FISITA WORLD CONGRESS

ORGANISED BY STA SOCIEDAD DE TÉCNICOS DE AUTOMOCIÓN

The Importance of User Experience in the Adoption of Innovative Micromobility Solutions: the RideSafeUM Initiative

Elena Cristóbal

Innovation Project Manager, CARNET – The Future Mobility Research HUB

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About myself

Innovation Project Manager at CARNET Barcelona

Madrid & Barcelona

International urban & transport planning, sustainable mobility strategies, new mobility solutions

RideSafeUM Project Lead

Working to achieve ***FREEDOM of safe movement for all***

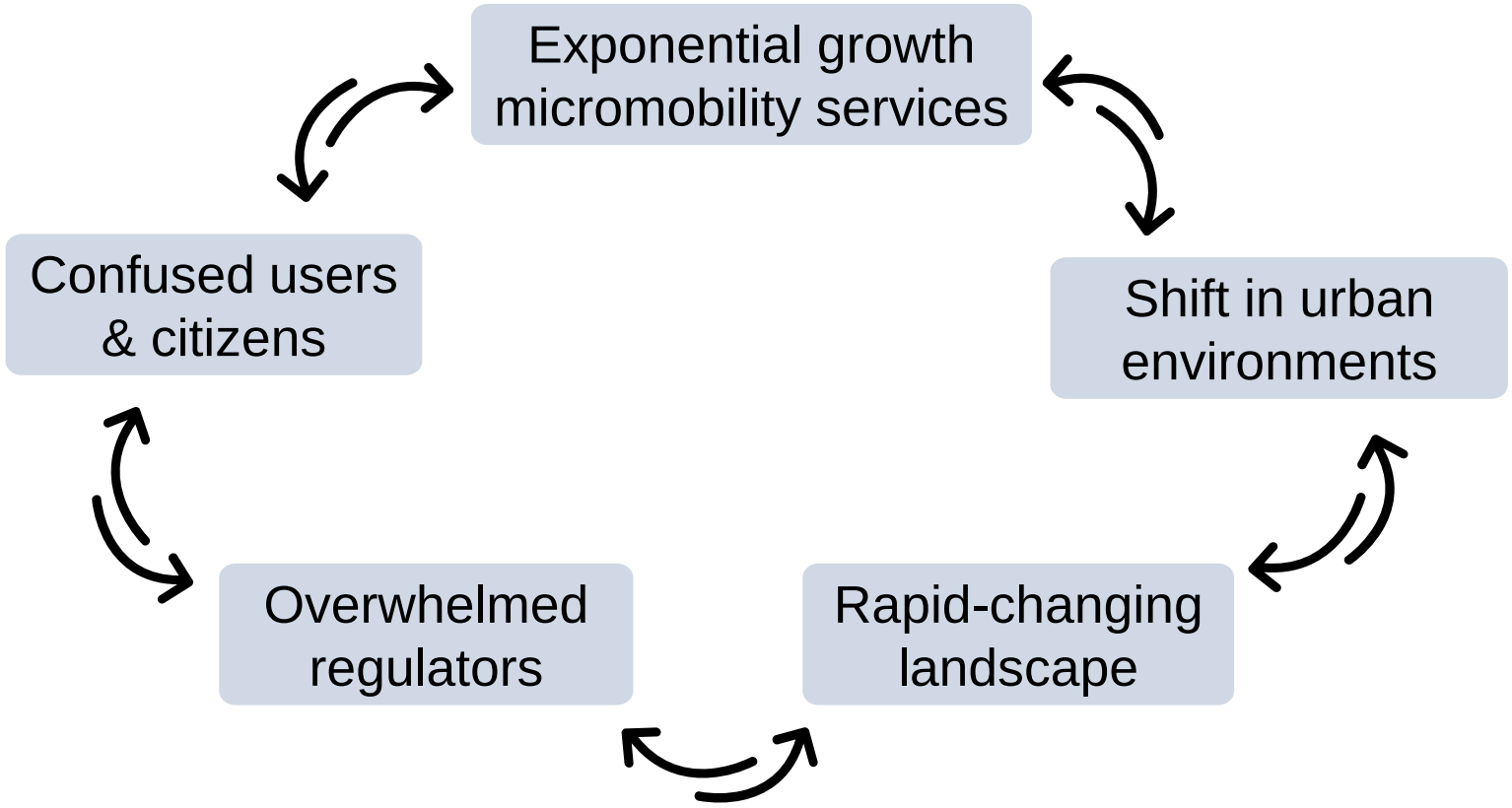
CARNET
FUTURE MOBILITY RESEARCH HUB

RideSafeUM

eit Urban Mobility

Co-funded by the European Union

The Urban Mobility Revolution



New issues: new solutions

SAFETY

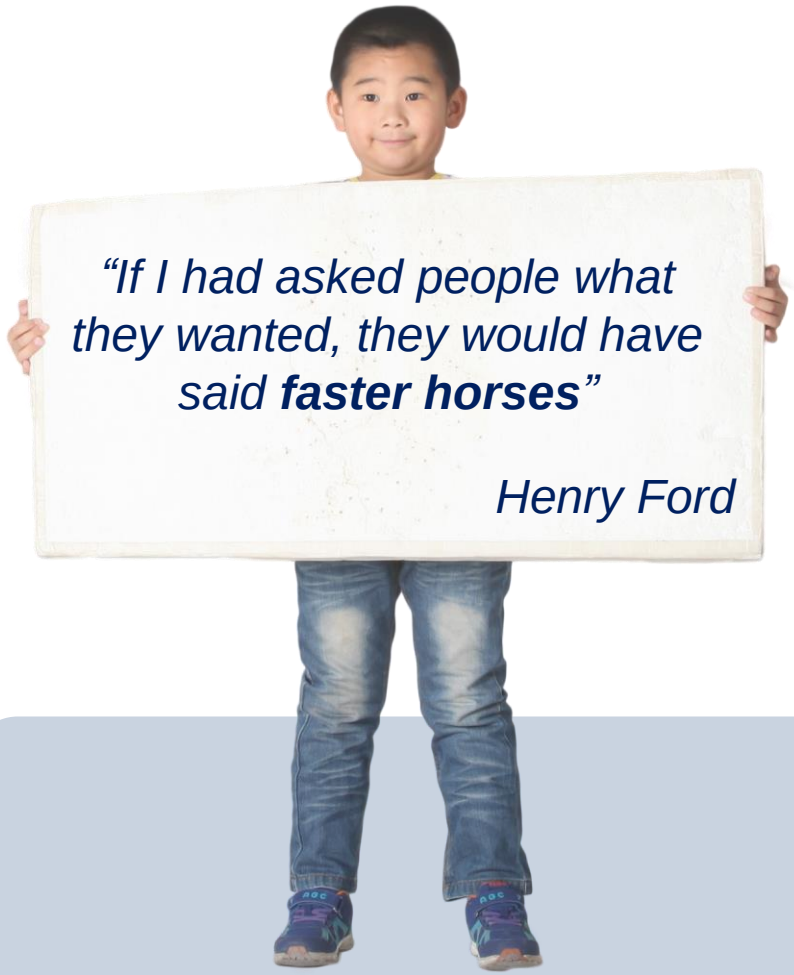
Rigid urban space: competition
Change of mobility patterns
Growth of all modes flows
Lack of knowledge

I N N O V A T I O N

DATA

Smart Cities
Space Optimization
Infrastr. mgmt. & maintenance
Regulation & training

Real innovation requires adoption



- History: high car acceptance ⇔ great **user experience / UX** (compared to riding a horse!). <u>If they hadn't enjoyed it, solved needs would have not mattered</u>
- Current research is only based on **social factors** (who) instead of psychological factors (why)
- **Psychological factor** still present today (how many people give up on diets regardless the benefits for their health..?)

When innovating, UX needs to be right at the center of our ideation brains since the very beginning

No encouragement → no adoption → no REAL changes

RideSafeUM

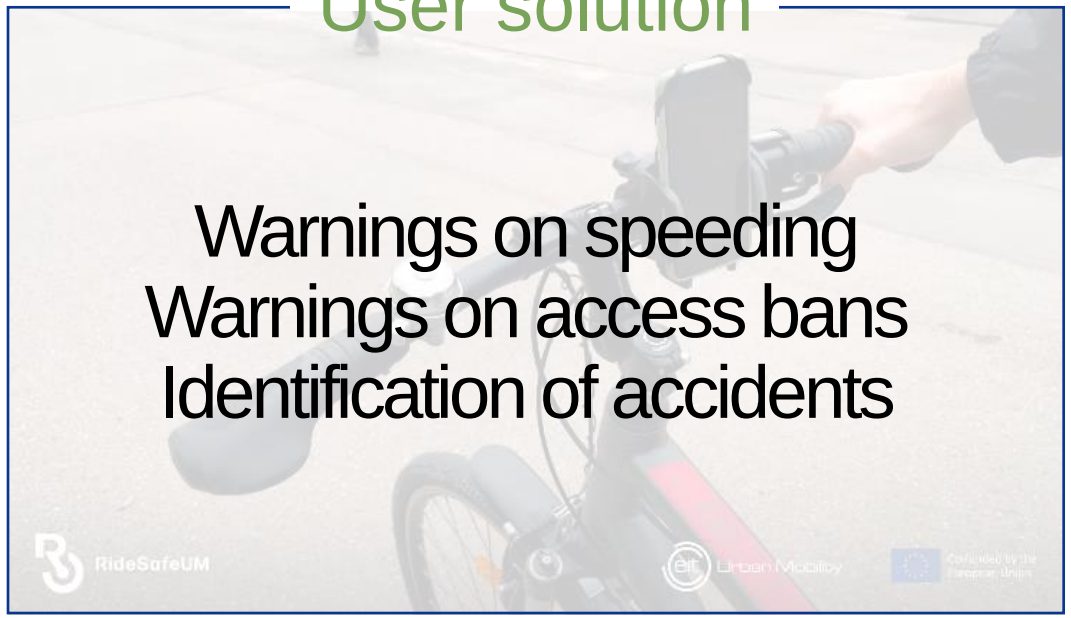
- Born in 2022 to provide an advanced safety solution for micromobility issues
- Co-funded by EIT Urban Mobility & coordinated by CARNET
- Mixed consortium covering all **future mobility stakeholders**

Public authorities	Roma Mobilitá
	Barcelona City Council & IMI
	MDAT
Research organizations	CERTH
	CARNET
Education	UPC

Private consultancy services	FACTUAL
Shared Micromobility Operators	Dott
	Thessbike
Private IT developers	IDIADA
	BrainBox

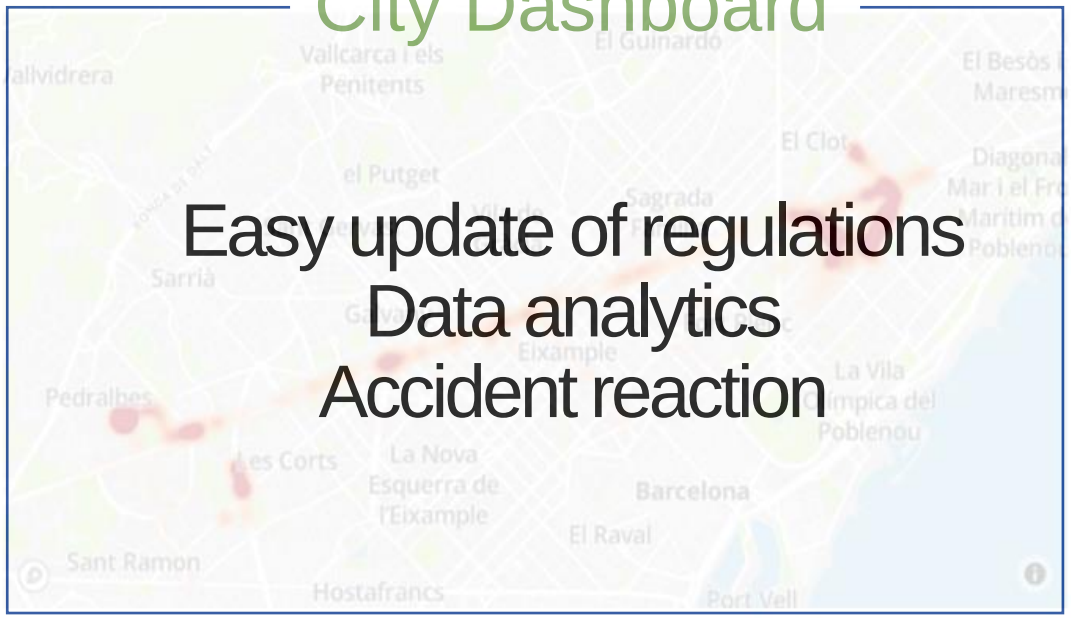
RideSafeUM

User solution



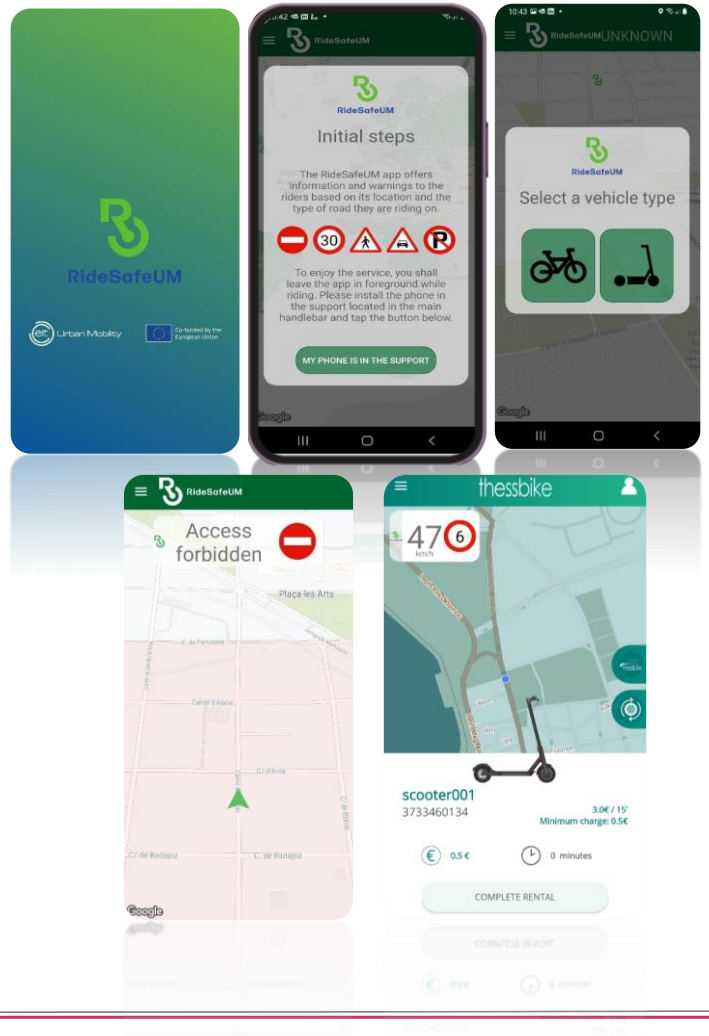
Warnings on speeding
Warnings on access bans
Identification of accidents

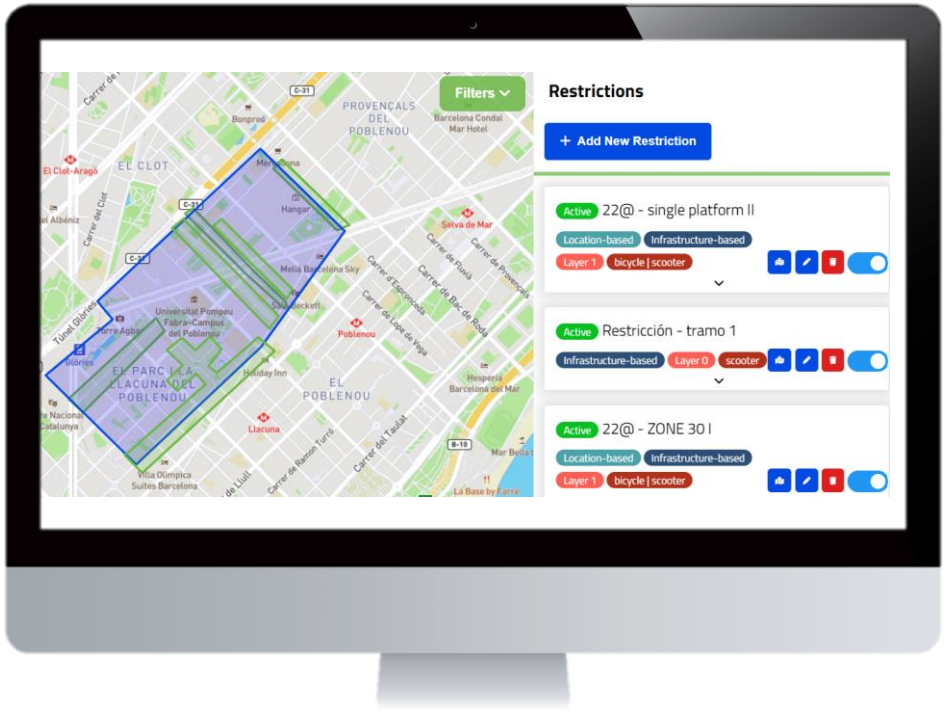
City Dashboard

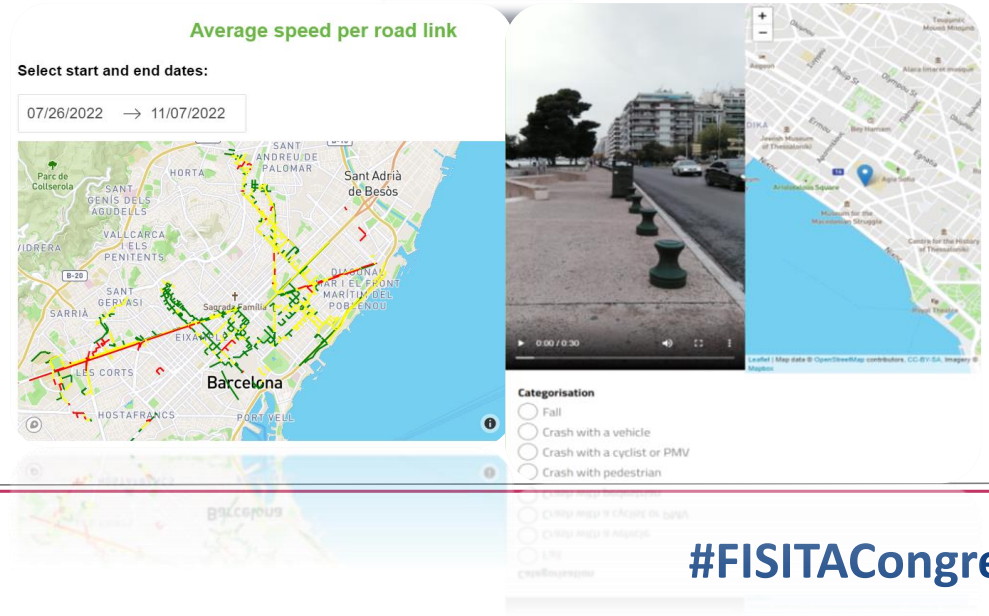


Easy update of regulations
Data analytics
Accident reaction

RideSafeUM


RideSafeUM
Urban Mobility
Initial steps
The RideSafeUM app offers information and warnings to the riders based on its location and the type of road they are riding on.
To enjoy the service, you shall leave the app in foreground while riding. Please install the phone in the support located in the main handlebar and tap the button below.
MY PHONE IS IN THE SUPPORT
Select a vehicle type
Access forbidden
thessbike
scooter001
3733460134
COMPLETE RENTAL


Filters
Restrictions
+ Add New Restriction
Active 22@ - single platform II
Location-based
Infrastructure-based
Layer 1
bicycle | scooter
Active Restricción - tramo 1
Layer 0
scooter
Active 22@ - ZONE 30 I


Average speed per road link
Select start and end dates:
07/26/2022 → 11/07/2022
Barcelona
Categorisation
Fall
Crash with a vehicle
Crash with a cyclist or PMV
Crash with pedestrian

RideSafeUM Testing

September – December 2022

Privately owned vehicles

Bespoke app

Phone holders provided to private users

Welcome pack

Dott's fleet

Bespoke app in parallel to Dott's

Phone holder already installed by Dott's holder side

Discount per ride

Thessbike's fleet

Integrated app into Thessbike's

Phone holder already installed

Discount per ride

Areas of evaluation

TECHNICAL

Adequate TRL before public launch

To ensure tech issues do not intercede with users' experience

OPERATIONAL

QUANTITATIVE

Global **adoption** levels through **data collection** tools:

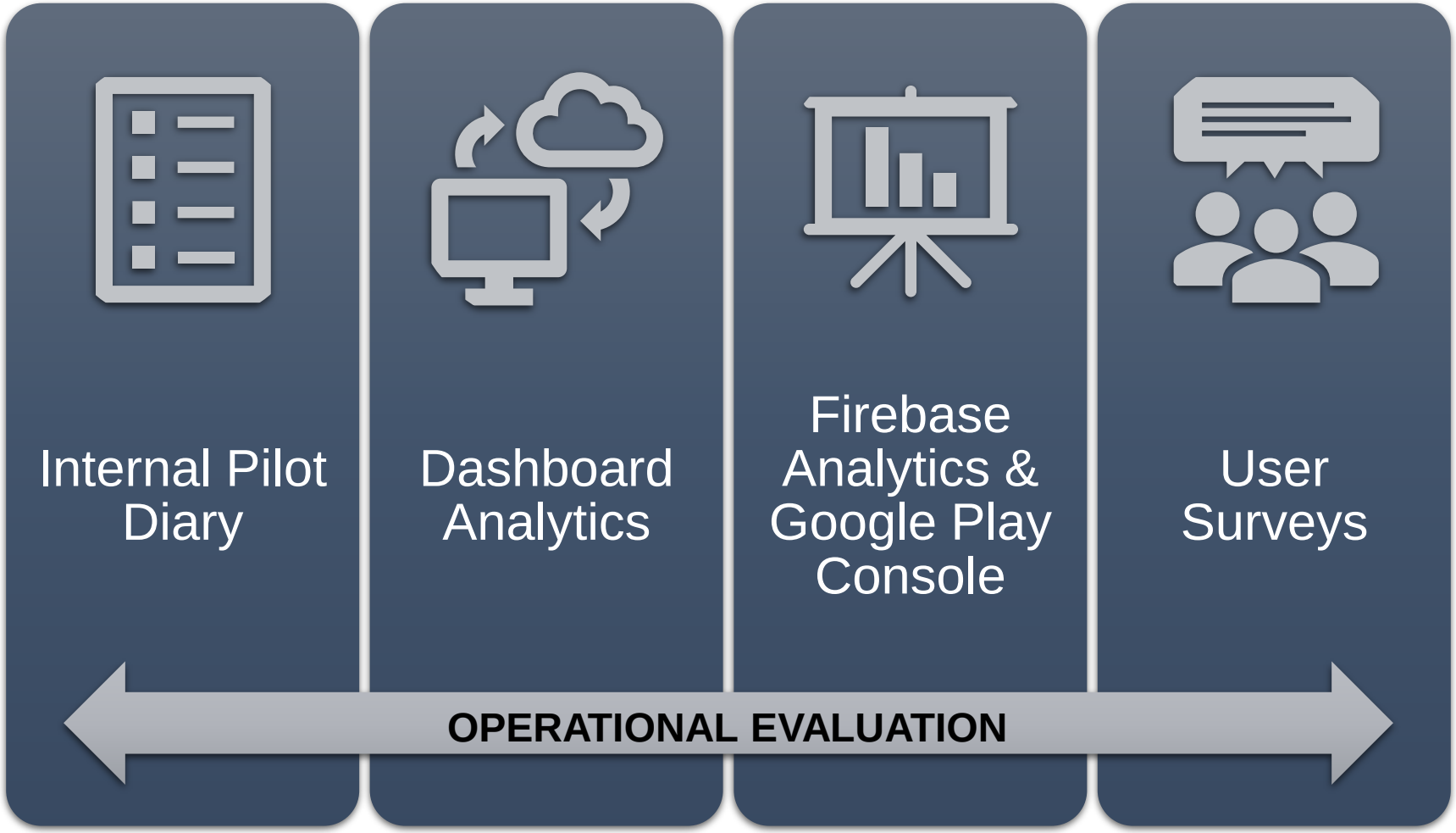
- Unique users
- Unique number of trips
- Vehicle type (i.e., e-scooters or cycles)
- Distance & time travelled

QUALITATIVE

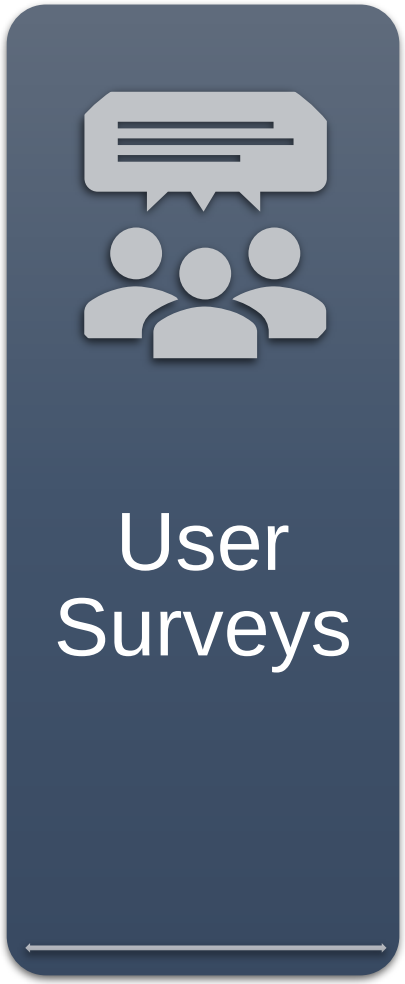
Global **satisfaction** levels through **surveys**:

- Ease of use
- Reliability
- Stress generation
- Continuity of service
- Safety feeling

Data Sources

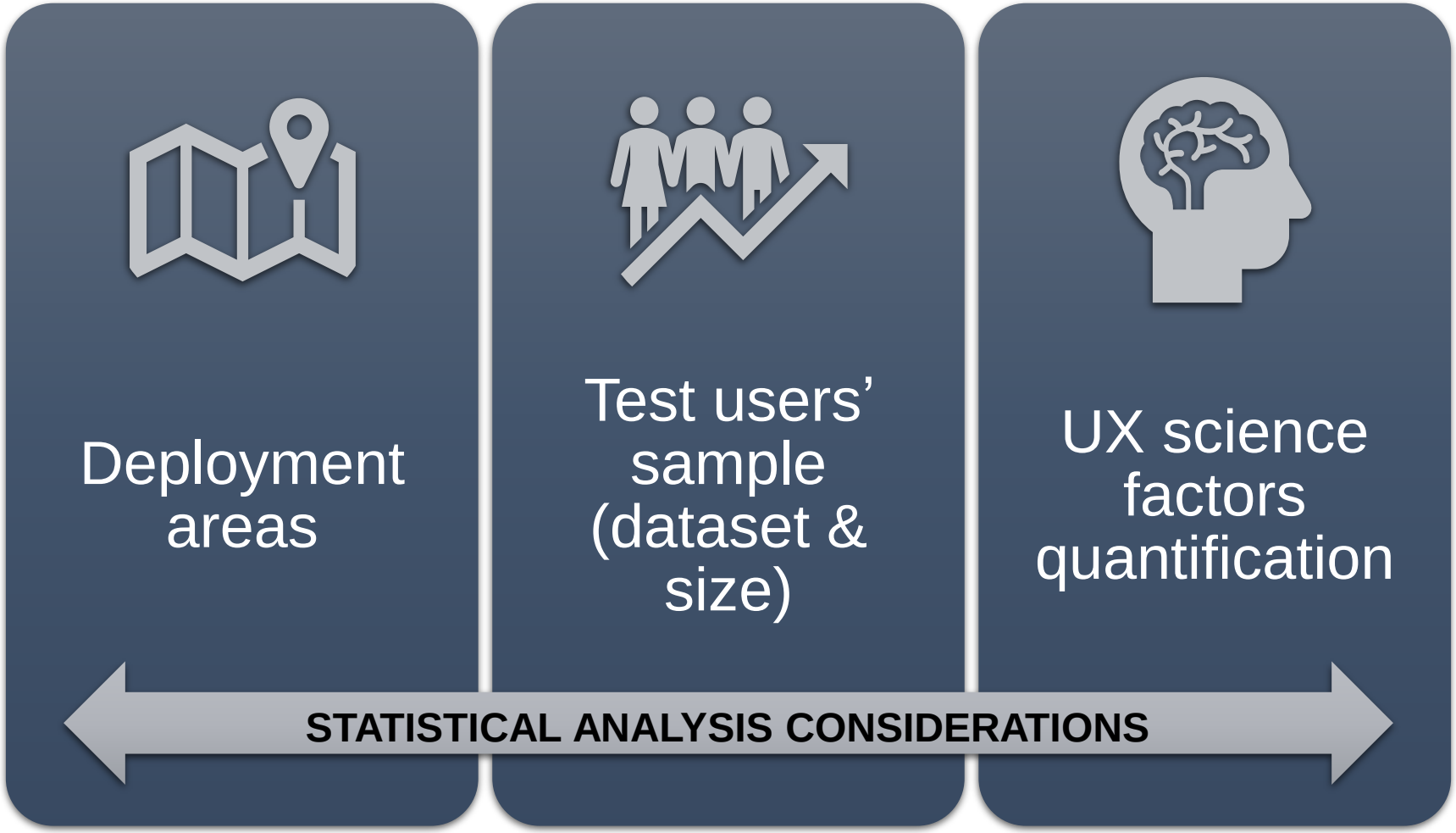


Data Sources



Question	Derived UX factor impacting on adoption levels
How **difficult** would you say it is to use the RideSafeUM app? (1-5)	**Ease of use**
How **accurate** were the alerts you received? (1-5)	**Reliability**
Were you **distracted** by the warnings you received? (Y/N)	**Stress generation** (vs. current experience)
Have you encountered any **false** accident detections? (Y/N)	Continuity of service & **reliability**
How much **safer** did you feel when riding with RideSafeUM? (1-5)	Consecution of **final objective** (providing regs. info to improve safety)
Overall, how **satisfied** are you with your experience using RideSafeUM? (1-5)	Informed overall **impact of the above factors on global satisfaction**

Initial limitations



Quantitative Testing Results

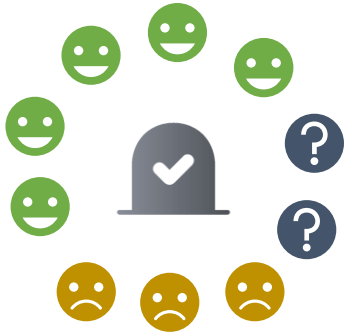
	Barcelona	Rome	Thessaloniki
Unique users	52	62	226
No. Trips	89	98	1,421
E-Scooter / Bike (%)	76 / 24	100 / 0	75 / 25
Avg. trip duration (mins)	31	4	28
Total km travelled	831	155	3,200

Qualitative Testing Results

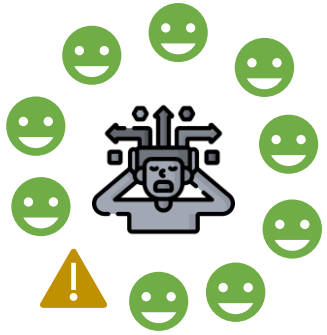
User Surveys

(53 respondents / 340 unique users, mostly from Thessaloniki)

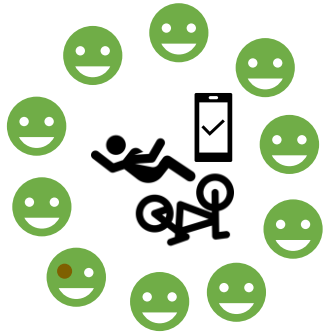
Easy to use



Accurate alerts



Distraction level



False accidents detection

Safer ride

Overall satisfaction

Qualitative Testing Results

User Surveys

(53 respondents / 340 unique users)

Add sound warnings

Extend Barcelona area

Reduce battery consumption

Improve phone angle

Results Observations

	Barcelona	Rome	Thessaloniki
Unique users	52	62	226
No. Trips	89	98	1,421
App	Bespoke	Parallel to Dott's	Thessbike's

Importance of ease of use is clear

Results Observations

	Barcelona	Rome	Thessaloniki
No. trips	89	98	1,421
E-Scooter / Bike (%)	76 / 24	100 / 0	75 / 25
Avg. trip time (mins)	31	4	28
Trip purpose	Commuting	Tourism	Leisure

Willingness to try new tech
higher in e-scooter riders and low stress situations

Concluding Results

Micromobility safety is one of the key issues authorities are more concerned about

BUT

safety is not the primary factor for micromobility users when engaging with innovative solutions

Micromobility users prioritise an easy, satisfactory user experience over other factors when it is about testing and adopting new solutions..

..even if they recognise the solution's potential to address current challenges they also consider important, including their own safety

Final Recommendation

When innovating, UX needs to be right at the center
of our ideation brains since the very beginning

“Normal” UX means no adoption

No adoption means NO REAL CHANGES

DO NOT FALL OUT FOR “NORMAL”

CREATE OUTSTANDING EXPERIENCES!

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Elena.Cristobal@carnetbarcelona.com

/elenacristobal/

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carnetbarcelona.com

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