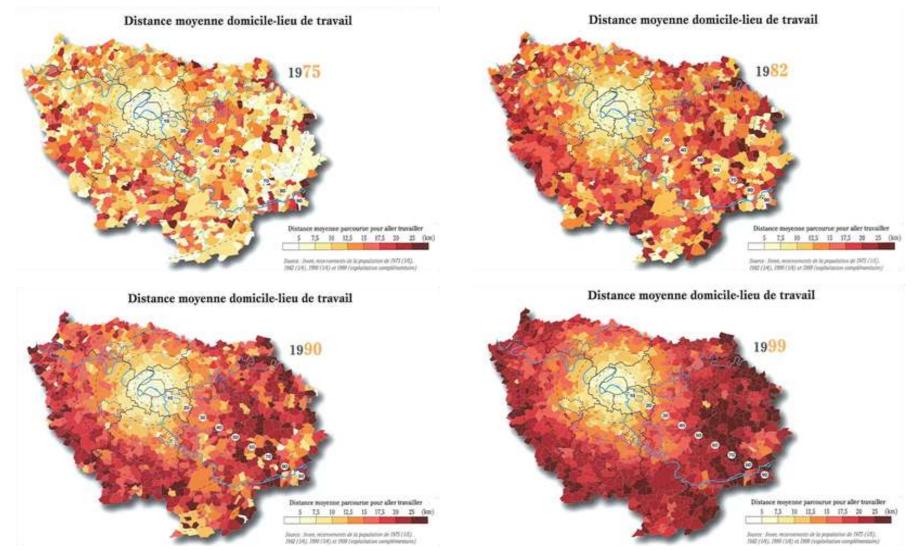
- Trends between national transport inquiries in 1994 and 2008 (all national transport modes)
  - Short daily trips (less than 80 km)
  - Long trips (more than 80 km)

1994	2008	%				
23,1	25,2	9%				
7,3	8,0	10%				
3,16	3,15	0%				
" + 0,7% per year " More far "						
	23,1 7,3 3,16 <b>year</b>	23,1       25,2         7,3       8,0         3,16       3,15				

Mobility trends for long distance trips (voyage)	1994	2008	%			
Distance per person and per year	5232	6020	15%			
average lenght per trip	947	944	0%			
Number of trips per year	5,53	6,38	15%			
Number of nights per trip (duration	5,0	4,2	-16%			
" + 1% per year "						
" More often, Less time "						



# Average length of commuting trips in Île de France (Paris region) from 1975 up to 1999 : "more far"



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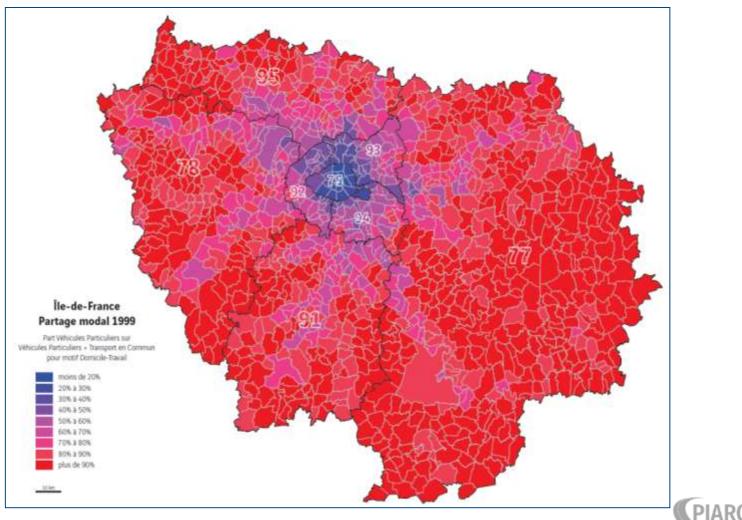
#### **Other trends in transportation in France**

- Modal split :
  - At a national level and despite a policy giving a strong priority in investments in favor of public transport since 2006 at a national level there is
    - No change in the modal split for passengers
    - A worsening of the modal split for freight (more lorrie's and less trains)
- Costs of mobility (daily short trips)
  - Increasing costs of the private car for the user
  - In average decreasing costs of the public transport for the user
  - In average increasing costs of public transport for the cities budgets
- A lot of projects are abandoned due to an increasing lack of public support



# Modal split public transport / private transport among motorized trips : from 80% of public transport in the center to 20% in the suburbs and in the periurban area

 The benefits delivered by public transport are concentrated in cities centers

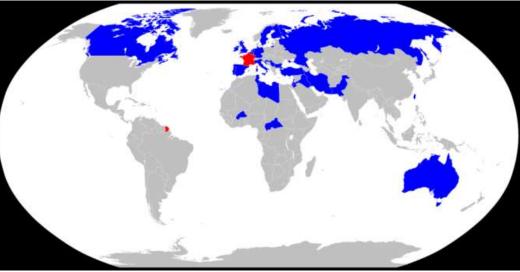


# Trends on costs of mobility : increasing lack of « social equity » and "yellow jackets" (or "yellow vests") protests











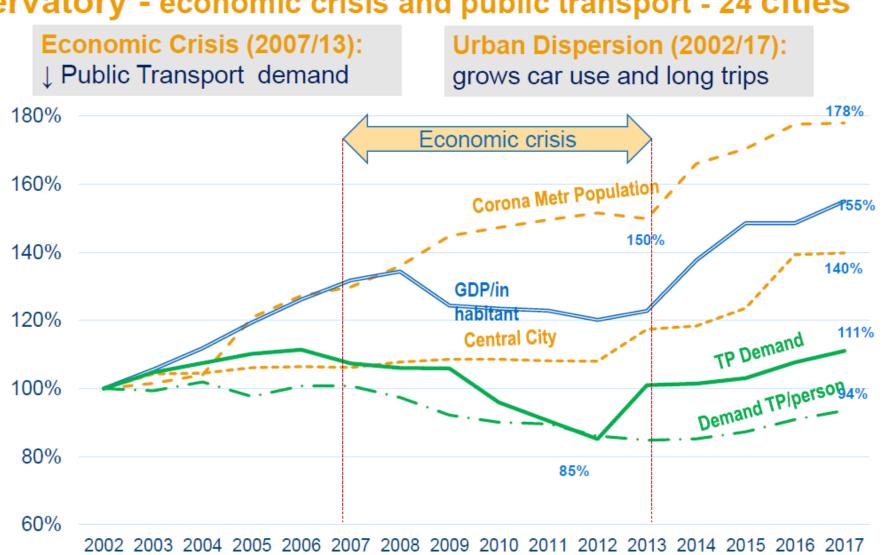
#### Covid-19 and urban transport in Spain (by Andrés Monzon de Caceres 5 may 2020)

#### Mobility Observatory - economic crisis and public transport - 24 cities

We already have the experience of the 2007-13 economic crisis

↓ Public Transport trip loss

- ↑ Urban sprawl
- ↑ Car dependency
- Economic, social and environmental costs



## From Lock Down to re-opening

- Reopening in France started on May 11th 2020
- Principle : Getting the economy back on track without triggering a second outbreak





# **Reopening of public transport in France** (Webinar institut Montaigne by Thierry Mallet CEO TRANSDEV may 2020)

- Some figures under the distancing constraints
  - The capacity of a bus is reduced from 80 passengers to around 20 passengers
  - the offer of transport was in between 80 and 100%
  - Operating costs are bigger due to sanitary constraints
  - The demand was around 20 and 30%
- Revenue losses of public transport for all French cities are expected to reach 4 to 5 billion euro. Main reasons are the following :
  - Less demand (unemployment, remote work, ...
  - Distancing measures and reduction of bus or train capacities
  - Sanitary measures / increasing operating costs

## Lockdown has shown us that we can change our habits

The boundaries between home and work, or between home and business have shifted

- This is an opportunity to modify the traffic demand in the peak hour
- But it can also lead to an increased urban sprawl and to an increase of "long distance trips"
- The understanding that freight is important for cities is better
  - This is an opportunity to optimize logistic investments in relation with big urban areas
- The understanding that there was an increasing lack of social equity is better
  - This is an opportunity to re-equilibrate the offer of public transport, and / or the cost of mobility for the users, between city centers and peripheries
- The willingness of cities to develop active pedestrian and bicycle facilities is better
- The willingness of rural communities to develop carpooling is better

• Ect ...



### **New willingness of cities in favor of bicycle facilities** (CEREMA Sandrine Rouzic)





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## From Lock Down to a new mobility?





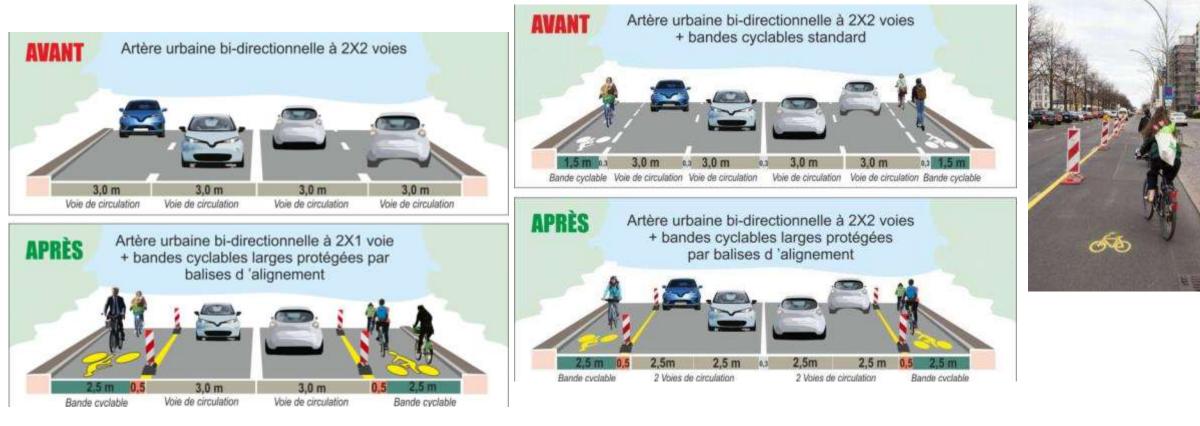
# Covid\_19 is also un opportunity for replacing « old ways of doing things by new ways " (French case to discuss)

- Develop remote working and other benefits of digital transition
- Develop bicycle services, paths, and financial support
- Reallocate public transport services from very short trips (0 to 5km) in City centers to medium distance trips in periurban areas
  - For very short trips replace bus services by bicycle equipment's
- Focus on multimodality (transport more and better with the existing networks)
- Change the policy of public transport fares from a "flat system" (you can use public transport as much as you want for the same fare) to a "you pay as you use" system





# **CEREMA** has published guides to promote cycling and to test temporary facilities.



<u>https://www.cerema.fr/fr/actualites/velo-deconfinement-guide-express-amenagements-cyclables</u>

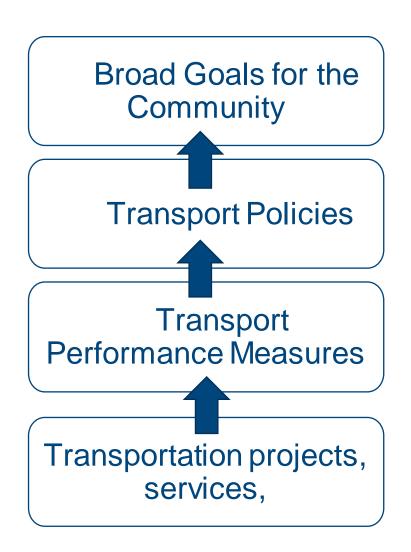


## What about the rôle of « ST 2 Mobility » ?





### Before the Covid\_19 we said : Let's always keep in mind the broad goals for the community



- The roads and road transport fields are constantly evolving in response to large social, economic, and environmental shifts.
  - Climate change and the need to reduce emissions of greenhouse gases
  - extreme weather events
  - urbanization trends
  - Social expectations
- Roads are the dominant national asset
- growing pressure on financing capacities
- Financing and managing risks for creating, renovating, and maintaining road assets are priorities in transportation.



# After the Covid\_19 we should add : Social expectations are more and more important

- We should :
  - Focus not only on vehicles or roads but on people needs and expectations
  - Focus not only on traffic demand but on people mobility (all modes) demand
  - Focus on changes in mobility trends and people behavior
  - Focus on trends of public support to new transportation policies
- Those remarks are specially important for
  - TC 2.1 Mobility in urban, areas, and
  - TC 2.2 Mobility in rural areas



## Thank you for your attention!



### André BROTO

**Chair of PIARC France** 

ST2 Coordinator

Andre.broto@vinci-autoroutes.com

@André\_Broto

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# Create livable urban spaces and COVID-19 Crisis Response:

### the case of Milan and Bologna in Italy

### **Andrea SIMONE**

Chair, PIARC Technical Committee 2.1 on Mobility on urban areas Professor, DICAM Department, Alma Mater Studiorum University of Bologna



Online webinar on the COVID crisis

3 June 2020

#### Phase 1 - From 8<sup>th</sup> in March to 4<sup>th</sup> in May

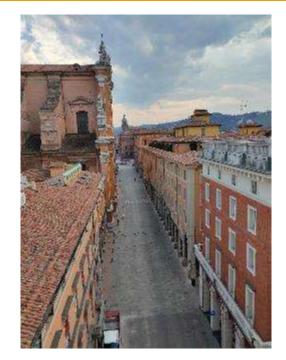
#### Lockdown

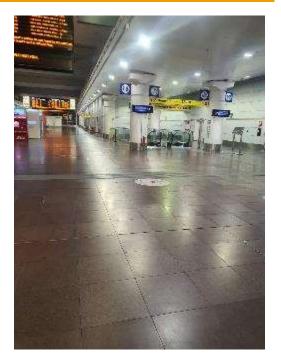
#### A pause has been forced on urban life

Quiet roads, empty skies, deserted high streets and parks, closed cinemas, cafés and museums – a break in the spending and work frenzy so familiar to us all.

The reality of lockdown is making ghost towns of the places we once knew.

Everything we know about our urban world has come to a shuddering halt.











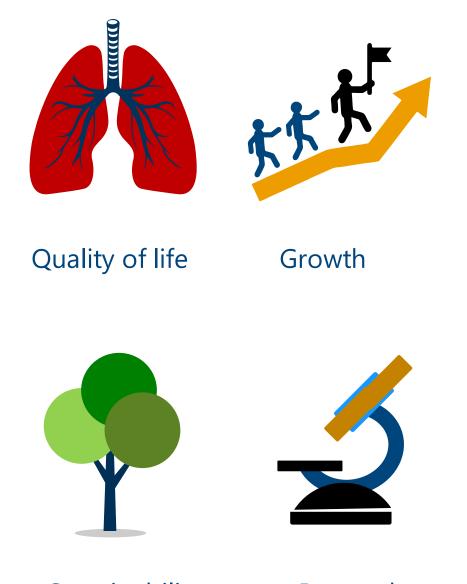
#### Phase 2 – after 4<sup>th</sup> in May

#### Post - Lockdown

**Urban life** will begin to hum again to the familiar rhythms of work, leisure and shopping.

After coronavirus, a key question emerges: what in essence, is a city for? Is it to pursue growth, attract inward investment and compete against global rivals? Or is it to maximise quality of life for all, build local resilience and sustainability?

These are not always mutually exclusive, but it's a question of regaining balance. Beyond politics and ideology, most people simply want to be safe and healthy, especially faced by future threats, be they climate, weather or virus related.



Sustainability

Research



#### Phase 1 - From 8<sup>th</sup> in March to 4<sup>th</sup> in May

#### Lockdown

Now, the lockdown has thrown us all into a **real-time laboratory** full of living examples of what a more sustainable future might look like.

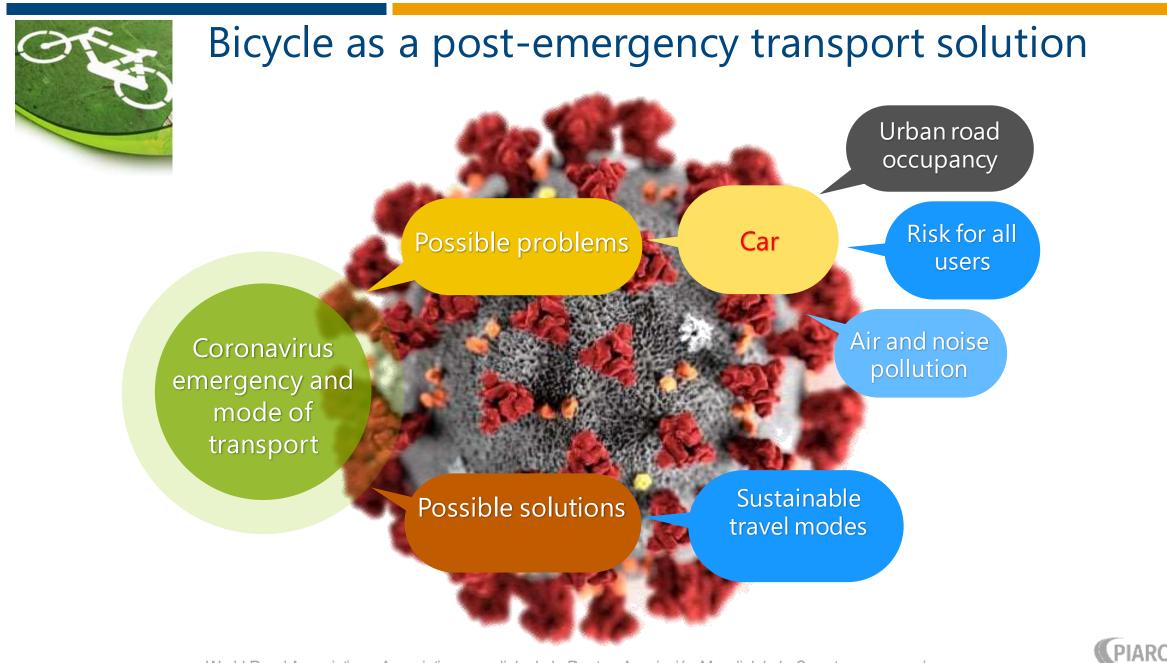
Streets with fewer cars have shown people what more liveable, walkable neighbourhoods would look like.



Accessible, affordable, zero-carbon, mobility services and public transport is key to supporting a less car dependent urban future.







Decree Law: «relaunch Italy» 19 May 2020





Mobility bonus equal to 60% of the expenses to buy bikes, e-bikes and electric scooter (max 500 euros)

Changes in the Road Code: New definitions: advanced house stop lanes and cycle lane



Changes regarding the role of the Mobility Manager (schools, company, association, etc.)



Protective measures for railway and public transport commuters









#### Phase 2 – after 4<sup>th</sup> in May Decree Law: «relaunch Italy» 19 May 2020

#### Italy: new sustainable mobility plan – bike lanes

City	Km Bike lanes Phase 1	Km Bike lanes Phase 2
Milan	220	406
Bologna	248	969
Florence	66	108
Naples	21	184
Palermo	48	155
Bari	45	202







#### Phase 2 – after 4<sup>th</sup> in May

#### Post - Lockdown

Italy: Sustainable Mobility - New Bike lanes

Bologna 493 km (60% at the end of 2020)

Milan: 35 km (22 km under construction)

Rome: 24,5 km (under construction)

In Italy 80% of trips take place in the city within a 5 km radius but few use the bike:

- Bozen 30%
- Bologna 9%
- Milan 7%
- Rome 1%







#### "Strade Aperte" project – "Open Roads" project

In Italy, on **May 4, Phase 2 began**, earlier than the rest of the Western countries: for this reason, the country represents the "proving ground" for the development of new urban strategies.

In Milan, in order to guarantee physical distancing, the Milan 2020 adaptation strategy was first implemented, from which the "Strade Aperte" project was then derived. This brings together a set of almost immediate actions including the construction of 35 km of cycle paths, 22 of which will be completed by this summer.

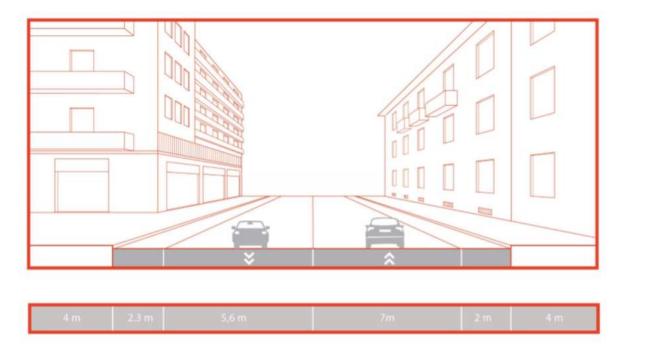
On average, the inhabitants travel 4 km to go to work, a much shorter distance compared to large European cities. The project is the result of the collaboration between the councillor for Mobility and Environment Marco Granelli, and Pierfrancesco Maran, councillor for Urban Planning, Green and Agriculture. World Road Association • Association mondiale de la Route • Asociación Mundial de la Carretera • www.piarc.org



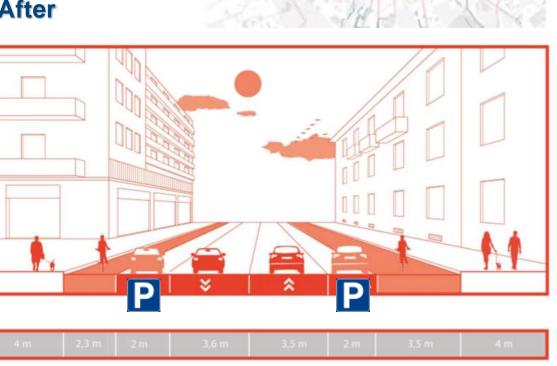
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"Strade Aperte" project – 22,7 km under construction **Corso Venezia** 

#### **Before**





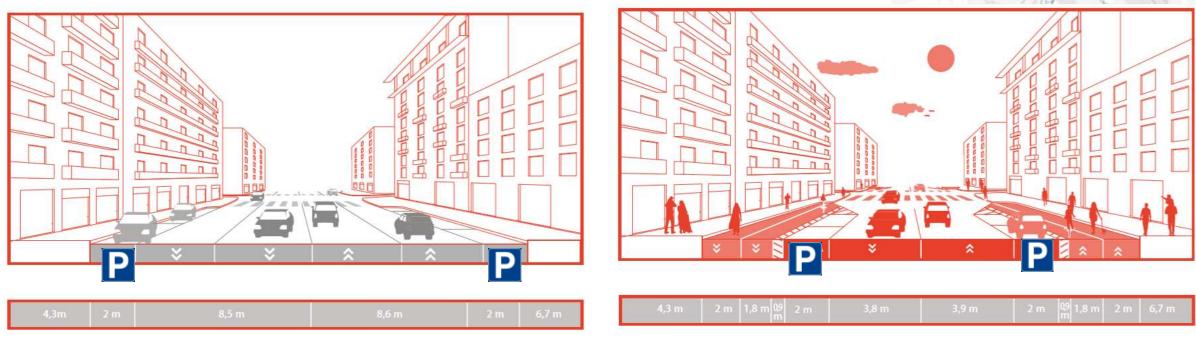




"Strade Aperte" project Corso Buenos Aires



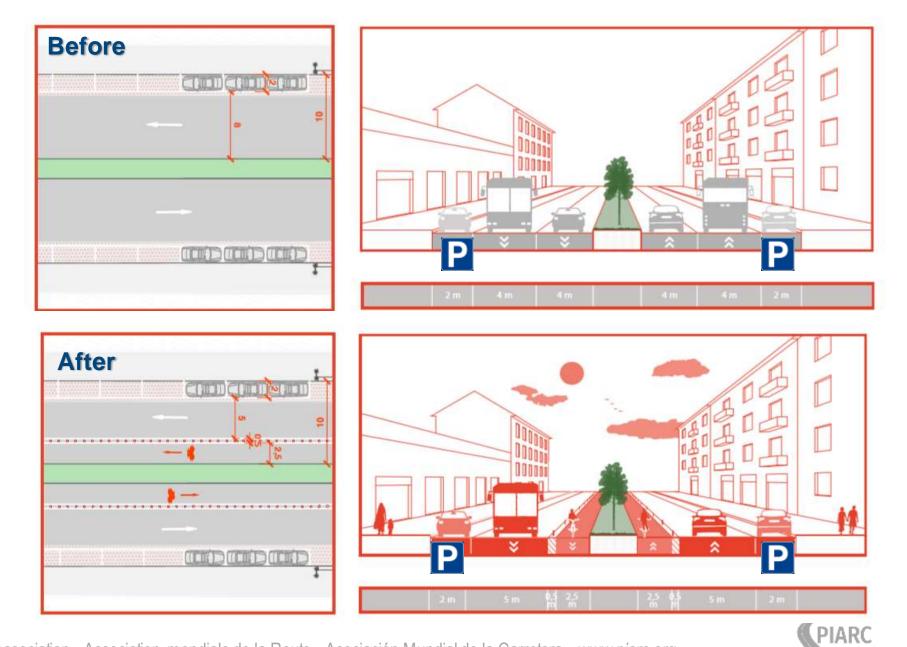




After



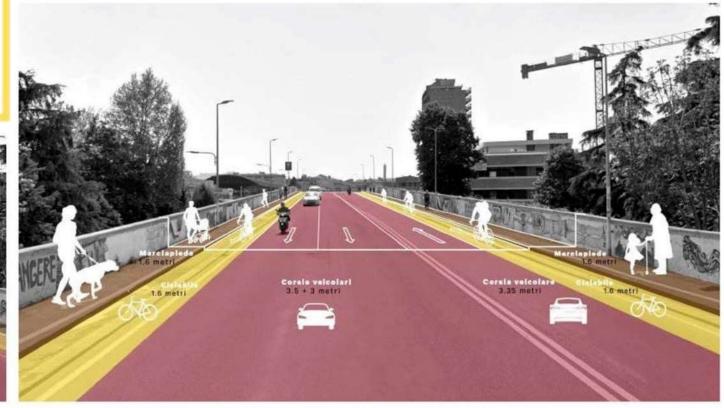
"Strade Aperte" project Viale Monza



**Stalingrado Road** 



#### **Open Roads - "there is hunger for space"**





After

PIARC

#### Saragozza Road



#### Before

After



#### **Toscana Road**



#### Before

After



#### **Malvasia Road**



After



### PADUA

### Sant'Orsola Hospital











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TURIN

### **CONCLUSIONS - CREATE LIVEABLE URBAN ROADS**

The adaptation of the urban road environment to the health crisis can be a stimulus to a more radical, far-sighted and dialogic **urban renewal.** 

Building **active travel networks** across regions also makes more sense than ever. Bikes have been seen by many places as better options for getting around.

Walking and cycling infrastructure can play a huge role in getting people around effectively and also making them healthier.

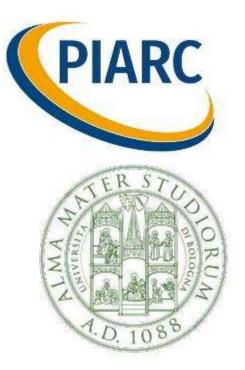
We often take the allocation of urban space as a given; hard concrete, we might assume, merely reinforces the normal order of things. But cities have more space available for pedestrians and cyclists and various forms of micromobility than we might think.







## Thank you for your attention!



### **Andrea SIMONE**

Chair, PIARC Technical Committee 2.1 on Mobility on urban areas

Professor, DICAM Department, Alma Mater Studiorum - University of Bologna

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## **Opportunities and threats for urban mobility in the aftermath of COVID-19**

www.polisnetwork.eu

PIARC Webinar, 3 June 2020

Karen Vancluysen, Polis



POLIS CITIES AND REGIONS FOR TRANSPORT INNOVATION

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# **No recipe for this disaster**



POLIS

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# **Cities stepping into the frontlines**



#### Brussels announces 20km/h limits to give more space to people Brussels has announced plans to introduce lower vehicle speed limits to give more space for people in response to the COVID-19 outbreak. From early May, the 'Pentagon' (i.e. the area located inside... READ MORE -



#### London launches new measures to reduce spread of virus London has announced new measures to adapt its transport system in response to the everchanging conditions of COVID-19. In recent weeks the British capital has been formulating new plans to respon... READ MORE --



Paris prepares network of pop-up bike lanes for post-confinement Paris has announced plans to roll out a network of pop-up bike lanes in preparation for the easing of confinement measures. The plans will see 650 kilometres of pop-up 'corona cycleways' created ac... READ MORE →



#### Dublin cuts parking space to prioritise pedestrians

35km of str... READ MORE -

Dublin City Council has announced plans to cut road space to give more space to pedestrians, during the coronavirus pandemic. To allow people to walk and cycle more easily in the city and to make soci... READ MORE →



#### Milan proposes post-COVID plans for walking and cycling Milan has announced ambitious plans to reallocate space for walking and cycling in response to the COVID-19 outbreak. The 'Strade Aperte' plan, announced on Tuesday 21st April, will see



Italian cities seek to retain temporary bike lanes after lockdown Italian cities have announced plans to keep temporary bike lanes in place after lockdown measures are lifted. Cities across the world have implemented temporary bike lanes in response to the COVID-... READ MORE -



#### Madrid reopens public bike hire

Madrid has announced the re-opening of its public bike hire scheme after a closure of more than one month. Madrid City Council reopened the BiciMAD on April 22. The Madrid Municipal Transport Compa... READ MORE →



#### New York to introduce legislation to open up streets

New York City Council is set to introduce legislation to open up streets to pedestrians and cyclists during the COVID-19 pandemic. The decision to open up streets will allow citizens to walk and cy... READ MORE →



#### Ile-de-France plans post-confinement mobility changes

Ile-de-France Mobilités has announced plans to adapt the region's transport system in preparation for the lifting of confinement measures. The post-confinement plan is underpinned by several key prí... READ MORE →



#### Data from Rome reveals changing travel during COVID-19

Italy has been heavily affected by the COVID-19 outbreak and Italian cities have felt majo impacts from the virus, including in mobility. In response to the virus outbreak, cities have implem... READ MORE →



Manchester launches free metro offer for health and social workers Tram services across Greater Manchester will be free for National Health Service (NHS) workers and social workers from 10 April. The offer was launched to support these key w at a challenging... READ MORE →



Barcelona launches 'solidarity buses' to transport COVID-19 patients Barcelona's city transport system has launched a new service of 'solidarity buses' to trans COVID-19 patients to secure facilities. Transfers of patients with Covid-19 are now under using T... READ MORE →

# From lockdown to gridlock?



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# Opportunity ← Missed Taken →

### Redistributed space

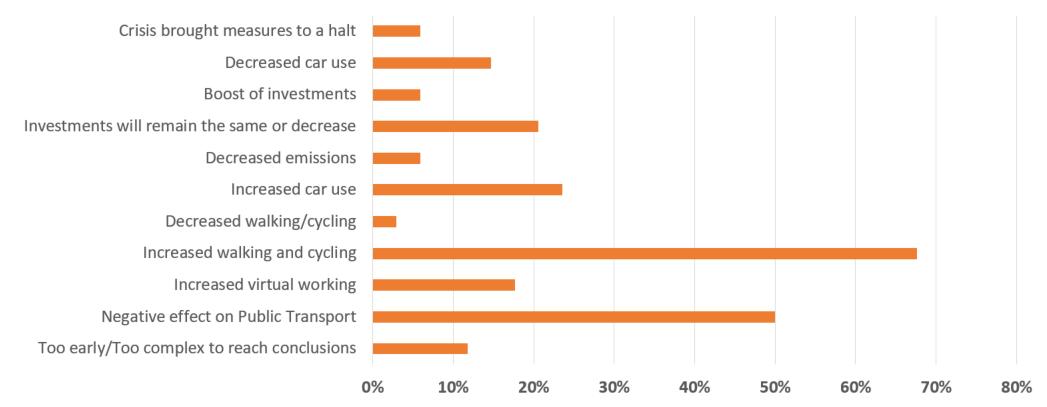
### Active travel boom

**Cleaner** air

#### No congestion

### How are cities coming out of the lockdown?

Question: How do you think this health crisis, and its subsequent financial implications, will impact, in the future, your organisation's actions on sustainable mobility?



#### POLIS

#### Source: Polis membership survey

#### **Fast-tracking**





AMBIENT

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### The elephant in the room

The massive drop of cars on our roads has made it visually very clear how massive the space is that this mode still occupies in our cities, with wide, almost empty car lanes during lockdown versus highly used narrow bike lanes and pavements

### **Respacing streets**



### But also...

#### ÷.

Public transport capacity with a 33% occupancy



4/05/2020:

mandatory mask

Supply (100% circulations)

Base demand

Capacity (33% occupancy)

Public transport is the only highcapacity, long-distance and sustainable system.

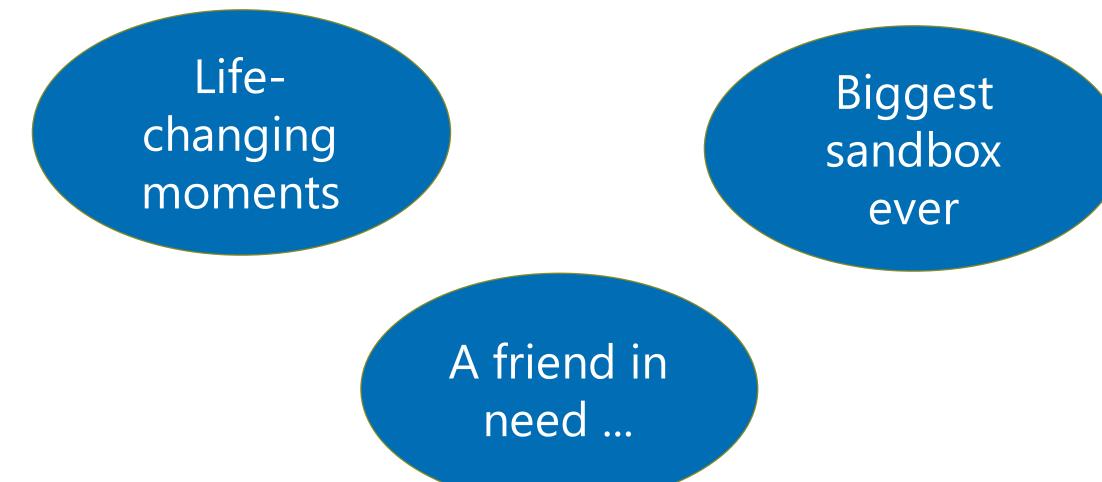
50% maximum occupancy





Instead of transporting the usual 1,37 mln commuters/day, Milan's subway will work at 30% of its normal capacity, meaning only 400.000 commuters can be transported. For the other 70% the new plan should bring a part of the solution.

### Triggers for change...



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### Life-changing moments





### Life-changing moments





### **Post COVID-19 Mobility Survey**

## Illustration : "Covid-19 et partages d'espace public", Fabian Todorovic, @fabiantodorovic, pour Transitec" FLATTEN THE MOBILITY CURVE Inquête sur les comportements de mobilité des Belges après la crise sanitaire du Covid-19 COO



Flatten the mobility curve - Espaces-Mobilités/Maestromobile - Enquête sur les comportements de mobilité des Belges après la crise sanitaire du Covid-19

• 43% say their mobility will change

- 35% intend to use bike or e-scooter more
- 29% fear they will use public transport less
- 22% might use their car less

**Source: Espaces Mobilités** 

POLIS

### Biggest sandbox ever

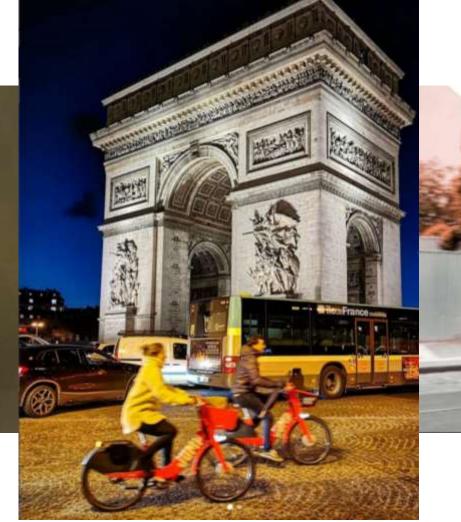


### A friend in need...

An integrated multimodal sustainable urban mobility ecosystem

### **Momentum for joining forces**









### But also...

Tech start-ups (+ Add to myFT)

#### Lime and Bird suspend e-scooter rentals in dozens of cities

Demand plummets amid coronavirus outbreak, putting pressure on cash-burning start-ups



Uber considers cutting 20 percent of workforce amid coronavirus: report by Naces Vege Aer 28, 2020 (1458pm)



# TIER HEROES

We support people working in system-critical jobs by providing free rides for their daily commute.

Cattertant

MARCH VA. 2022

#### Uber leads \$170M Lime investment, offloads Jump to Lime

Romain Dillet: generateditet 7 3-80 per COST + May 7, 2020



Voi supports the restaurant industry: offering e-scooters for increased home delivery demand



### Integrated multimodal sustainable urban mobility ecosystem

#### **Integration PT & shared mobility**

- take pressure away from PT
- spread capacity & shift travellers to shared bikes, e-bikes and e-scooters
- adopt broader definition of PT, embracing a mix of mass transit and shared mobility

#### Public-Private Partnerships

- new business models
- subsidies

#### • Data

• Mobility as a Service



### Big happy family?

#### ≡ Forbes

Sec. 1

COVID Prompts U.K. Rethink On Shared Scooters



#### CORE MaaS: A Social Distancing Mobility Platform

ACCIÓ	STMOTION	Mania	SICANE
anteverti		Mart American	Six   Finger
Anna discharger a	COMMECTED MUDILITY HUB	Maas	
AUTONOMY	S ISOCARP	newcities	WW
bestmile	ILS Finland	POLIS	() wbcsd
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Hallo Zurich and Wintertur

Happy to be back in Switzerland today and going live with Swiss national railroad company SBB CFF FFS. Designated parking at railroad stations and integration into app...

Strong move from SBB showing how old and new mobility combined could create consumer value

#### #sbb #ridevoi



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#### CARSHARING CITY AWARD WINNERS

#### Metropolitan winner: MILAN, ITALY

Regional winner: GHENT, BELGIUM





How it works v Blog Cities About Qv

#### Set up your city bike-share in one month!

Are you interested in getting bikes for your city? We can help!

### Bouncing back



- Cities have shown they can act fast in times of emergency
- PT is an essential service we can rely on
- Active travel has proven once again it deserves more space
- Cities will show their resilience, but...

Positive change will not come naturally

Cities need support from other levels of government and from the private sector!

### Thank you!

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www.polisnetwork.eu/2020-annual-polis-conference/ www.polisnetwork.eu/document/covid-19-keeping-thingsmoving/ www.polisnetwork.eu/news/post-lockdown-mobility-acovid-19-webinar-series-for-polis-members/



2-3 DECEMBER 2020 | ARNHEM NIJMEGEN CITY REGION, THE NETHERLANDS





#### POST-LOCKDOWN MOBILITY

A COVID-19 webinar series for Polis members



#### CITIES FOR PEOPLE: BUILDING BACK BETTER THROUGH SUSTAINABLE URBAN MOBILITY STRATEGIES

Dionisio González Director of Advocacy & Outreach

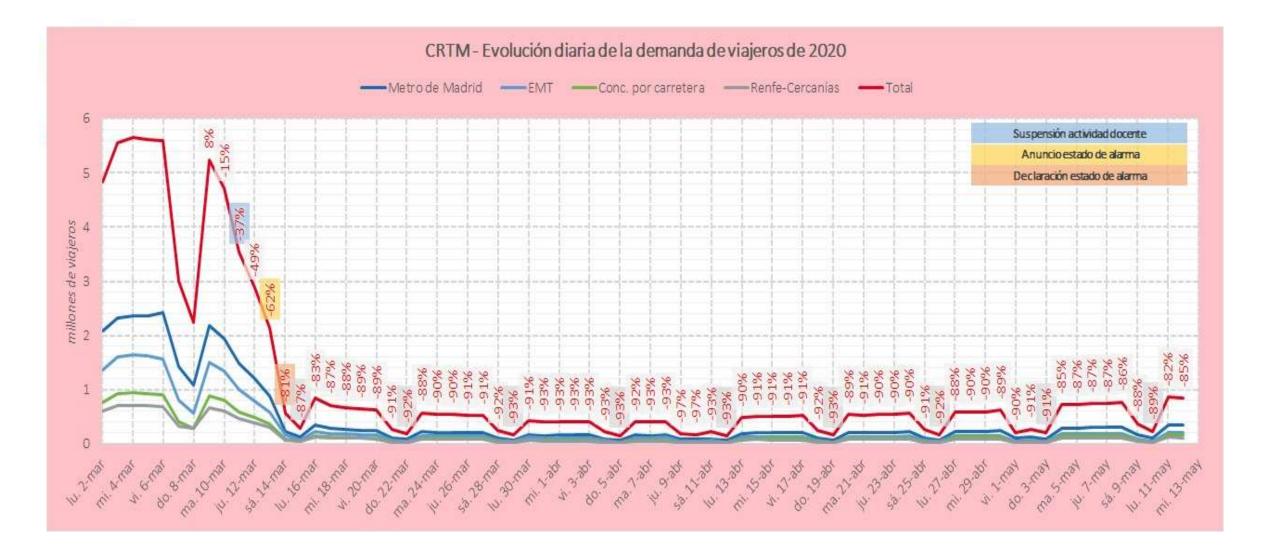








#### 3.1. Introduction





The health crisis is having a major impact on public transport systems

PT is a vital public service, ensuring mobility of essential workers while protecting staff and customers

But we're under attack, public threat and confusing messages

It is imperative to step in with exceptional financial measures or the system will collapse (short-term)

Global challenges linked to SDGs: climate, health, social inclusion, road safety, economy... are at stake (medium-long term)





### **THE BENEFITS OF PUBLIC TRANSPORT TO SOCIETY**

Key role of public transport, the backbone of urban mobility, as an enabler to other city objectives:

- Economic: accessibility, jobs, growth,...
- Social: no one and no place behind
- Environmental: health, climate, road safety,...

This health crisis opens a window of opportunity for decision-makers to develop people-focused policies







### 3.2. Addressing the challenge of public transport survival: funding and financing

### **ECONOMIC AND FINANCIAL IMPACTS OF COVID-19**

UITP is closely following the ongoing impacts of COVID19 to our sector.

Key areas:

- Overview of impacts:
  - Short: lockdown
  - Short-medium: restart, recovery
  - Medium-long: investment, culture change, ways of working
- Surveys
- Assess range of initiatives to support the PT sector





### 3.3. Supporting Public Transport as a key enabler to build back better



### SUSTAINABLE URBAN MOBILITY TO BUILD BACK BETTER

Cities the world over have understood that now is the time to move forward on sustainable urban mobility.

Main pillars:

- Strong common vision, rethinking cities for people;
- Effective governance and modern regulation;
- Solid and stable long-term funding and business plans, including urgent financial measures;
- Ambitious political leadership.







#### To build back better, it's key:

- Good communication and trust into PT services
- Priority to PT and more urban space for walking and cycling
- Clear rules and enforcement by competent authorities
- Consultation with PT experts
- Demand management, flatten the curve
- Opportunity to develop an stable institutional and funding framework











### **RECENT UITP ACTIVITIES**



Knowledge



Campaigns

•



Exchange Platform • Webinars





BUITP Europe @UITPEurope · May 13

More than 80 #EU CEOs and city representatives call for local public transport to be a key sector in the EU recovery plan. Public #transport is vital to keep cities alive & for the European economy. #EU support is crucial for its survival from #COVID19



Advocacy





### **QUESTIONS?**

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### Questions and Answers Moderated by Christos Xenophontos





#### **Our Speakers today**

- Patrick Malléjacq Secretary General, PIARC
- Dipl Ing Tommaso Bonino, SRM, Bologna, Italy
- Prof. Lei Zhang, USA, Univ. of Maryland, USA
- André Broto, Strategic Theme Coordinator for PIARC Theme 2- Mobility
- Andrea Simone, Chair, PIARC Technical Committee 2.1 on Mobility on urban areas
- Karen Vancluysen, Secretary General, POLIS Network
- Dionisio Gonzalez, Director of Advocacy and Outreach, UITP



### **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
- We publish "Notes" with the findings from those webinars
- An in-depth report is scheduled for August

https://www.piarc.org/en/News-Agenda-PIARC/Coronavirus-PIARC-and-Covid-19



**Two PIARC polls are open** 

#### In order to allow everyone to contribute, two polls are now open:

To identify issues of concern: <u>https://forms.gle/cgi8WCeQYykCeNFQA</u>

To identify stakeholders who wish to share their practices : <u>https://forms.gle/8sPYw3qhZoySQueJ9</u>

Those two links are also available from PIARC's website.



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### Thank you for your attention!



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