

Pilot Action – PCS Automation

Multimodal Route Planner

Deliveries Planning System - DELPLAN

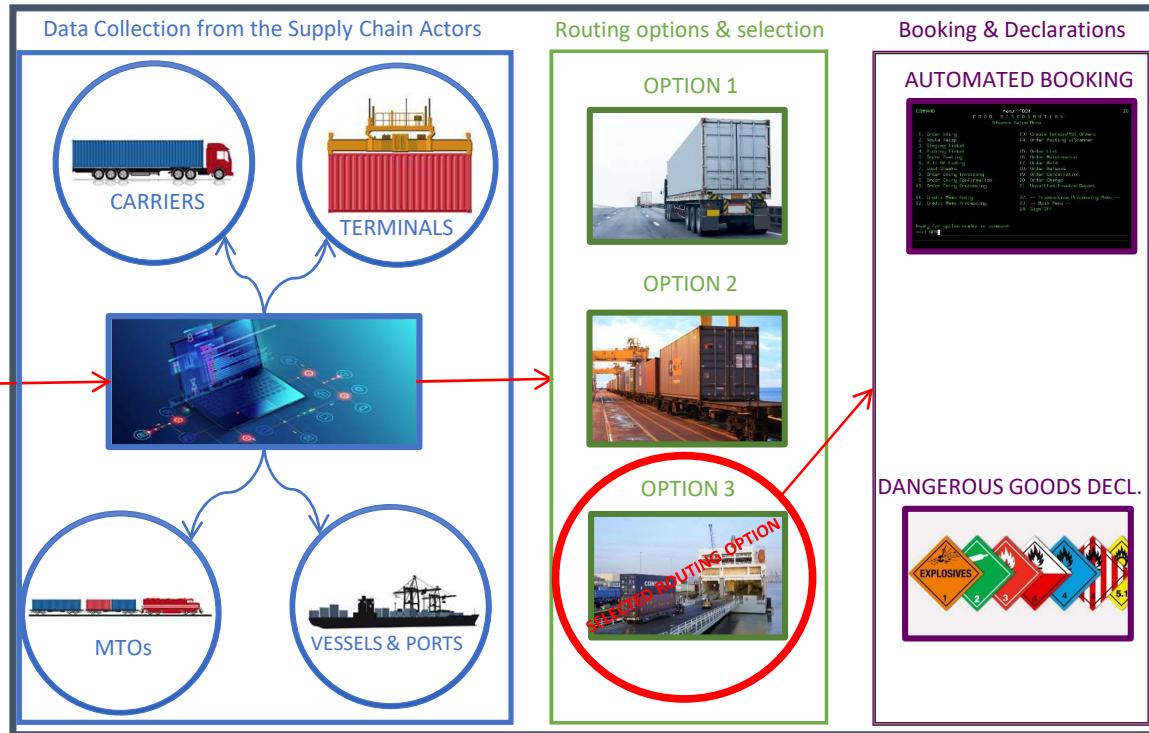
«Digitalising Logistics processes – DigLogs»

<https://www.italy-croatia.eu/diglogs>

Actual IT (PP5) & Polo Inoltra (PP6)

DELIVERIES PLANNING SYSTEM: PROPOSED SOLUTION

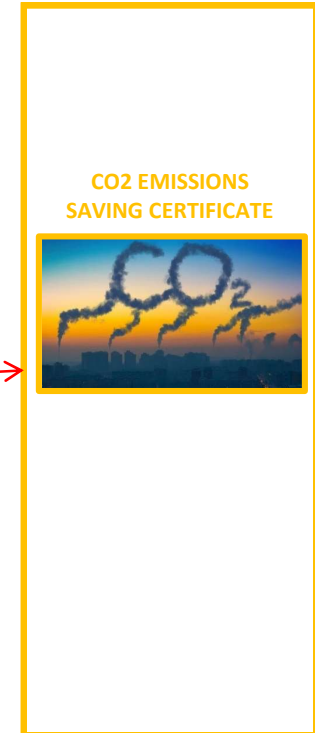
Phase 1. Before the Shipment



Phase 2. During the Shipment



Phase 3. After the Shipment



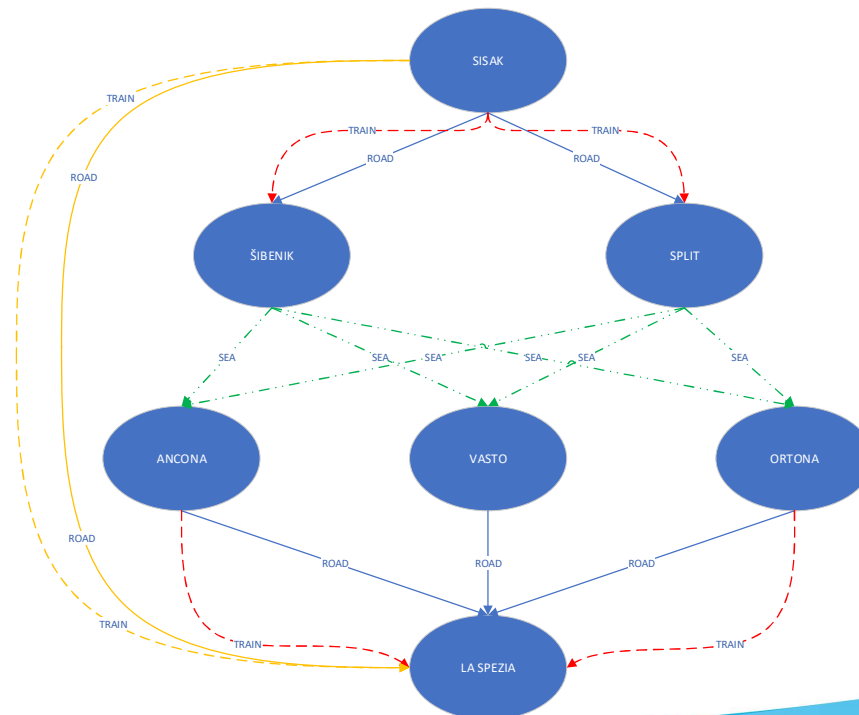
DELPLAN – PILOT FUNCTIONALITIES

PILOT NAME DelPlan – Deliveries Planning System

PILOT TYPOLOGY Multimodal Route Planner

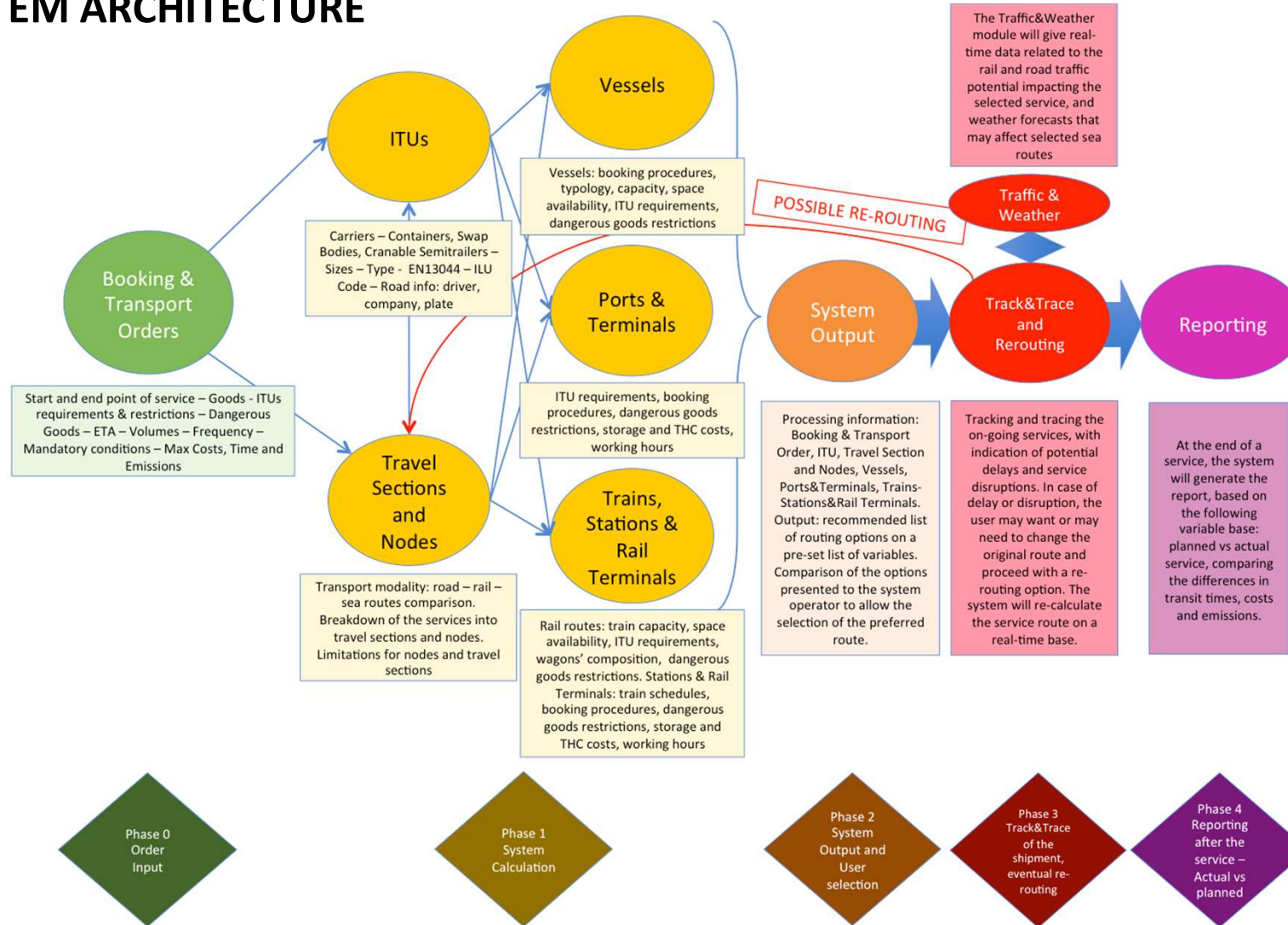
FUNCTIONALITIES

The system calculates all the potential intermodal routing options on the three modality rail-road-sea, in terms of costs, transit times and emissions, starting from or arriving at any Italian province or Croatian county.



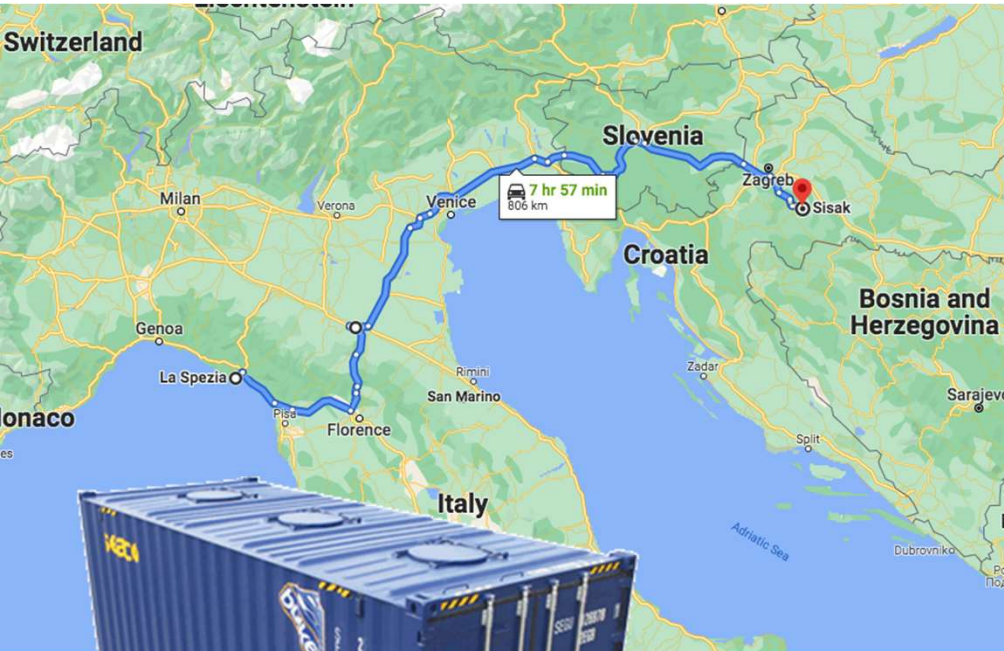
DELPLAN – SYSTEM FUNCTIONALITIES

SYSTEM ARCHITECTURE



DELPLAN – SYSTEM FUNCTIONALITIES

SHIPMENT SAMPLE: BULK CONTAINER TRANSPORT FROM LA SPEZIA TO SISAK



DELPLAN – SYSTEM FUNCTIONALITIES

SHIPMENT SAMPLE: BULK CONTAINER TRANSPORT FROM LA SPEZIA TO SISAK



DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot shows a web browser window with the URL `dev-diglogs.portline.eu/home`. The application is titled "Diglogs" and the user is logged in as "Marco Grifone". The dashboard features a sidebar with navigation options: Dashboard, General Overview (selected), Route planning, and Administration. The main content area displays three key performance indicators (KPIs) in colored boxes:

- Active items** (Green box): 15. Number of requests currently in progress.
- Reroutes** (Blue box): 3. Reroutes created.
- Todays completions** (Purple box): 1. Number of requests that complete today.

At the bottom left of the sidebar, there is a button labeled "« Collapse sidebar".

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot shows the 'Customer booking request' form in the Diglogs application. The interface includes a dark sidebar on the left with navigation options: Dashboard, Route planning, Customer booking request list (selected), New request, and Administration. The top right of the header shows the user name 'Marco Grifone'. The main form area has a title 'Customer booking request' and a 'Calculate route' button. The form fields are: 'STARTING POINT' (56 - La Spezia, with a dropdown menu open showing options 51 - Gorizia, 52 - Grosseto, 53 - Imperia, 54 - Isernia, 55 - L'Aquila, and 56 - La Spezia), 'ARRIVAL POINT' (empty dropdown), 'CARGO TYPE' (empty dropdown), 'DELIVERY DEADLINE' (text input with placeholder 'day.month.year hour:minute' and a calendar icon), and 'DANGEROUS' (checkbox).

Dashboard

Route planning

Customer booking request list

New request

Administration

Marco Grifone

Customer booking request

Calculate route

STARTING POINT

56 - La Spezia

- 51 - Gorizia
- 52 - Grosseto
- 53 - Imperia
- 54 - Isernia
- 55 - L'Aquila
- 56 - La Spezia

ARRIVAL POINT

CARGO TYPE

DANGEROUS

DELIVERY DEADLINE

day.month.year hour:minute

« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot shows the 'Customer booking request' form in the Diglogs system. The form is titled 'Customer booking request' and includes a 'Calculate route' button. The form fields are:

- STARTING POINT:** 56 - La Spezia
- ARRIVAL POINT:** 131 - Rijeka (selected from a dropdown menu)
- CARGO TYPE:** (empty)
- DANGEROUS:**
- ETD:** day.month.year hour:minute

The dropdown menu for the Arrival Point is open, showing the following options:

- 131 - Rijeka
- 132 - Šibenik
- 133 - Sisak
- 134 - Split
- 135 - Varaždin
- 136 - Virovitica

The sidebar on the left contains the following navigation items:

- Dashboard
- Route planning
- Customer booking request list
- New request
- Administration

The user's name, Marco Grifone, is displayed in the top right corner. A 'Collapse sidebar' button is located in the bottom left corner.

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

Diglogs Marco Grifone

Customer booking request Calculate route

STARTING POINT	ARRIVAL POINT	CARGO TYPE	DANGEROUS
56 - La Spezia	133 - Sisak		<input type="checkbox"/>
ETD	DELIVERY DEADLINE		
day.month.year hour:minute	day.month.year hour:minute		

- SOP - Solid - palletized
- BLK - Bulk
- LIQ - Liquid
- GAS - Gas
- SNP - Solid - not palletized
- OTH - Other

« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot displays the 'Customer booking request' form in the DELPLAN system. The interface includes a sidebar with navigation options: Dashboard, Route planning, Customer booking request list, New request, and Administration. The user 'Marco Grifone' is logged in. The form fields are as follows:

- STARTING POINT:** 56 - La Spezia
- ARRIVAL POINT:** 133 - Sisak
- CARGO TYPE:** BLK - Bulk
- DANGEROUS:**
- ETD (Estimated Time of Departure):** day.month.year hour:minute
- DELIVERY DEADLINE:** day.month.year hour:minute

A date picker is open, showing the month of November 2021. The date 27 is selected. The date picker has tabs for 'DATE' and 'TIME', and buttons for 'CANCEL' and 'SET'.

« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot displays the 'Customer booking request' form in the DELPLAN system. The form includes fields for starting and arrival points, cargo type, and delivery deadline. A date picker is currently open, showing the calendar for November 2021, with the date 12 (Friday, November 12, 2021) selected. The interface also features a sidebar with navigation options and a top header with the user name 'Marco Grifone'.

Customer booking request Calculate route

STARTING POINT	ARRIVAL POINT	CARGO TYPE	DANGEROUS
56 - La Spezia	133 - Sisak	BLK - Bulk	<input type="checkbox"/>

ETD: 02.12.2021 00:00

DELIVERY DEADLINE: day.month.year hour:minute

DATE | **TIME**

November 2021 | Today

SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

December 2021

CANCEL | **SET**

Friday, November 12, 2021

« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot displays the Diglogs system interface. The top navigation bar includes the Diglogs logo and the user name Marco Grifone. The left sidebar contains navigation options: Dashboard, Route planning, Customer booking request list, New request, and Administration. The main content area is titled "Customer booking request" and features a "Calculate route" button. The form contains the following fields:

STARTING POINT	ARRIVAL POINT	CARGO TYPE	DANGEROUS
56 - La Spezia	133 - Sisak	BLK - Bulk	<input checked="" type="checkbox"/>
ETD	DELIVERY DEADLINE		
02.12.2021 00:00	17.12.2021 00:00		

At the bottom left, there is a "Collapse sidebar" button.

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot displays the Diglogs system interface. The top navigation bar shows the user 'Marco Grifone' and a 'Calculate route' button. The left sidebar contains navigation options: Dashboard, Route planning, Customer booking request list, New request, and Administration. The main content area is titled 'Customer booking request' and features a 'Select ITU' modal window.

The 'Select ITU' modal window contains the following fields and controls:

- ITU TYPE (dropdown)
- ITU TYPOLOGY (dropdown, currently set to 'Bulk - Bulk')
- DIMENSIONS (dropdown)
- EN13044 PROFILE NUMBER (input field)
- EN13044 SUPPORT STAND WEIGHT (input field)
- EN13044 POCKET WAGON COMPATIBLE CODES (input field)
- Search and Clear buttons

Below the input fields is a table listing ITU options:

<input type="checkbox"/>	↓	TYPE	TPOLOGY	DIMENSIONS	EN13044 PROFILE N...	EN13044 SUP
<input type="checkbox"/>	5	Container	Bulk	45'		
<input type="checkbox"/>	4	Container	Bulk	40'		
<input type="checkbox"/>	3	Container	Bulk	30'		
<input type="checkbox"/>	2	Container	Bulk	21'-29' NON-ISO		
<input type="checkbox"/>	1	Container	Bulk	20'		

At the bottom of the modal, there are pagination controls showing '1' selected, '10' items per page, and '1 - 5 of 5 items'. The modal also includes 'Cancel' and 'Select' buttons.

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot displays the 'Customer booking request' interface in the Diglogs system. A modal window titled 'Select ITU' is open, allowing users to choose an ITU (International Traffic Unit) for their booking. The modal contains three dropdown menus for 'ITU TYPE', 'ITU TYPOLOGY', and 'DIMENSIONS'. Below these is a search bar with 'Search' and 'Clear' buttons. A table lists five ITU options, each with a checkbox, a number, a type, a typology, and dimensions. The table is paginated, showing 1-5 of 5 items.

		TYPE	TPOLOGY	DIMENSIONS	EN13044 PROFILE N...	EN13044 SUP
<input type="checkbox"/>	5	Container	Bulk	45'		
<input checked="" type="checkbox"/>	4	Container	Bulk	40'		
<input checked="" type="checkbox"/>	3	Container	Bulk	30'		
<input type="checkbox"/>	2	Container	Bulk	21'-29' NON-ISO		
<input checked="" type="checkbox"/>	1	Container	Bulk	20'		

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

☰ Diglogs 👤 Marco Grifone

🏠 Dashboard

🚚 Route planning

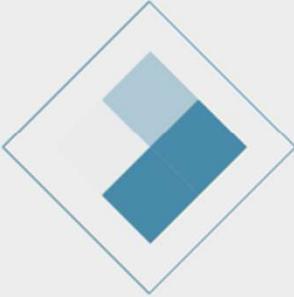
📄 Customer booking request list

+ New request

⚙ Administration

Customer booking request 🔍 Calculate route

STARTING POINT	ARRIVAL POINT	CARGO TYPE	DANGEROUS
56 - La Spezia	133 - Sisak	BLK - Bulk	<input checked="" type="checkbox"/>
ETD	DELIVERY DEADLINE		
02.12.2021 00:00 ✕ 📅	17.12.2021 00:00 ✕ 📅		



« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot displays the 'Customer booking request' form in the DELPLAN system. The interface includes a sidebar with navigation options and a main content area with a form and a list of container options.

Navigation Sidebar:

- Dashboard
- Route planning
- Customer booking request list
- New request
- Administration

Customer booking request form:

Customer booking request Calculate route

STARTING POINT	ARRIVAL POINT	CARGO TYPE	DANGEROUS
5 - Port of La Spezia	7 - Sisak	BLK - Bulk	<input type="checkbox"/>
ETD 02.12.2021 00:00	DELIVERY DEADLINE 17.12.2021 00:00		

Container Options:

- Container - Bulk - 20'
- Container - Bulk - 30'
- Container - Bulk - 40'

« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

- Customer booking request list
- + New request
- Administration

ETD: 02.12.2021 00:00
DELIVERY DEADLINE: 17.12.2021 00:00

Container - Bulk - 20'

Option 1

Select

ETD	ETA	EMISSIONS (GCO2)	COST (€)
02.12.2021 00:00	03.12.2021 10:03	23535	1169
1 Port of La Spezia Interporto Marche 2 By Rail € 330 ETD 03/12/2021 15:00 ETA 04/12/2021 03:30 Emissions 0 gCO2	2 Interporto Marche Port of Ortona 3 By Road € 291 ETD 04/12/2021 04:30 ETA 04/12/2021 08:01 Emissions 16362 gCO2	3 Port of Ortona Port of Sibenik 4 By Sea € 420 ETD 07/12/2021 15:00 ETA 08/12/2021 07:30 Emissions 0 gCO2	4 Port of Sibenik Port of Split 5 By Road € 128 ETD 08/12/2021 08:30 ETA 08/12/2021 10:02 Emissions 7173 gCO2

Option 2

Select

ETD	ETA	EMISSIONS (GCO2)	COST (€)
02.12.2021 00:00	02.12.2021 17:10	79875	1418

Port of La Spezia

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

☰ Diglogs Marco Grifo

Dashboard Route planning Customer booking request list + New request Administration

Container - Bulk - 30'

Option 1 ✔ Select

ETD	ETA	EMISSIONS (gCO2)	COST (€)
02.12.2021 00:00	03.12.2021 10:21	10961	996

1 Interporto di Novara Interporto d'Abruzzo 2	2 Interporto d'Abruzzo Port of Ortona 3	3 Port of Ortona Port of Sibenik 4	4 Port of Sibenik Port of Split 5
By Rail € 380 ETD 02/12/2021 16:00 ETA 03/12/2021 07:30 Emissions 0 gCO2	➤	By Road € 68 ETD 03/12/2021 08:30 ETA 03/12/2021 09:18 Emissions 3788 gCO2	➤
		By Sea € 420 ETD 07/12/2021 15:00 ETA 08/12/2021 07:30 Emissions 0 gCO2	➤
			By Road € 128 ETD 08/12/2021 08:30 ETA 08/12/2021 10:02 Emissions 7173 gCO2

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

Diglogs Marco Grifone

- Dashboard
- Route planning
- Customer booking request list
- New request
- Administration

ETD 02/12/2021 18:00 ETA 03/12/2021 06:15 Emissions 0 gCO2	ETD 03/12/2021 07:15 ETA 03/12/2021 07:56 Emissions 3224 gCO2	ETD 09/12/2021 15:00 ETA 10/12/2021 07:30 Emissions 0 gCO2	ETD 11/12/2021 09:00 ETA 11/12/2021 16:20 Emissions 0 gCO2
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Option 3 Select

ETD	ETA	EMISSIONS (gCO2)	COST (€)
02.12.2021 00:00	03.12.2021 12:44	10397	986

1 Interporto di Bologna
Scalo Merci Saletti **2**

By Rail € 350

ETD 02/12/2021 18:00
ETA 03/12/2021 06:15
Emissions 0 gCO2

2 Scalo Merci Saletti
Port of Vasto **3**

By Road € 58

ETD 03/12/2021 07:15
ETA 03/12/2021 07:56
Emissions 3224 gCO2

3 Port of Vasto
Port of Sibenik **4**

By Sea € 200

ETD 09/12/2021 15:00
ETA 10/12/2021 07:30
Emissions 0 gCO2

4 Port of Sibenik
Port of Split **5**

By Road € 128

ETD 10/12/2021 08:30
ETA 10/12/2021 10:02
Emissions 7173 gCO2

5 Port of Split
Sisak **6**

By Rail € 250

ETD 10/12/2021 11:00
ETA 10/12/2021 16:45
Emissions 0 gCO2

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

Diglogs Marco Grifone

Dashboard
Route planning
Customer booking request list
New request
Administration

Customer booking request

STARTING POINT	ARRIVAL POINT	CARGO TYPE	DANGEROUS
5 - Port of La Spezia	7 - Sisak	BLK - Bulk	<input type="checkbox"/>
ETD	DELIVERY DEADLINE		
02.12.2021 00:00	24.12.2021 00:00		
SELECTED ITU	TOTAL EMISSION (GCO2)		
4	51584		

Past leg(s)

Current leg

Next leg(s)

1 Port of La Spezia Scalo Merci Saletti 2 By Road € 859 ETD 02/12/2021 01:00 ETA 02/12/2021 11:24 Emissions 48360 gCO2 Reroute ↻	➤	2 Scalo Merci Saletti Port of Vasto 3 By Road € 58 ETD 02/12/2021 12:24 ETA 02/12/2021 13:05 Emissions 3224 gCO2 Reroute ↻	➤	3 Port of Vasto Port of Sibenik 4 By Sea € 200 ETD 02/12/2021 15:00 ETA 03/12/2021 07:30 Emissions 0 gCO2 Reroute ↻	➤	4 Port of Sibenik Sisak 5 By Rail € 200 ETD 04/12/2021 09:00 ETA 04/12/2021 16:20 Emissions 0 gCO2 Reroute ↻
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« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

Diglogs Marco Grifone

Dashboard
Route planning
Customer booking request list
+ New request
Administration

Customer booking request Calculate route

STARTING POINT	ARRIVAL POINT	CARGO TYPE	DANGEROUS
8 - Port of Sibenik	7 - Sisak	BLK - Bulk	<input type="checkbox"/>
ETD	DELIVERY DEADLINE		
03.12.2021 07:30	24.12.2021 00:00		
SELECTED ITU	TOTAL EMISSION (GCO2)		
4			

« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

☰ Diglogs 👤 Marco Grifone

🏠 Dashboard
🚚 Route planning
📄 Customer booking request list
➕ New request
⚙️ Administration

Option 1 ✔ Select

ETD	ETA	EMISSIONS (gCO2)	COST (€)
03.12.2021 07:30	03.12.2021 14:50	0	200

1 Port of Sibenik
Sisak 2

By Rail € 200
ETD 04/12/2021 09:00
ETA 04/12/2021 16:20
Emissions 0 gCO2

Option 2 ✔ Select

ETD	ETA	EMISSIONS (gCO2)	COST (€)
03.12.2021 07:30	03.12.2021 14:47	7173	378

1 Port of Sibenik
Port of Split 2

By Road € 128
ETD 03/12/2021 08:30
ETA 03/12/2021 10:02
Emissions 7173 gCO2

2 Port of Split
Sisak 3

By Rail € 250
ETD 03/12/2021 11:00
ETA 03/12/2021 16:45
Emissions 0 gCO2

« Collapse sidebar

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

The screenshot displays the Diglogs system interface. The top navigation bar includes a menu icon, the text "Diglogs", and the user name "Marco Grifone". The left sidebar contains navigation options: "Dashboard", "Route planning", "Customer booking request list", "New request", and "Administration".

The main content area shows a summary of a booking request with the following details:

- Start Date: 03.12.2021 07:30
- End Date: 24.12.2021 00:00
- SELECTED ITU: 4
- TOTAL EMISSION (gCO2): 7173

Below this is a section for "Reroutes (previous requests)" featuring a card for "Customer booking request 313". The card details are as follows:

- STARTING POINT: Port of La Spezia
- ARRIVAL POINT: Sisak
- CREATED DATE: 27.11.2021 18:57
- ETA: 24.12.2021 00:00

The interface also includes sections for "Past leg(s)", "Current leg", and "Next leg(s)".

The "Next leg(s)" section displays a comparison between two routing options:

Option	Mode	Price (€)	ETD	ETA	Emissions (gCO2)
1	By Road	128	03/12/2021 08:30	03/12/2021 10:02	7173
	By Rail	250	03/12/2021 11:00	03/12/2021 16:45	0

Each option includes a "Reroute" button with a refresh icon. The route for Option 1 is Port of Sibenik to Port of Split, and for Option 2, it is Port of Split to Sisak.

At the bottom left, there is a "Collapse sidebar" button.

DELPLAN – SYSTEM FUNCTIONALITIES

PILOT SCREENSHOT

☰ Diglogs 👤 Marco Grifone

🏠 Dashboard

🚢 Route planning

📄 Customer booking request list

+ New request

⚙ Administration

Customer booking request list

📄 Results

ID ↓	RER...	STARTING POINT	ETD	ARRIVAL POINT	ETA
316	<input type="checkbox"/>	Interporto d'Abruzzo	12/12/2021 14:00:00	Port of Sibenik	17/12/2021 16:
315	<input type="checkbox"/>	Interporto d'Abruzzo	12/12/2021 15:00:00	Port of Sibenik	16/12/2021 18:
314	<input checked="" type="checkbox"/>	Port of Sibenik	03/12/2021 07:30:00	Sisak	24/12/2021 00:
312	<input type="checkbox"/>	Novara	29/11/2021 00:00:00	Split	09/12/2021 00:
311	<input type="checkbox"/>	Novara	29/11/2021 00:00:00	Split	09/12/2021 00:
310	<input checked="" type="checkbox"/>	Port of Ortona	25/11/2021 09:18:52	Split	03/12/2021 00:
308	<input checked="" type="checkbox"/>	Port of Ancona	15/11/2021 23:04:04	Port of Sibenik	16/11/2021 18:
306	<input type="checkbox"/>	Interporto di Novara	15/11/2021 09:00:00	Interporto d'Abruzzo	16/11/2021 00:
305 ⚠	<input type="checkbox"/>	Interporto d'Abruzzo	20/12/2021 11:00:00	Port of Sibenik	21/12/2021 08:
304	<input checked="" type="checkbox"/>	Port of Ancona	07/12/2021 14:04:04	Port of Sibenik	08/12/2021 10:

⏪ ⏩ 1 2 3 ... 10 items per page 1 - 10 of 32 items

CONTACTS

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E-newsletter registration: <http://eepurl.com/gnOvFL>