



D 3.4.1 – E-CHAIN platform design and high-level architecture

WP 3 - Activity 3.4 – Platform design

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1. VERSION CONTROL

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3. ACRONYMS / ABBREVIATIONS

ACRONYM	DEFINITION
IT	Information Technologies
PP	Project partners
PT	Project Team
SoA	State of the Art
TC	Technical task coordinator
WP	Work package

4. INTRODUCTION

4.1. PURPOSE OF THE DOCUMENT

The document has been developed in accordance with the Activity 3.4 “Platform and service design of E-CHAIN” of the Project.

The task of the document is to gather requirements for design and development of the services within E-CHAIN platform for the deployment in the pilot sites (Ancona, Split and Venice). The aim is to draw up the comprehensive design for all pilot sites’ implementation and to prepare specifications for all equipment and systems involved.

5. WORKING PRINCIPLE

The WP 3.4 Activity’s objective is to design E-CHAIN platform, consisting of several components and modules. Modularity allows to offer all ports in the Adriatic area a suitable tool for specific needs. The scope is providing a platform and infrastructure, allowing creation and usage of wide mobility services within Program area.

Basic step is to define a global and refined architecture for service ecosystem and facilities that are provided by the platform. That will ensure a holistic architecture approach to E-CHAIN and will provide enough details for the development activities and enable them to refine the architecture to their needs. This will also couple the individual developments to a common approach. The characteristics of existing services and standard used within PPs IT system will be considered for the platform design. Definition of Web services allows interfacing between systems provided by partners involved or DLL for integration in the local systems, are included in the activity.

Particularly the WP 3.4.1 is related to E-CHAIN platform design and high level architecture. This deliverable consists of the reference architecture for all developed services, interfaces and E-CHAIN platform from which site-specific technical architectures will be derived and info-mobility and info-panel system design.

6. BACKGROUND INFORMATION

E-CHAIN’s (Enhanced Connectivity and Harmonization of data for the Adriatic Intermodal Network) main objective is to enhance connectivity and harmonization of data for the Adriatic Intermodal Network, through the realization of a modular integrated software (E-CHAIN platform) for the management of intermodal transport services in port areas for passenger transport. To enhance the current situation, E-CHAIN will focus on providing new services such as: an improved Port multimodal info mobility system for the passengers, a ticketing system integrated with other transport modes, and an advanced touristic co-

marketing tool for the operators. These services will be designed and deployed in the selected pilot sites (Ancona, Split and Venice). A Business model suited to adapt the technology developed in the three applicative contexts will be created and specific needs will be taken into account.

7. SEGMENTATION AND SUB-SEGMENTATION

7.1. GENERAL INFORMATION

The platform E-CHAIN will perform three principal functions:

- Function A: trip planning (the delivery of customer facing solutions)
- Function B: trip management and support (assistance during the journey and facilitation of interactions between customer and suppliers)
- Function C: data analysis (providing PAs and suppliers with comprehensive data for the analysis of flows and improvement of transport performance in the port area)

Function A:

The interface will be: a responsive web portal.

Function B:

The interface will be: login page for customers, instant communication with the customer, login page for suppliers.

Function C:

The interface will be: dashboard with aggregated data analysis for the PA, dashboard with specific data for analysis each supplier.

7.1.1. FUNCTION A

To describe this function, first we identified some benchmarks analysing comparable sites, such as:

- Rome2Rio
- Google Maps
- Herewego
- Omio
- Viamichelin
- Waze

We tested all these platforms with the same trip request to compare their results reporting (See Attachment A), the visualization and the research engines used.

Customer side

The customer will use the platform to plan the trip, inserting the starting point and the final destination. The platform will use Google Maps to show the different options to reach the defined access point of the port (Tronchetto in Venice, the maritime station in Ancona, the maritime station in Split). At the access point the user will have the option to use a static SVG map with routes to the embarkation dock (after clicking a specific button with allowance to share the user's position to the platform).

The path designed for the user is as follows:

- Search on the E-Chain portal for trip options with Google Maps
- Receiving information on the CO2 of the various routes
- For every route option the list of transport services suppliers will be indicated with the links to the suppliers' booking web-sites and contacts for offline booking. In the case of online booking the user will be redirected to the supplier's booking web-page with already pre-filled fields, in accordance with the search carried out by Google Maps (when possible). The purchased tickets should appear in a customer wallet (tracked booking links the supplier's site with E-chain site). In the case of offline booking, the purchased tickets will be uploaded to the customer wallet manually by the operator. The tracking of bookings will be performed between the E-Chain portal and the sites of the various suppliers (or, in the second case, through a form compiled by the operator) and between the sites of the various suppliers and E- Chain in order to activate the function B.
- To activate the function B, the customer gives consent to be informed on the updates and details of the trip as well as complementary offers of non-transport services. The data with the details of the trip are provided by the supplier or uploaded by the customer if the supplier does not provide such data or if the tickets were purchased by the customer out of E- Chain platform.
- At the end of the route selection or after completing the purchase, the user returns to the E-Chain page and we suggest cross-selling or up-selling of the non-transport services that we have managed with the DMS (data relating to the third part of the document 3.3.1 on the three pilot sites uploaded individually by suppliers or manually by us).

Supplier side

We will use Google Maps for its "Google Transit" system that operates with real-time timetables of various suppliers. Moreover, since the integration between suppliers' systems and Google Transit is free of charge and it works with easy-to-use API GTFS, Google Transit attracts a growing number of suppliers, making this system most suitable for E-Chain.

Trenitalia is already on Google Transit routing (therefore with real-time updates on the status of the trains)

Jadrolinija is on Google Transit but without routing (therefore either they integrate it or we take it from the port authorities of Ancona and Split)

Conerobus is now on Google Transit for the Ancona and Jesi areas

7.1.2. FUNCTION B

Based on the dedicated links (or the proactive position of the customer who wants to take advantage of the "keep me informed" service) we will activate pre-filled CRM for instant messaging. These are predefined messages from individual suppliers, sent via SMS / email, sent on specific dates and times regarding basic travel information such as date and time of departure (of the ferry, for example), route, type of transport used to arrive up to the access point.

The path for the user of transport services is as follows:

- The user clicks on the dedicated link and accesses the page already loaded with his travel data. After being informed of the GDPR, the user clicks to start the CRM, and receives as well assistance numbers with short links for quick communication (a support chat, for example)

The path for the transport service provider is as follows:

- Supplier establishes the contents of the CRM based on ports, seasonality, type of customers, dates of departure, etc.
- Supplier integrates a dedicated link into all confirmation emails on online ticket purchase, that preloads the relevant data into E-Chain platform. Furthermore, upon the customer's consent, supplier starts the CRM.
- Supplier (or operator in case of offline-purchased tickets) uploads the customer data on a dedicated page, by importing from .CSV file for example

The path for the non-transport service provider is the following:

- The supplier uses the DMS to load the bookable services and to manage their availability, the DMS already starts the CRM preloaded by the suppliers themselves.

The path devised for the user of non-transport services is as follows:

- The customer uses the DMS and receives confirmation via instant messaging and communications of the CRM prepared by the supplier.

The data needed to start the CRM (both transport and non-transport) are:

- Date and time of departure
- Place of check-in and time of the boarding
- Supplier contacts and assistance contacts
- Languages spoken and passenger's special needs

The path for the PA (e.g. port services manager) is as follows:

- Tourist board uploads the information on events with date, time and place - if they match the client's arrival data, they are automatically sent to him.
- Automatically sent weather forecast based on the simple integration with place, date, and time.
- Port authority or other territorial body provides special communications for specific periods of time (e.g., temporarily modified port viability due to the official communications), or particular indications (e.g. specific anti-Covid regulations), or documents required for abroad-travels (e.g. post-Covid health passport/Green Pass). These communications will be loaded manually by local operators appointed by these bodies

Customer Relationship Management (CRM)

Here we will report a list of sms messages related to the CRM for different types of passengers

Passengers boarding cars			
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Dear tag_client free for you our customer service with useful information and updates for your trip. Click here
Port departure1-Port Arrival1	Before departure Special messages		
	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo1. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in Porto arrival1	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arriv1. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo2. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in port_arrival_2	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arrival2. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
After Trip	24 hours after arrival in port_arrival2		Was our assistance useful to you? Your opinion matters! Click here and tell us yours

		Foot passengers	
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Dear tag_client free for you our customer service with useful information and updates for your trip. Click here
Port departure1-Port Arrival1	Before departure Special messages		
	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo1. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in Porto arrival1	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arriv1. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo2. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in port_arrival_2	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arrival2. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
After Trip	24 hours after arrival in port_arrival2		Was our assistance useful to you? Your opinion matters! Click here and tell us yours

		pax with reduced mobility	
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Dear tag_client free for you our customer service with useful information and updates for your trip. Click here
Port departure1-Port Arrival1	Before departure Special messages	72 hours before departure	Dear customer tag, there are passengers with reduced mobility in your booking. Click here to find all the information on the services available
	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo1. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in Porto arrival1	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arriv1. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo2. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in port_arrival_2	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arrival2. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
After Trip	24 hours after arrival in port_arrival2		Was our assistance useful to you? Your opinion matters! Click here and tell us yours

families with childs			
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Dear tag_client free for you our customer service with useful information and updates for your trip. Click here
Port departure1-Port Arrival1	Before departure Special messages	48 hours before departure	Dear customer tag, do not miss the opportunity to discover tag_portopartenza1 child-friendly before embarking for tag_portoarrivo1
	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo1. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in Porto arrival1	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arriv1. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo2. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in port_arrival_2	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arrival2. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
After Trip	24 hours after arrival in port_arrival2	24 hours after arrival2	Was our assistance useful to you? Your opinion matters! Click here and tell us yours

		campers	
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Dear tag_client free for you our customer service with useful information and updates for your trip. Click here
Port departure1-Port Arrival1	Before departure Special messages	48 hours before departure	Dear customer tag, do not miss the opportunity to discover tag_portopartenza1. Click here for useful info for campers like you!
	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo1. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in Porto arrival1	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arriv1. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer tag, tomorrow we are leaving for tag_tag_porto arrivo2. Click here to check the documents required for boarding.
	Day of departure		
	Arrival in port_arrival_2	1 hour before expected arrival time tag	Soon we will arrive at tag_porto arrival2. Click here for useful and tourist info on tag_portoarrival1. Thanks for traveling with us
After Trip	24 hours after arrival in port_arrival2		Was our assistance useful to you? Your opinion matters! Click here and tell us yours

Here we will report a list of e-mail messages related to the CRM for different types of passengers

Passengers boarding cars			
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Thanks to the E-Chain project, (ITALY CROATIA CROSS-BORDER COOPERATION PROGRAMME) Amatori Traghetti as a partner offers you a free SMS assistance service to keep you informed during all phases of your trip to or from Croatia. 3 authorization: a) sending sms info b) authorization for data collection for statistical purposes c) authorization for sending sms for commercial communications by other commercial operators
Port departure1- Port Arrival1	Before departure Special messages		
	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at tag_departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity cards or passports of all passengers in addition to any medical documentation required.at the time of departure (covid test / green pass / vaccination certificates, etc). Useful links: 1) open path to get to the ferry terminal of tag_portopartenza1 for check in. 2) Reach the boarding pier at tag_portopartenza1 3) Passenger boarding info tag_portopartenza1 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza1 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in Porto arrival1	1 hour before expected arrival time tag	1) Useful info tag info port arrival1 2) Discover port_arrival1
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity card or passport of all passengers. In addition to any medical documentation required at the time of departure (covid test / green pass / vaccination certificates). Useful links: 1) open path to get to the ferry terminal of the tag_portopartenza2 for check in. 2) Reach the boarding dock at tag_portopartenza2 3) Passenger boarding info tag_portopartenza2 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza2 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in port_arrival_2	1 hour before expected arrival time tag	1) Useful info tag info port arrival2 2) Discover port_arrival2
	After Trip	24 hours after arrival in port_arrival2	

		Foot passengers	
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Thanks to the E-Chain project, (ITALY CROATIA CROSS-BORDER COOPERATION PROGRAMME) Amatori Traghetti as a partner offers you a free SMS assistance service to keep you informed during all phases of your trip to or from Croatia. 3 authorization: a) sending sms info b) authorization for data collection for statistical purposes c) authorization for sending sms for commercial communications by other commercial operators
Port departure1- Port Arrival1	Before departure Special messages		
	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at tag_departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity cards or passports of all passengers in addition to any medical documentation required.at the time of departure (covid test / green pass / vaccination certificates, etc). Useful links: 1) open path to get to the ferry terminal of tag_portopartenza1 for check in. 2) Reach the boarding pier at tag_portopartenza1 3) Passenger boarding info tag_portopartenza1 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza1 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in Porto arrival1	1 hour before expected arrival time tag	1) Info utili tag info porto arrivo1 2) Scopri porto_arrivo1
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity card or passport of all passengers. In addition to any medical documentation required at the time of departure (covid test / green pass / vaccination certificates). Useful links: 1) open path to get to the ferry terminal of the tag_portopartenza2 for check in. 2) Reach the boarding dock at tag_portopartenza2 3) Passenger boarding info tag_portopartenza2 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza2 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in port_arrival_2	1 hour before expected arrival time tag	1) Useful info tag info port arrival2 2) Discover port_arrival2
	24 hours after arrival in port_arrival2		Questionnaire: question 1 question 2 question 3 etc.
After Trip			

Passengers with reduced mobility			
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Thanks to the E-Chain project, (ITALY CROATIA CROSS-BORDER COOPERATION PROGRAMME) Amatori Traghetti as a partner offers you a free SMS assistance service to keep you informed during all phases of your trip to or from Croatia. 3 authorization: a) sending sms info b) authorization for data collection for statistical purposes c) authorization for sending sms for commercial communications by other commercial operators
	Before departure Special messages	72 hours before departure	Dear customer_tag, there are passengers with reduced mobility in your booking. Click here to find all the information on the services available
Port departure1- Port Arrival1	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at tag_departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity cards or passports of all passengers in addition to any medical documentation required at the time of departure (covid test / green pass / vaccination certificates, etc). Useful links: 1) open path to get to the ferry terminal of tag_portopartenza1 for check in. 2) Reach the boarding pier at tag_portopartenza1 3) Passenger boarding info tag_portopartenza1 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza1 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure		
	Arrival in Porto arrival1	1 hour before expected arrival time tag	1) Useful info tag info port arrival1 2) Discover port_arrival1
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity card or passport of all passengers. In addition to any medical documentation required at the time of departure (covid test / green pass / vaccination certificates). Useful links: 1) open path to get to the ferry terminal of the tag_portopartenza2 for check in. 2) Reach the boarding dock at tag_portopartenza2 3) Passenger boarding info tag_portopartenza2 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza2 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure		
	Arrival in port_arrival_2	1 hour before expected arrival time tag	1) Useful info tag info port arrival2 2) Discover port_arrival2
After Trip	24 hours after arrival in port_arrival2		Questionnaire: question 1 question 2 question 3 etc.

Families with childrens			
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Thanks to the E-Chain project, (ITALY CROATIA CROSS-BORDER COOPERATION PROGRAMME) Amatori Traghetto as a partner offers you a free SMS assistance service to keep you informed during all phases of your trip to or from Croatia. 3 authorization: a) sending sms info b) authorization for data collection for statistical purposes c) authorization for sending sms for commercial communications by other commercial operators
Port departure1- Port Arrival1	Before departure Special messages	48 hours before departure	Dear customer_tag, do not miss the opportunity to discover tag_portopartenza1 child-friendly before embarking for tag_portoarrivo1
	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at tag_departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity cards or passports of all passengers in addition to any medical documentation required.at the time of departure (covid test / green pass / vaccination certificates, etc). Useful links: 1) open path to get to the ferry terminal of tag_portopartenza1 for check in. 2) Reach the boarding pier at tag_portopartenza1 3) Passenger boarding info tag_portopartenza1 https://www.amatori.com/it/traghetto/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza1 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in Porto arrival1	1 hour before expected arrival time tag	1) Useful info tag info port arrival1 2) Discover port_arrival1
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity card or passport of all passengers. In addition to any medical documentation required at the time of departure (covid test / green pass / vaccination certificates). Useful links: 1) open path to get to the ferry terminal of the tag_portopartenza2 for check in. 2) Reach the boarding dock at tag_portopartenza2 3) Passenger boarding info tag_portopartenza2 https://www.amatori.com/it/traghetto/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza2 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in port_arrival_2	1 hour before expected arrival time tag	1) Useful info tag info port arrival2 2) Discover port_arrival2
After Trip	24 hours after arrival in port_arrival2		Questionnaire: question 1 question 2 question 3 etc.

campers			
Booking	Booking date	At the time of booking. When the passenger pays and receives the ticket. He is informed of the possibility of using the concierge service. This step is required to request privacy consent	Thanks to the E-Chain project, (ITALY CROATIA CROSS-BORDER COOPERATION PROGRAMME) Amatori Traghetti as a partner offers you a free SMS assistance service to keep you informed during all phases of your trip to or from Croatia. 3 authorization: a) sending sms info b) authorization for data collection for statistical purposes c) authorization for sending sms for commercial communications by other commercial operators
Port departure1- Port Arrival1	Before departure Special messages	48 hours before departure	Dear customer_tag, do not miss the opportunity to discover tag_portopartenza1. Click here for useful info for campers like you!
	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at tag_departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity cards or passports of all passengers in addition to any medical documentation required.at the time of departure (covid test / green pass / vaccination certificates, etc). Useful links: 1) open path to get to the ferry terminal of tag_portopartenza1 for check in. 2) Reach the boarding pier at tag_portopartenza1 3) Passenger boarding info tag_portopartenza1 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza1 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in Porto arrival1	1 hour before expected arrival time tag	1) Useful info tag info port arrival1 2) Discover port_arrival1
Port Departure2 - Port Arrival2	Before departure	24 hours before departure	Dear customer_tag, here we are, tomorrow we leave. We remind you that your ship leaves at departure time and that you must arrive at the port for check-in 2 hours before departure. We remind you to take the identity card or passport of all passengers. In addition to any medical documentation required at the time of departure (covid test / green pass / vaccination certificates). Useful links: 1) open path to get to the ferry terminal of the tag_portopartenza2 for check in. 2) Reach the boarding dock at tag_portopartenza2 3) Passenger boarding info tag_portopartenza2 https://www.amatori.com/it/traghetti/passeggeri/info-passeggeri 4) Vehicle boarding info tag_porto_partenza2 https://www.amatori.com/en/ferries/vehicles/passenger-vehicles 5) Viaggiare Sicuri Croatia site 6) Enter Croatia site
	Day of departure Arrival in port_arrival_2	1 hour before expected arrival time tag	1) Useful info tag info port arrival2 2) Discover port_arrival2
	After Trip	24 hours after arrival in port_arrival2	

7.1.3. FUNCTION C

We provide two types of dashboards, one with aggregated data for the PA and one with precise data for each supplier, always in a non-exhaustive form, we divide them by the function A-B-C we already explained before:

Function A: trip planning

Main KPIs are:

- Number of web portal users
- Number of user's logins
- Number of customer wallets created (Number of tickets sold using the services but not actual tickets sold. Instead, we will use information of how many links to suppliers booking sites have been detected and how many have been successful)
- Carbon impact (percentages of reduced CO2 and how many users have chosen to reduce it compared to the fastest/cheapest trip)
- Number of requests from customers to be kept informed during the trip
- Number of customers who don't want to be informed during the trip (receive sms/email)
- Number of the non-transport services (managed with the DMS) detected

Function B: trip management and support

Main KPIs are:

- Number of customers who accessed dedicated links and started the CRM
- Number of sms / e-mail to customers from E-chain web platform
- Number of supplier's logins
- Number of the CRM created
- Number of non-transport supplier's logins
- Number of non-transport services
- Number of non-transport services booked
- Number of special communications from port authority or other territorial body

Function C: data analysis

Main KPIs are:

- Number of route requests on the E-chain web platform
- Number of links to suppliers' booking sites that have been detected
- Number of links to suppliers' booking sites that have been successful (completed the purchase)
- Percentages of reduced CO2 (and how many have chosen to reduce it compared to the fastest/cheapest trip)
- Number of successful cross-selling and up-selling non-transport services
- Number of geolocation of users who have joined the service in real time during the navigation within port area
- Number of special needs shown (families with children, people in wheelchairs, motor homes)
- Service operators' investment costs
- Service operators' operating costs
- Average modal split-passengers (analysis of customer travel modes and routes).

For further explanation about the KPIs analysis we suggest to check the WP 5.3.1

7.2. TOTEM

In 2 pilot sites - Ancona and Split - two totems will be placed in the ports area to provide access to the E-Chain's services.

Both totems will be touch-responsive and interactive. The totem will be a personalization of the Split's and Ancona's pages of E-Chain the platform. QR codes will be used to let the customers download the suitable information directly into their smartphone.

PAs of both Split and Ancona will have the possibility to manage the information showed in the totems.

7.3. MOCKUPS

The links below demonstrate mockups on the platform and the totems.

E-Chain Platform

<https://xd.adobe.com/view/c139c879-de80-45e2-8bac-5f416f304586-946a/>

Split's totem

<https://xd.adobe.com/view/d0aba8df-a7bc-4c00-af4e-cbb50971ad08-85f8/>

Ancona's totem

<https://xd.adobe.com/view/e7241344-f5a9-4482-9a1a-960bb545e011-b277/>