IP4MaaS AS-IS and TO-BE User Journey Maps (C-REL)

D2.2 – Annex 2

BARCELONA

AS-IS Journey Maps

1. Travelling from a suburban area to the UPC campus

Expected target users Commuters (workers, students), participant to conferences/meetings/events hold by UPC.

A

Planning

Journey Planning — **Booking/Buying**

Travelling

Private Car/Car Sharing (**Social Car**)   Metro (**TMB**)   Walking

Sabadell
Central Station   Sants Estació   Jordi Girona -
John M Keynes   **UPC campus**

Current Pain Points

PPA1: SocialCar app doesn't provide journey planning. The user should use a separate app to calculate the route to reach Sants Estació.

PPA2: The TMB or the AMB planner can be used to plan only the Metro itinerary between Sants Estació and Jordi Girona - John M Keynes.

PPA3: The user should use different applications to book the car through the Social Car application and to purchase the ticket for the TMB Metro leg.

PPA4: No cars can be available through the SocialCar app when trying to perform the booking, so the user may need to plan a different travel solution.

PPA5: No integrated rates are available for a user (nor car and public transport, nor car and parking) so a solo traveller may prefer to directly reach her/his destination using the car.

PPA6: It is not possible to share the ride with other passengers using the SocialCar app. The cost of renting the car could be reduced making an arrangement with friends/colleagues.

PPA7: Real-time updates are announced at the metro station, displayed through monitors tables and published on social networks/apps. The user doesn't receive a push notification and may reach the transfer point before discovering that the Metro is not working due to a disruption.

PPA8: The user may have difficulties in finding a place where to park the car.

PPA9: The user needs to collect a paper-based ticket from a vending machine in the Metro station (possible queues) using the code received when buying the ticket. A change of infrastructure would be needed to enable digital tickets.
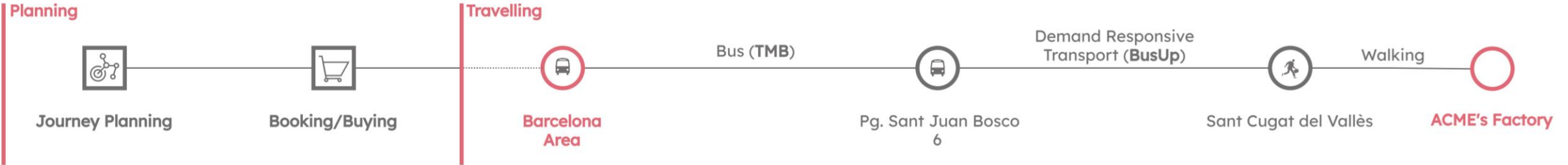
PPA10: The user may have difficulties in finding information on the arrival time for the next metro and the number of stops to be performed before reaching the destination.

PPA11: The paper ticket can be lost and for multi-trip paper tickets it is difficulty to assess number of trips already performed. These may lead to fines during ticket inspection.

Shift2Rail

2. Travelling to suburban industrial areas for work

Expected target users Commuters (workers)

B

Planning

Journey Planning

Booking/Buying

Travelling

Bus (**TMB**)

Demand Responsive Transport (**BusUp**)

Walking

Barcelona Area

Pg. Sant Juan Bosco 6

Sant Cugat del Vallès

ACME's Factory

Current Pain Points

PPB1: Integrated journey planning is not available. The users should use the TMB or the AMB planner to calculate the route to reach the BusUp stop.

PPB2: BusUp app available only to users of registered companies. Travellers working in similar locations can not plan solutions involving a shared bus ride to reach the destination leading to high private vehicle usage.

PPB3: The user should use different applications to purchase the ticket for the TMB bus leg and to book the BusUp ride.

PPB4: No seats can be available through the BusUp app when trying to perform the booking, so the user may need to perform again the journey planning for the first leg.

PPB5: No integrated tickets/mobility packages available to support the combined usage of public transport and shared bus rides.

PPB6: The user should use separate applications (TMB/BusUp) to visualise real-time updates on the state of services.

PPB7: In case of disruption for the first leg, the user should use the BusUp application to cancel the booking and perform re-planning of the entire solution using separate applications. If an alternative BusUp route is not available, the user may need to plan a different travel solution.

PPB8: The user may have difficulties in finding information on the arrival time for the BusUp bus and the number of stops to be performed before reaching the destination.

PPB9: A different entitlement should be provided by the user for validation and inspection for the TMB bus leg and the BusUp ride.

BARCELONA

TO-BE Journey Maps

1. Travelling from a suburban area to the UPC campus

Expected target users Commuters (workers, students), participant to conferences/meetings/events hold by UPC.

A

Planning

Journey Planning — **Booking/Buying**

Travelling

Private Car/Car Sharing (**Social Car**) — Metro (**TMB**) — Walking

Sabadell Central Station — Sants Estació — Jordi Girona - John M Keynes — **UPC campus**

Use Cases

UCA1: The user can plan through the Travel Companion an integrated travel solution involving a SocialCar ride from Sabadell to the Sants Estació station, and a metro leg to Jordi Girona - John M Keynes.

UCA2: The Trip Sharing functionality of the Travel Companion can be used by a user to notify friends about her/his travel solution. The user can arrange a shared car ride with friends that are interested in reaching Sants Estació so the environmental impact of the ride is reduced.

UCA3: The user, through the Travel Companion, can select the planned travel solution and directly book the car with SocialCar and buy a TMB ticket for the metro leg in a unique transaction.

UCA4: The travel solution is proposed to the user only if SocialCar cars are available nearby its starting position, otherwise, the Travel Companion will directly propose alternative solutions.

UCA5: Mobility packages are defined through the CMMP by relevant stakeholders and offered to users through the Travel Companion (car and public transport, or car and parking) to reduce the usage of cars in the Barcelona city centre.

UCA6: The Travel Companion notifies in real-time the user about possible disruptions to the metro she/he is supposed to get. As a result, in case of disruption, the user can reach by car a different transfer point and/or decide to reach directly the destination using the car.

UCA7: Travellers sharing the car leg with can help in reducing the number of private vehicles and facilitate the parking at the Sants Estació.

UCA8: The user receives a digital ticket (e.g., QR code) that can be validated and used to access the metro.

UCA9: The Travel Companion provides navigation information during the travel on the time of arrival/next arrival time for the metro, and information on the intermediate stops to be performed before reaching the destination.
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UCA10: The digital ticket is saved in the Travel Companion and always available for inspection. Previously performed trips can be viewed by the user in the Travel Companion.

UCA11: Through the Travel Companion, the user can provide feedback about delays, cleanliness of the stations, disruptions, crowdiness, etc.

2. Travelling to suburban industrial areas for work

Expected target users Commuters (workers)

Planning

Travelling

B

Bus (**TMB**)

Demand Responsive Transport (**BusUp**)

Walking

Journey Planning

Booking/Buying

Barcelona Area

Pg. Sant Juan Bosco 6

Sant Cugat del Vallès

ACME's Factory

Use Cases

UCB1: The user can plan through the Travel Companion an integrated travel solution involving a bus leg from different location in Barcelona to the BusUp bus stop.

UCB2: BusUp can offer available seats also to Travel Companion users not employed by registered companies. Travellers working in similar locations can now plan solutions involving a shared bus ride to reach the destination reducing the private vehicle usage.

UCB3: The user, through the Travel Companion, can select the planned travel solution and directly purchase the TMB ticket for the bus leg and book the BusUp ride.

UCB4: The user is proposed with this travel solution only if seats for a BusUp ride are available, otherwise, the Travel Companion will directly propose alternative solutions.

UCB5: Mobility packages are defined through the CMMP by relevant stakeholders and offered to users through the Travel Companion to support the combined usage of public transport and shared bus rides reducing the number of private vehicles used to commute outside Barcelona.

UCB6: The Travel Companion notifies in real-time the user about possible disruptions to the different legs of the travel solution that she/he is performing (integrating TMB and BusUp real-time events).

UCB7: In case of disruption for the first leg, the user can use the Travel Companion application to cancel the BusUp and directly plan an alternative travel solution, possibly reaching a different transfer points through TMB services.

UCB8: The Travel Companion provides navigation information during the travel on the intermediate stops for the legs and the time of arrival/next arrival time for the second leg.

UCB9: Tickets are available on the Travel Companion for boarding and inspection on the TMB bus and/or during the BusUp ride.

UCB10: Through the Travel Companion, the user can provide feedback about delays, cleanliness of the stations, disruptions, crowdiness, etc.
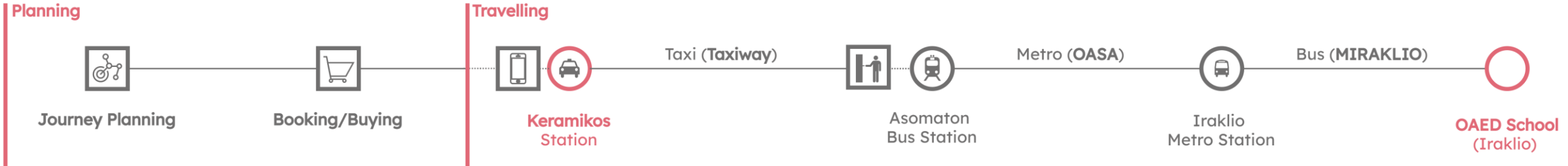
ATHENS

AS-IS Journey Maps

1. Travelling to/from the Northern sector of Athens

Expected target users Commuters for work/education/leisure

A

Planning

Journey Planning — **Booking/Buying**

Travelling

Taxi (**Taxiway**)   Metro (**OASA**)   Bus (**MIRAKLIO**)

Keramikos Station

Asomaton Bus Station

Iraklio Metro Station

OAED School (Iraklio)

Current Pain Points

PPA1: There is no planner app that integrates all the services (Taxiway/OASA/MIRAKLIO) so the user should use different apps to calculate the complete travel solution.

PPA2: No digital ticket available for OASA metro or bus. The ATHENA Card can be purchased online and either delivered home or collected at the station

PPA3: Taxi booking and buying should be performed using a dedicated application

PPA4: No integrated tickets/mobility packages available to support the combined usage of public transport and taxi rides.

PPA5: It is not possible to share the ride with other passengers using the Taxiway app, so the environmental impact is similar to the one of a private vehicle if the traveller doesn't make an arrangement with friends/colleagues using a different communication channel. Moreover, due to the current SARS-CoV-2 pandemic, there currently are legal barriers preventing vehicle sharing

PPA6: Physical (not intangible) tickets or cards may be easily lost/ stolen

PPA7: If not home delivered, the user needs to collect the card-based ticket from a vending machine in the Metro station (possible queues). A change of infrastructure would be needed to enable digital tickets.

PPA8: Real-time updates for OASA and MIRAKLIO are announced at the metro and bus stations, displayed through monitors tables and there are no notifications. The user may reach the destination before discovering that the metro/bus is not working due to a disruption.

PPA9: In case of disruption it may be difficult to find an alternative solution combining different means of transport

PPA10: There is no integrated navigation functionality during the travel so the user may need to use a different application to get directions on when to get off, how to reach the next stop and the next arrival time for the following leg

2. Tourists travelling to/from Keramikos district

Expected target users Tourists

B

Planning

Journey Planning

Booking/Buying

Travelling

Bike Sharing (**Brainbox**)

Metro (**OASA**)

Bus (**OASA**)

Keramikos district

Keramikos Metro station

Syntagma Bus Station

El. Venizelos Airport

Current Pain Points

PPB1: There is no planner app that integrates both Brainbox and OASA services and routes so the user should use different apps to plan the travel solution.

PPB2: No digital ticket available for OASA metro or bus. The ATHENA Card can be purchased online and either delivered home or collected at the station

PPB3: Booking of a bike is only available half an hour before renting it meaing that the user can't reserve it in advance.

PPB4: There are no special offers/ packages for travellers willing to combine PT modes with other sustainable modes of transport (walking, cycling, e-vehicles).

PPB5: A user may not find available bikes when reaching the bike-sharing stations. Each alternative sharing mobility option (e-scooter/car) require a separate application to plan an alternative solution.

PPB6: Physical (not intangible) tickets cards may be easily lost/ stolen

PPB7: If not home delivered, the user needs to collect the card-based ticket from a vending machine in the Metro station (possible queues). A change of infrastructure would be needed to enable digital tickets.

PPB8: There is no integrated navigation functionality during the travel so the user may need to use a different application to get directions on when to get off, how to reach the next stop and the next arrival time for the following leg

3. Travelling to a metro station located at a rural area of Attica

Expected target users Commuters (work, leisure)

Planning

Journey Planning

Booking/Buying

Travelling

Keramikos
Metro Station

Metro (**OASA**)

Omonoia
Metro Station

Metro (**OASA**)

Neratziotisa
Metro Station

Walking

The Mall Athens

Current Pain Points

PPC1: There is no planner app that integrates all services and routes so the user should use different apps to plan the travel solution.

PPC2: No digital ticket available for OASA metro or bus. The ATHENA Card can be purchased online and either delivered home or collected at the station

PPC3: Physical (not intangible) tickets cards may be easily lost/ stolen

PPC4: The user needs to collect a card-based ticket from a vending machine in the Metro station (possible queues). A change of infrastructure would be needed to enable digital tickets.

PPC5: There is no integrated navigation functionality during the travel so the user may need to use a different application to get directions on when to get off, how to reach the next stop and the next arrival time for the following leg

ATHENS

TO-BE Journey Maps

1. Travelling to/from the Northern sector of Athens

Expected target users Commuters for work/education/leisure

Planning

Travelling

A

Journey Planning

Booking/Buying

Keramikos Station

Taxi (**Taxiway**)

Metro (**OASA**)

Bus (**MIRAKLIO**)

Asomaton Bus Station

Iraklio Metro Station

OAED SCHOOL Iraklio

IP4 Enabled Travel Experience

UCA1: The user can plan, through the Travel Companion, an integrated travel solution involving a Taxiway ride, an OASA metro ride and a MIRAKLIO bus section.

UCA2: The user, through the Travel Companion, can select the planned travel solution and directly book the taxi ride, pay travel entitlements and buy a ticket for the metro leg in a unique transaction.

UCA3: Mobility packages are defined through the CMMP by relevant stakeholders and offered to users through the Travel Companion (car and public transport).

UCA4: The Trip Sharing functionality of the Travel Companion can be used to extend the trip planning and booking with a family member.

UCA5: The user receives a digital ticket (usable through the ATHENA Card or via QR code) that can be validated and used to access the metro.
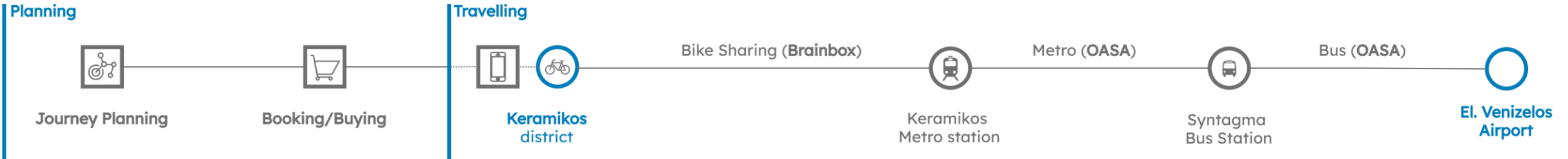
UCA6: The digital ticket is saved in the ATHENA Card or the Travel Companion and always available for inspection. Previously performed trips can also be viewed by the user in the Travel Companion.

UCA7: The Travel Companion notifies the user in real-time about possible disruptions to the metro she/he is supposed to get.

2. Tourists travelling to/from Keramikos district

Expected target users Tourists

B

Planning

Journey Planning   Booking/Buying

Travelling

Bike Sharing (**Brainbox**)   Metro (**OASA**)   Bus (**OASA**)

Keramikos district   Keramikos Metro station   Syntagma Bus Station   **El. Venizelos Airport**

IP4 Enabled Travel Experience

UCB1: The user can plan through the Travel Companion an integrated travel solution involving busses, metro and bike sharing.

UCB2: The user, through the Travel Companion, can select the planned travel solution, opt to book a bike and buy a ticket for the metro leg in a unique transaction.

UCB3: The user is proposed with this travel solution only if bikes are available, otherwise, the Travel Companion will directly propose alternative solutions.

UCB4: Mobility packages are defined through the CMMP by relevant stakeholders and offered to users through the Travel Companion to support the combined usage of public transport and bike rides.
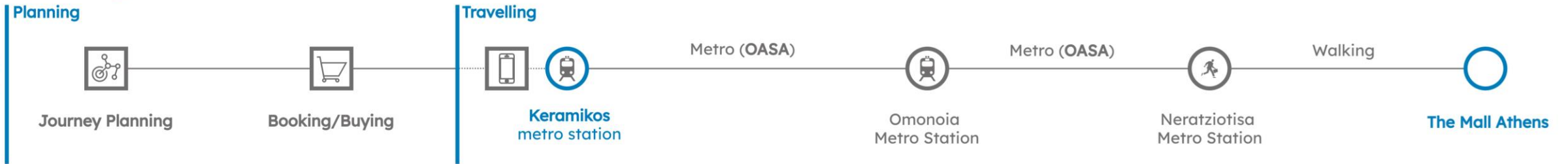
UCB5: The Travel Companion notifies in real-time the user about possible bike availability.

UCB6: The Travel Companion offers an integrated navigation functionality offering to the user directions on how to reach the correct metro or bus stop.

UCB7: If the waiting times are fairly long the user can user the Travel Companion's location-based experiences to access quiz games and commercial offers.

3. Travelling to a metro station located at a rural area of Attica

Expected target users Commuters (work, leisure)

Planning

Journey Planning

Booking/Buying

Travelling

Keramikos
metro station

Metro (**OASA**)

Omonoia
Metro Station

Metro (**OASA**)

Neratziotisa
Metro Station

Walking

The Mall Athens

IP4 Enabled Travel Experience

UCC1: The user can plan through the Travel Companion an integrated travel solution involving busses and metro.

UCC2: The user, through the Travel Companion, can select the planned travel solution and directly buy a ticket for the metro leg in a unique transaction.

UCC3: Mobility packages are defined through the CMMP by relevant stakeholders and offered to users through the Travel Companion to support the combined usage of public transports.

UCC5: The Travel Companion offers an integrated navigation functionality offering to the user directions on how to reach the correct metro or bus stop.

UCC6: Through the Travel Companion, the user can provide feedback about delays, cleanliness of the stations, disruptions, crowdiness, etc.

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PADUA

AS-IS Journey Maps

1. Travelling to Venice University

Expected target users Commuters (workers, students) travelling from a town in rural area surrounding Padua to the University of Venice (Ca' Foscari) Campus.

A

Planning

Journey Planning	Booking/Buying

Travelling

Bus (**BusItalia** Veneto) — Train (**Trenitalia**) — Walking

Montegalda
Bus Station

Padua Central
Station

Venice St. Lucia
Station

Venice Ca' Foscari
University Campus

Current Pain Points

PPA1: Trenitalia and BusItalia website\app provide partial support for multi-modal door-to-door planning, possibly not including first and last miles

PPA2: The user needs to use two separate applications to purchase the BusItalia and Trenitalia tickets.

PPA3: It is not possible to book ancillary service (e.g. meal on the train) in advance.

PPA4: Trenitalia and Busitalia website\app don't provide integrated tickets\mobility packages.

PPA5: Real-time updates are displayed through monitors tables for BusItalia (no real-time updates available through the app). The user may reach the bus station before discovering that the bus service is not available due to a disruption.
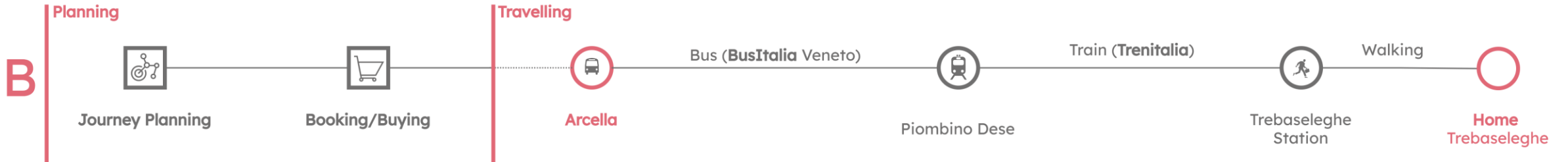
PPA6: In case of disruption for the first leg, the user should use the BusItalia and Trenitalia application to cancel the bookings and perform re-planning of the travel solution using separate applications. If an alternative BusItalia service is not available, the user may need to plan a different travel solution.

PPA7: A different entitlement should be provided by the user for inspection for the BusItalia and Trenitalia leg using different applications.

PPA8: In case of disruption on one or multiple legs, the user needs to go/write to Trenitalia or Busitalia Veneto stations/info points to get a refund.

2. Travelling home from Arcella to Padua rural area

Expected target users Commuters (workers) travelling back home in the rural area surrounding Padua from the suburban area of Padua.

B

Planning

Journey Planning · Booking/Buying

Travelling

Arcella — Bus (**BusItalia** Veneto) — Piombino Dese — Train (**Trenitalia**) — Trebaseleghe Station — Walking — **Home** Trebaseleghe

Current Pain Points

PPB1: Trenitalia and BusItalia website\app provide partial support for multi-modal door-to-door planning, possibly not including first and last miles.

PPB2: The user cannot easily share the trip details with a friend who ususally travels by car.

PPB3: The user needs to use two separate applications to purchase the BusItalia and Trenitalia tickets.

PPB4: No integrated rates are available for a user (nor train and bus, nor train and parking) so a solo traveller may prefer to directly reach her/his destination using the car.

PPB5: Real-time updates are displayed through monitors tables for BusItalia (no real-time updates available through the app). The user may reach the bus station before discovering that the bus service is not available due to a disruption.

PPB6: In case of disruption for the first leg, the user should use the BusItalia and Trenitalia application to cancel the bookings and perform re-planning of the travel solution using separate applications. If an alternative BusItalia service is not available, the user may need to plan a different travel solution.

PPB7: There is no integrated navigation functionality during the travel so the user may need to use a different application to get directions on when to get off, how to reach the next stop and the next arrival time for the following leg.

PPB8: A different entitlement should be provided by the user for inspection for the BusItalia and Trenitalia leg using different applications.
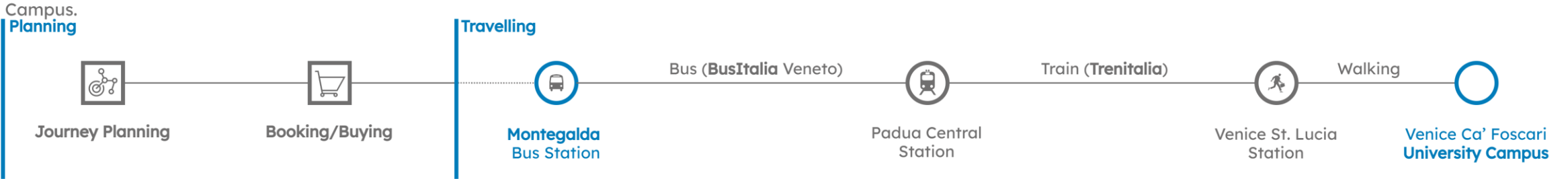
PPB9: In case of disruption on one or multiple legs, the user needs to go/write to Trenitalia or Busitalia Veneto stations/info points to get a refund.

PADUA

TO-BE Journey Maps

1. Travelling to Venice University

Expected target users Commuters (workers, students) travelling from a town in rural area surrounding Padua to the University of Venice (Ca' Foscari) Campus.

Planning

Travelling

A

Journey Planning — Booking/Buying

Bus (**BusItalia** Veneto) — Train (**Trenitalia**) — Walking

Montegalda Bus Station

Padua Central Station

Venice St. Lucia Station

Venice Ca' Foscari University Campus

Use Cases

UCA1: The user can plan through the Travel Companion an integrated travel solution involving a bus ride from Montegalda to the Padua Central station, and a train leg to Venice St. Lucia.

UCA2: The user, through the Travel Companion, can select the planned travel solution and directly book and buy the bus leg with BusItalia and the train leg with Trenitalia in a unique transaction.

UCA3: The user, through the Travel Companion, can visualise, book and buy ancillary services for the planned solution (e.g. meal on the train).

UCA4: Mobility packages are defined through the CMMP by BusItalia and Trenitalia stakeholders to offer integrated rates for bus and train to commuters.

UCA5: The user can access through the Travel Companion the digital ticket(s) (e.g., QR code) that can be validated and used to access both the bus and the train.
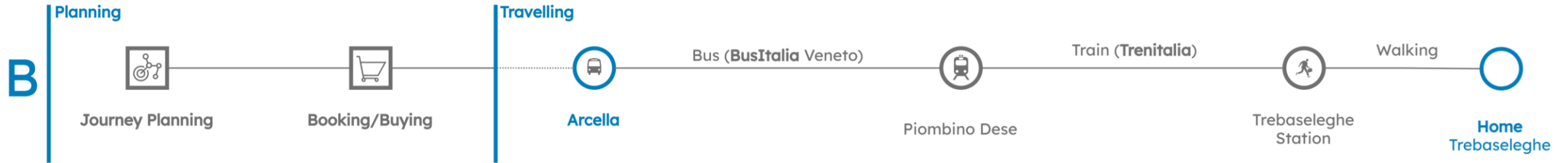
UCA6: The Travel Companion notifies in real-time the user about possible disruptions to the bus she/he is supposed to get.

UCA7: In case of disruption for the first leg, the user can use the Travel Companion application to cancel the bus and train bookings and directly plan an alternative travel solution.

UCA8: Through the Travel Companion, the user can provide feedback about delays, cleanliness of the stations, disruptions, crowdiness, etc.

2. Travelling home from Arcella to Padua rural area

Expected target users Commuters (workers) travelling back home in the rural area surrounding Padua from the suburban area of Padua.

Planning

Travelling

B

Journey Planning — Booking/Buying ⋯ **Arcella** — Bus (**BusItalia** Veneto) — Piombino Dese — Train (**Trenitalia**) — Trebaseleghe Station — Walking — **Home** **Trebaseleghe**

Use Cases

UCB1: The user can plan through the Travel Companion an integrated travel solution involving a bus ride from Arcella to the Padua Central station, and a train leg to Camposampiero.

UCB2: Friends of the user, usually travelling to/from work in Padua by car, may be interested in joining. The Trip Sharing functionality of the Travel Companion can be used by a user to notify friends about her/his travel solutions for the next day.

UCB3: The user, through the Travel Companion, can select the planned travel solution and directly book and buy the bus leg with BusItalia and the train leg with Trenitalia in a unique transaction.

UCB4: Mobility packages are defined through the CMMP by relevant stakeholders and offered to users through the Travel Companion (train and bus, or train and parking) to reduce the usage of cars in the Padua city.

UCB5: The Group Travelling functionality can be used by a user to directly purchase tickets also for friends interested in joining her/him on the same travel solution.

UCB6: The user can access through the Travel Companion the digital ticket(s) (e.g., QR code) that can be validated and used to access both the bus and the train.

UCB7: The Travel Companion notifies in real-time the user about possible disruptions to the bus she/he is supposed to get.

UCB8: In case of disruption for the first leg, the user can use the Travel Companion application to cancel the bus and train bookings and directly plan an alternative travel solution.

UCB9: Through the Travel Companion, the user can provide feedback about delays, cleanliness of the stations, disruptions, crowdiness, etc.

UCB10: The Travel Companion provides navigation information during the travel on the time of arrival/next arrival time for the train, and information on the intermediate stops to be performed before reaching the destination.

OSIJEK

AS-IS Journey Maps

1. Travelling to UNIOS student campus
Expected target users Students, employees

A

Planning

Journey Planning → Booking/Buying

Travelling

Čepin → *Private car/Ridesharing* → Čepin Railway Station → *Train (HŽPP)* → Railway station Osijek Dravski most → *Tram (GPP)* → **Student Campus Osijek**

Current Pain Points

PPA1: The HŽPP planner offers station-to-station planning and can be used to plan only the train itinerary between the stations of Čepin and Osijek Dravski most.

PPA2: GPP doesn't provide journey planning. The user should use a third-party app to calculate the route to reach the Student Campus from Osijek Dravski most.

PPA3: Train departures from Čepin train station are not frequent and no door-to-door journey planning is provided. The user should estimate the time required to perform the first leg to the station using a third-party app.

PPA4: The user should use different applications to book the train ticket for HŽPP and to purchase the GPP ticket for the tram leg.

PPA5: No integrated rates for train (HŽPP) and public transport (GPP) are available for the passenger. A discount is available for passengers buying HŽPP and GPP monthly subscriptions but purchases should be performed separately.
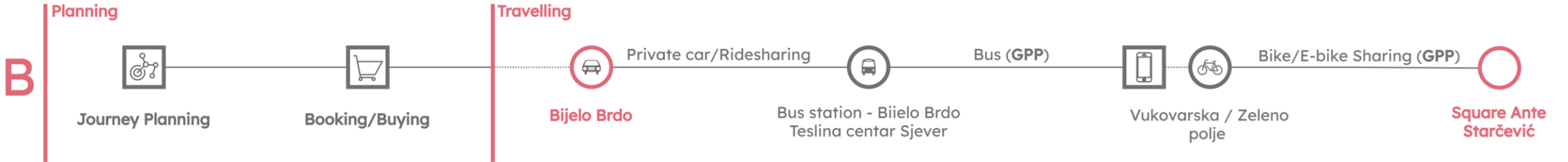
PPA6: Real-time updates are available only for HŽPP through the app but provide limited information and the user is not automatically notified. The user should check social networks to receive news about disruptions on GPP lines.

PPA7: No navigation tool is available for the user during the travel.

PPA8: The ticket for the GPP tram leg must be validated separately from the HŽPP train ticket.

2. Travelling to Osijek city center

Expected target users Daily commuters (students, employees), retired people, visitors (people coming to the city center for leisure or recreational activities)

B

Planning

Journey Planning — **Booking/Buying**

Travelling

Private car/Ridesharing — Bus (**GPP**) — Bike/E-bike Sharing (**GPP**)

Bijelo Brdo — Bus station - Bijelo Brdo Teslina centar Sjever — Vukovarska / Zeleno polje — **Square Ante Starčević**

Current Pain Points

PPB1: Door-to-door journey planning is not available. The user should use a third-party app to calculate the entire travel solution.

PPB2: The user should use the bike-sharing application to check the position of bike-sharing stations before planning the travel solution.

PPB3: The user should use different applications to purchase the GPP ticket for the bus leg and to pay the bike-sharing ride.

PPB4: The bike for the ride cannot be booked in advance, but only when reaching the station.

PPB5: No integrated tickets/mobility packages available to support the combined usage of public transport and sharing mobility.

PPB6: No real-time updates on disruptions for the bus leg.

PPB7: An integrated navigation functionality is not available during the travel, the user may need to use a different application to know when to get off from the bus and where the bike-sharing station is located.

PPB8: A user may not find available bikes when reaching the bike-sharing stations. Each alternative sharing mobility option (e-scooter/car) require a separate application to plan an alternative solution.

PPB9: A tourist may want to know how to reach the tourist attractions from the bike-sharing station.
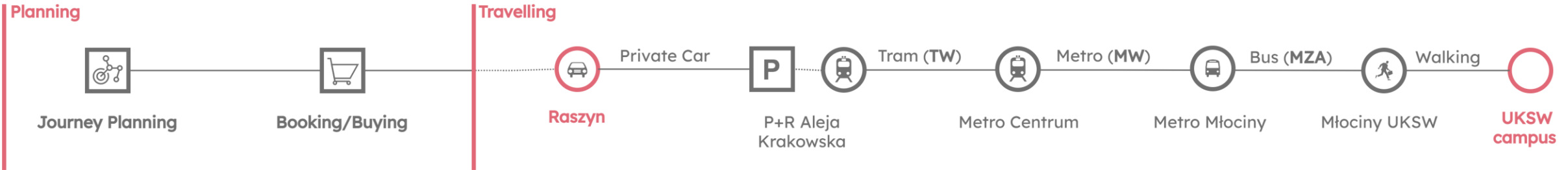
WARSAW

AS-IS Journey Maps

1. Travelling to UKSW campus

Expected target users Commuters (workers, students)

A | **Planning** | **Travelling**

Planning

Journey Planning — Booking/Buying

Travelling

Raszyn —*Private Car*→ P+R Aleja Krakowska —*Tram (TW)*→ Metro Centrum —*Metro (MW)*→ Metro Młociny —*Bus (MZA)*→ Młociny UKSW —*Walking*→ **UKSW campus**

Current Pain Points

PPA1: ZTM, MZA and TW do not provide journey planning. The user should use a third-party App (Jakdojade) to calculate the route to reach UKSW campus. Jakdojade does not provide door-to-door solutions.

PPA2: The user should use Jakdojade or other certified Apps to purchase the ticket for the journey.

PPA3: At peak hour, the user could be involved in traffic jam. There are no incentives to promote the usage of PT or ride-sharing for reducing the number of cars on the road.

PPA4: The user may have difficulties in finding a place where to park the car.

PPA5: Real-time updates about delays and disruptions are announced via speakers by drivers and displayed through monitors tables. The user doesn't receive a push notification and may reach the transfer point before discovering that the Tram/Metro/Bus is not working due to a disruption.

PPA6: In case of disruption, the user should use Jakdojade to identify an alternative travel solution to reach the UKSW campus.

PPA7: A navigation system is not available for travelers. The user is not notified that e.g., it is time to board or to get off.

PPA8: Bus waiting time could be more than 10 minutes.

2. Travelling to SGGW campus

Expected target users Commuters (workers, students)

B

Planning

Journey Planning

Booking/Buying

Travelling

Bus (**MZA**) — Metro (**MW**) — Bus (**MZA**) — Walking

Dąbrówka Wiślana — Metro Młociny — Metro Służew — SGGW – Rektorat — SGGW campus

Current Pain Points

PPB1: ZTM, MZA and TW do not provide journey planning. The user should use a third-party App (Jakdojade) to calculate the route to reach SGGW campus.

PPB2: The user should use Jakdojade or other certified Apps to purchase the ticket for the journey.

PPB3: Real-time updates about delays and disruptions are announced via speakers by drivers and displayed through monitors tables. The user doesn't receive a push notification and may reach the transfer point before discovering that the Metro/Bus is not working due to a disruption.

PPB4: In case of disruption, the user should use Jakdojade to identify an alternative travel solution to reach the SGGW campus.

PPB5: A navigation system is not available for travelers. The user is not notified that e.g., it is time to board or to get off.

PPB6: Bus waiting time could be more than 10 minutes.

LIBEREC

AS-IS Journey Maps

1. Travelling to the hospital in Liberec

Expected target users Commuters

Planning

Travelling

A

Journey Planning — Booking/Buying ⋯ **Nový Bor** Bus Station — Bus (**KORID**) — Jablonné v Podještědí — Train (**ARRIVA**) — Nádraží (Liberec) — Tram (**KORID**) — Šaldovo náměstí — Walking — **Regional hospital** (Liberec)

Current Pain Points

PPA1: The planning app does not allow the user to set up personal preferences

PPA2: No ancillary services can be booked in advance (e.g. WiFi, meals,...).

PPA3: No integrated tickets/mobility packages including external bike/car sharing services or parking credit.

PPA4: It is not possible to share the ride with other passengers using the IDOS web-app

PPA5: Real-time updates regarding delays and cancellations for the selected travel solution are not provided as notifications to the end-users

PPA6: In case of disruption it may be difficult to find an alternative solution combining different means of transport. IDOS offers no re-planning functionalities.

PPA7: There is no integrated navigation functionality during the travel so the user may need to use a different application to get directions on when to get off, how to reach the next stop and the next arrival time for the following leg

2. Trip through the historical beauties of the Liberec region

Expected target users Tourists

B

Planning

Journey Planning — **Booking/Buying**

Travelling

Zittau — Train (**KORID - TL**) — Liberec — Train (**KORID**) — Frýdlant Bus Station — Bus (**ČSAD Liberec**) — Hejnice Bus Station — Walking — **Hejnice monastery**

Current Pain Points

PPB1: The planning app does not allow the user to ser up personal preferences

PPB2: No ancillary services can be booked in advance (e.g. WiFi, meals,...).

PPB3: No integrated tickets/mobility packages including external bike/car sharing services or parking credit.

PPB4: It is not possible to share the ride with other passengers using the IDOS web-app

PPB5: Real-time updates regarding delays and cancellations for the selected travel solution are not provided as notifications to the end-users

PPB6: In case of disruption it may be difficult to find an alternative solution combining different means of transport. IDOS offers no re-planning functionalities.

PPB7: There is no integrated navigation functionality during the travel so the user may need to use a different application to get directions on when to get off, how to reach the next stop and the next arrival time for the following leg

3. Business trip to Warsaw

Expected target users Businessman who is familiar with travelling between Jablonec nad Nisou and Warsaw

Planning

Travelling

Journey Planning — Booking/Buying

Nový Svět — Tram (KORID) — Jablonec nad Nisou — Train (KORID, Koleje Dolnoslaskie) — Szklarska Poreba Go — Train (Koleje Dolnoslaskie) — Wroclaw Glowny — Train (PKP Intercity) — Warszawa Centralna — Tram (TW) — Konstruktorska (tram stop) — Walking — Służewiec business area

Current Pain Points

PPC1: There is no planner app that integrates all the services of both the Liberec and Warsaw areas so the user should use different apps to calculate the complete travel solution.

PPC2: A user can not have another person arrange the trip on his/her behalf

PPC3: Buying the tickets for all the legs require multiple apps for the Liberec part, the legs in the middle and the final Warsaw part.

PPC4: No integrated tickets/mobility packages including external bike/car sharing services or parking credit.

PPC5: Real-time updates regarding delays and cancellations for the selected travel solution are not provided as notifications to the end-users

PPC6: In case of disruption it may be difficult to find an alternative solution combining different means of transport. IDOS offers no re-planning functionalities and the user would have to recalculate a new solution.

PPC7: There is no integrated navigation functionality during the travel so the user may need to use a different application to get directions on when to get off, how to reach the next stop and the next arrival time for the following leg

PPC8: Waiting times may be long in between the different legs, especially when the changes needed are this many.

PPC9: Tickets are not refundable. If any distruption was to happen, the user may loose the value of the ticket (if already validated)