MaaS
MOBILITY AS A SERVICE

Joubert Flores
President of ANPTrilhos

Commuter and Regional Trains
UIC - International Union of Railways

December 3, 2020
“To Integrate and to give access to different transport services on a digital platform considering active mobility and public transport as a basis.”

Jurandir Fernandes

Source: UITP - Urban mobility in times of change - Conrado Grava de Souza - 25th Technology Week - AEAMESP
“Integrated and interconnected solution, between different modes and consumed as a service.”

“Connectivity, unified account, blockchain and common tariff rules as prerequisites for effective implementation.”

“Issues related to data security, user privacy and the lack of regulation.”

Source: 6th Week UITP Latin America
MaaS

**URBAN CONTEXT**
- Climate Change
- Cultural Changes
- Public Health
- Sustainability
- Energy Efficiency
- More Dense Urban Areas
- Demographic Transformations
- Transport Under Demand

**STRUCTURING TRANSPORTS ON RAILS**

**ENABLING TECHNOLOGIES**
- Connectivity and GeoLocalization
- Shared Vehicles
- Sensors and Servers
- Circuits and Algorithms
- Electronic Validation
- Digital Personal Devices
- Connected Active Mobility
- New Business Models
CELL INFRASTRUCTURE

ACTIVE MOBILITY

TAXI, E-BUS, SHARING

STRUCTURING TRANSPORTS

COLLECTIVE TRANSPORT

TECHNOLOGIES

GEOLOCALIZATION + CONNECTIVITY + MOBILE DEVICES = SMART, SHARED MOBILITY AND NEW AGENTS

2G >>> 5G

UNDERGROUND INFRASTRUCTURE

DATA OVERFLOW

ANP TRILHOS
- New metro lines 100% underground
- Automated train operations
- Designed to carry up to 1 million passengers per day
- Rails carry around 8 million passengers per day in SP
With the consent of the users, what will be the added value of sharing data on displacements on the metro-rail network?
SAME FACILITIES OF THE EXTERNAL ENVIRONMENT IN REAL TIME

SERVICES

TRAIN WAZE
EMPTY CAR
GEOREFERENTED STATION MAP

AUTOMATIC DETECTION OF SUSPECTED PATTERNS
MONITORING OF PMR AND PCD

ABNORMALITY POP UPS
BEST TIME FOR SHIPMENT

AUTOMATIC SEARCHES FOR BOARDING AND LANDING

STRUCTURING TRANSPORTS

SURVEYS BY PROFILE OR NETWORK LOCATION

WITHDRAWAL OF GOODS FROM E-COMMERCE

COMPLAINTS AND OCCURRENCES BY GEOREFERENTIATED USERS

BEST TIME FOR SHIPMENT

ALERT FOR LANDING
DIGITAL TRANSFORMATION

CONNECTED USER PROFILE

ENVIRONMENTAL AWARENESS

BUSINESS INTELLIGENCE

BIG DATA

QUANTUM COMPUTING

CULTURAL CHANGES

TECHNOLOGICAL DEVELOPMENTS

SIGNATURE

SIMULTANEITY

IA
Digital voice assistants as great allies

- Reduces human distractions
- Assists in indoor / outdoor navigation
- Occupies the ear canal, but frees vision and mind
- Collaborates for simultaneous travel
AID IN ORIENTATION IN STATIONS WITH AUGMENTED REALITY?
CAN YOU COLLABORATE WITH NEW SERVICES AND ACCESSORY REVENUE AT STATIONS?
Pay with your face? China's subway system experiments with facial recognition instead of payments

Facial recognition is a hot topic right now

AMELIA HEATHMAN | 1 day ago

People using Shenzhen's subway system, where over 600 can use a new facial recognition system (PHILIPPE LOPEZ/AFP/Getty Images)

China's Alipay pilots facial recognition payment tech at KFC

By John Glenday - 04 September 2017 09:22am

China pioneers facial recognition digital payment tech
Thank you!