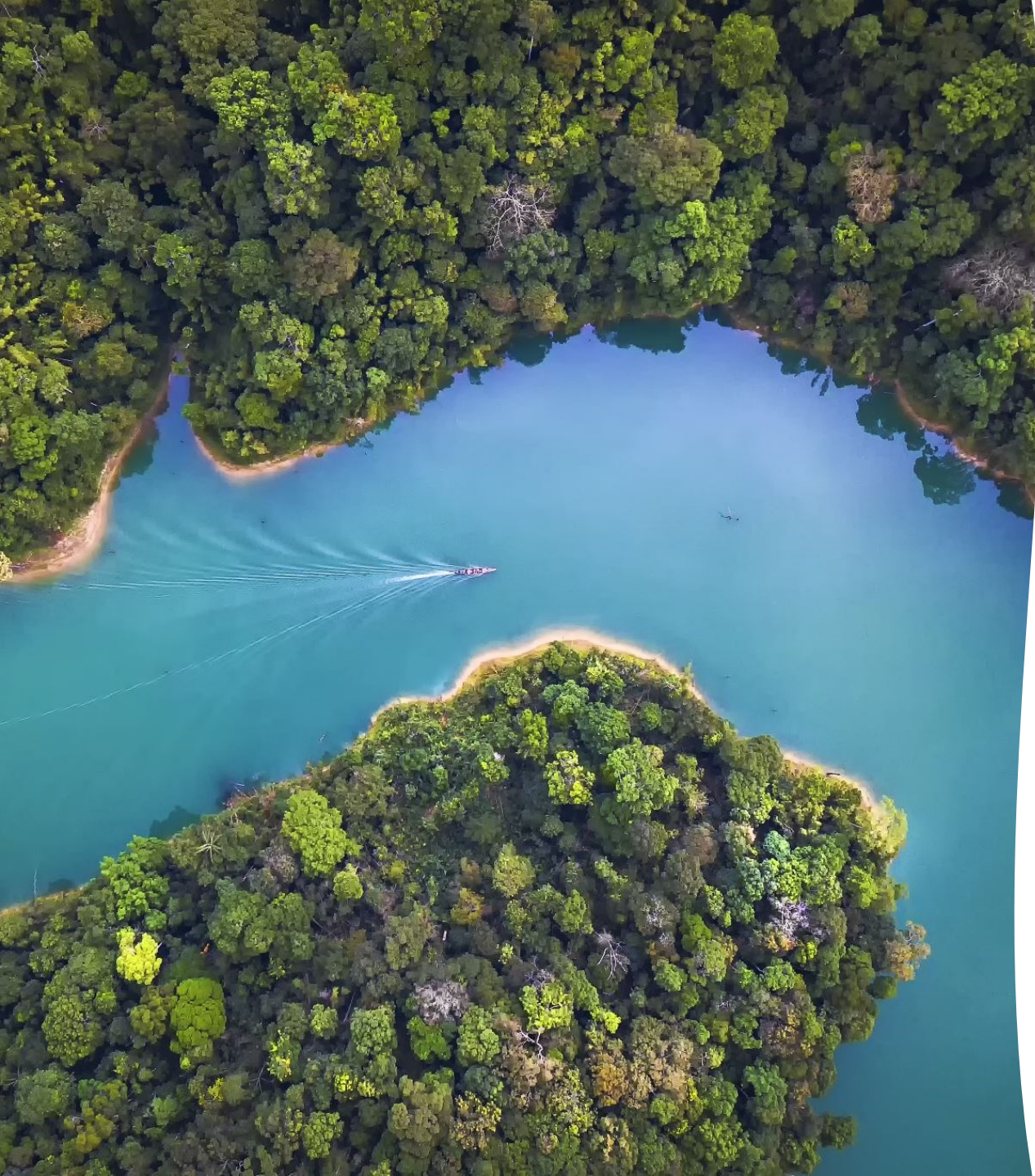




Tablero de eficiencia y emisiones marítimas v. 2.0

1er taller regional GMN Fase II

Dr. Gabriel Fuentes
Norwegian School of Economics
gabriel.fuentes@nhh.no

Financiado por:

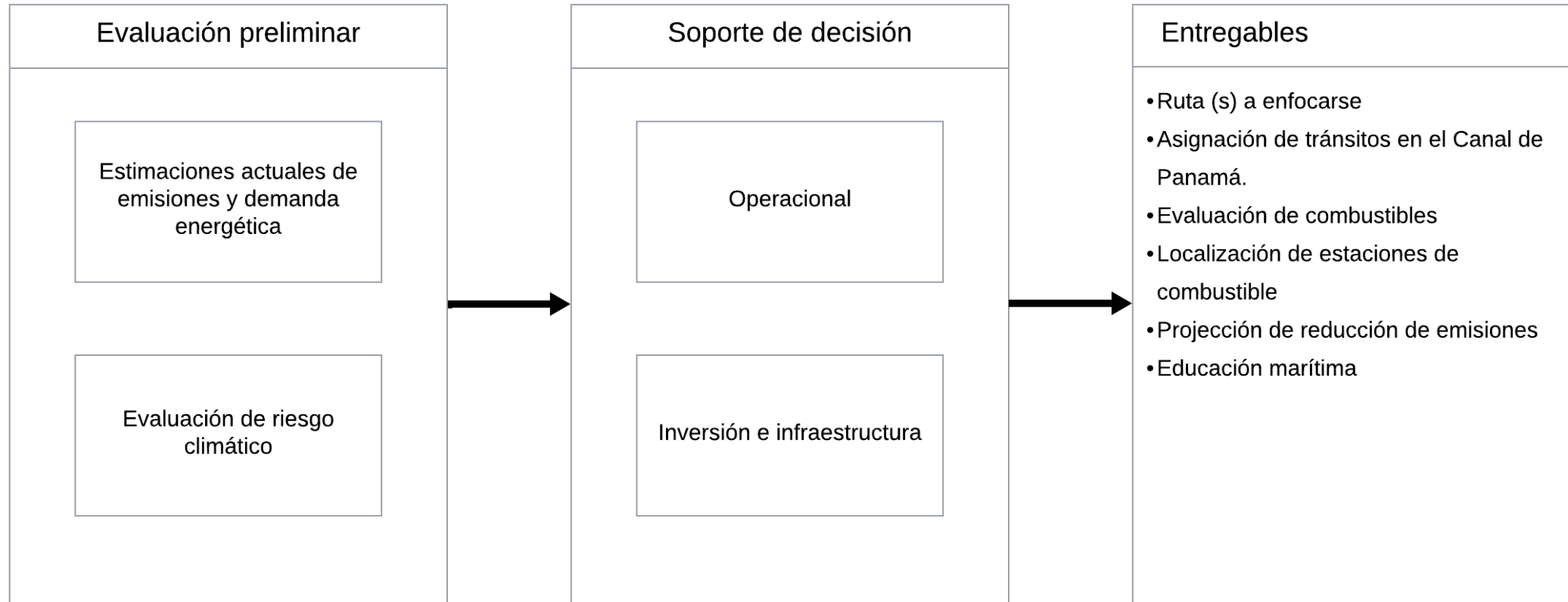


Participantes y colaboradores

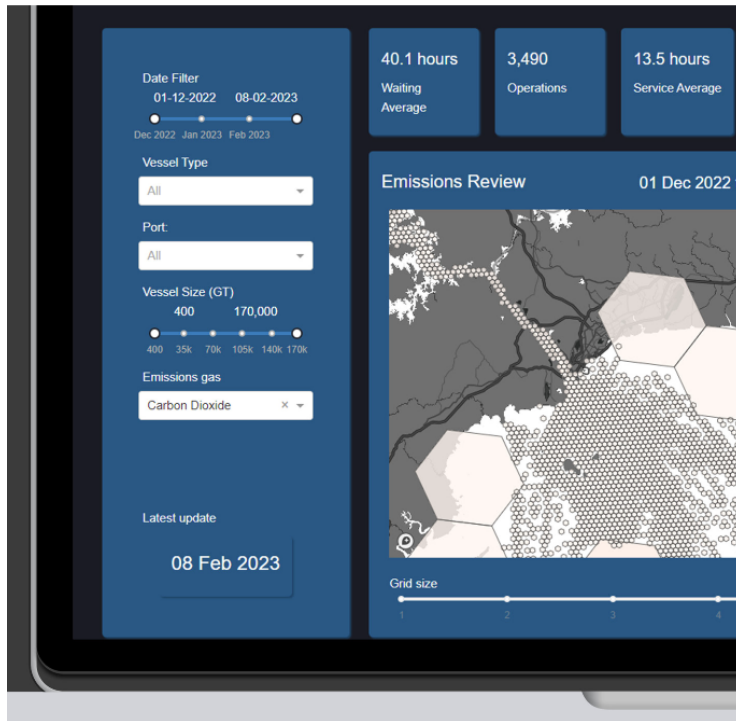


Estructura del proyecto

Corredores Marítimos verdes a través del Canal de Panamá



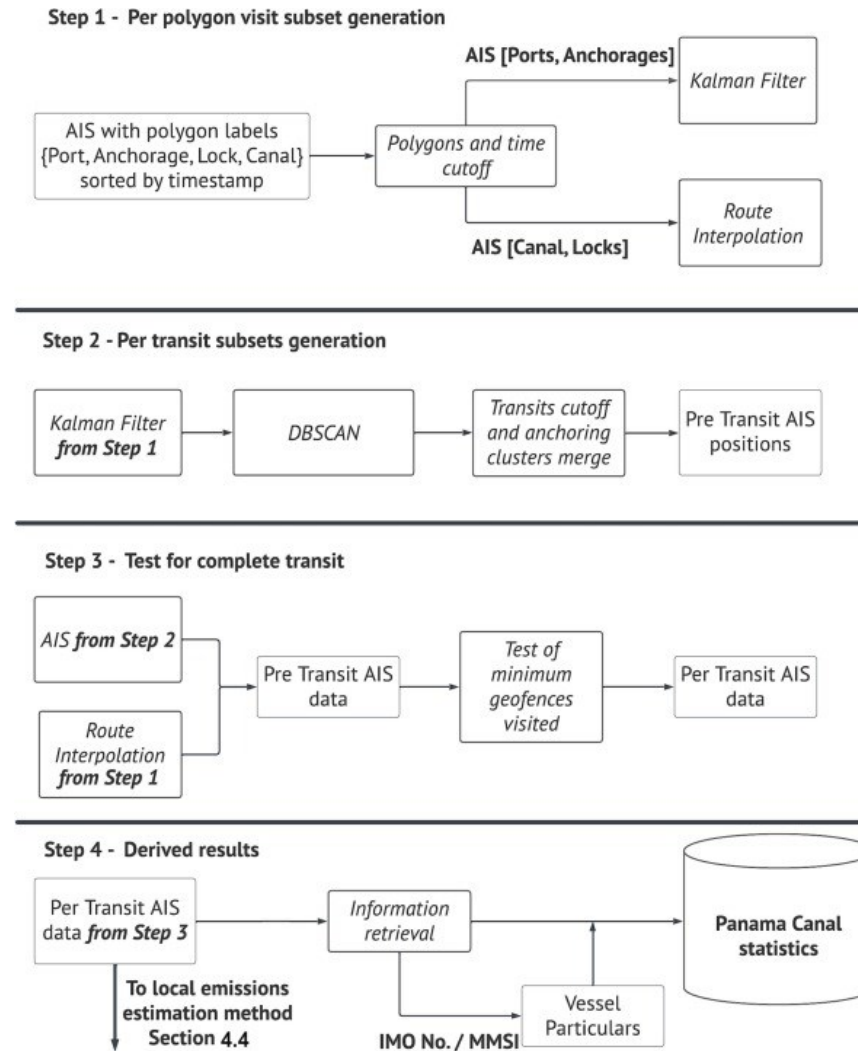
Tablero de emisiones v .1.0



MTCC Latin America's Innovative Dashboard Premieres at IMO Cares workshop

At a hybrid event, logistikk.io introduced the beta version of the emissions dashboard for the MTCC Latin America Pilot Project 3. The dashboard is fed with statistics generated by a joint project between MTCC Latin America and the UN Global Platform.

Validez de los datos y el dashboard



Source: Fuentes and Adland, 2023

Validez de los datos y el dashboard

UMIP recibe premio Innovación Verde del Sindicato de Industriales de Panamá

La foto arriba



Sustainability Research & Innovatio...
3,124 followers
1yr • Edited •

💡 Reflections from the #SRI2023 Idea Market Winners & how they plan to use their prize money to further their already incredible projects!

Mariana Martínez Balvanera won for her collaboratory kitchen for sustainability in the tropical rainforest.

Gabriel Fuentes-Lezcano won for his submissoin, "The Panama Connection: A Green Corridor from Busan to New York to Tackle Climate Change." **Norwegian School of Economics (NHH)**

👉 <https://bit.ly/3Qg53Nv>

Belmont Forum

International Association of Maritime Eco...
2,745 followers
6mo • Edited •

Dear IAME Members,

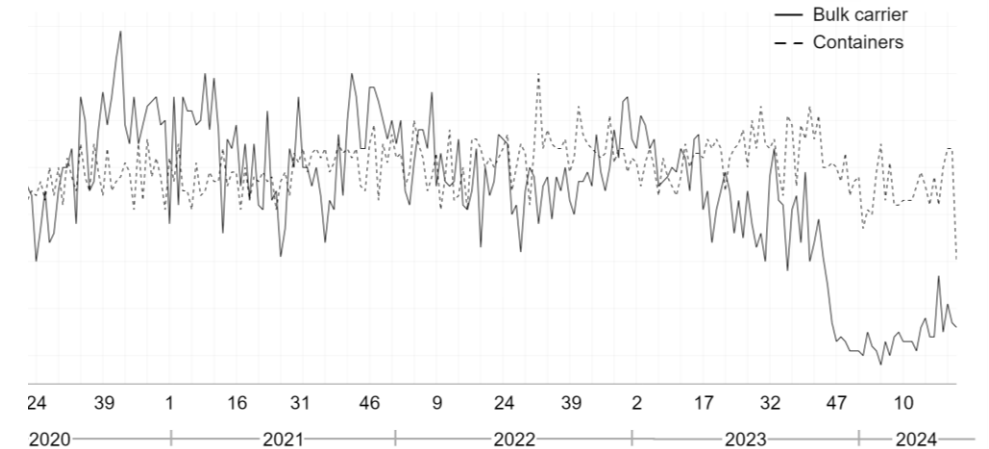
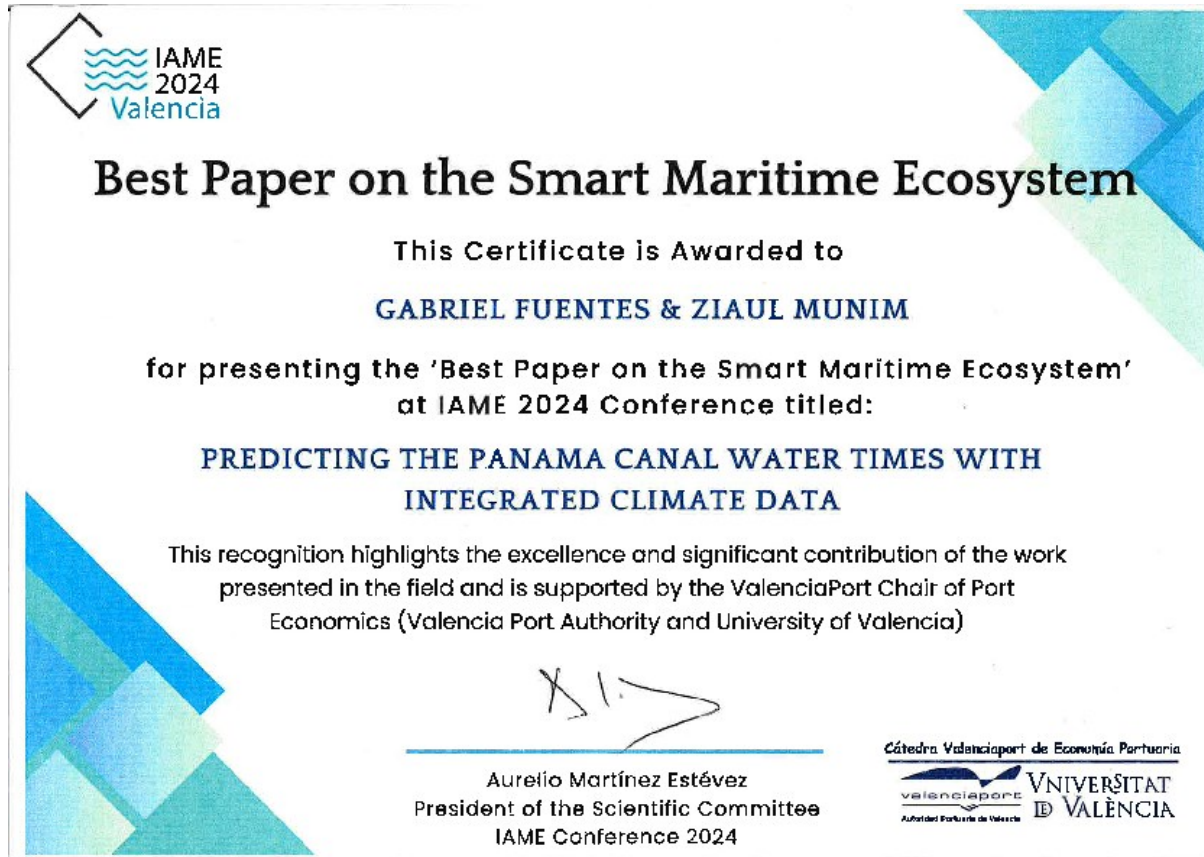
🏆 We are thrilled to announce the winners of the 6 awards given out by IAME, in its Conference 2024 at Valencia.

💡 Best Paper on the Smart Maritime Ecosystem 💡

This prize is awarded to **Gabriel Fuentes-Lezcano** & **Ziaul Haque Munim** for their paper titled Predicting the Panama canal water times with integrated climate data.

This recognition is supported by the **Valenciaport Chair of Port Economy APV - UV (Autoridad Portuaria de Valencia and University of Valencia)**.

Aplicaciones – El Niño como indicador de número de tránsitos



Variables	Number of Transits			
	Bulk Carriers	Containers	LNG Tankers	Oil Tankers
ONI 6 weeks lag	-3.563*** (0.232)	-0.273*** (0.086)	-0.110 (0.157)	0.0951 (0.090)
NeoPanamax transit	-14.922*** (0.310)	4.775*** (0.144)	2.678*** (0.129)	-1.288*** (0.154)
Northbound transit	3.149*** (0.335)	2.694*** (0.142)	-0.916*** (0.287)	-0.518*** (0.154)
Constant	16.711*** (0.199)	8.150*** (0.102)	2.648*** (0.129)	4.996*** (0.113)
Monthly Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.609	0.497	0.157	0.100
Observations	1083	1530	271	557
df	14	14	14	14

Notes: Clustered standard errors. Significance levels: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Panama Maritime Statistics

Efficiency and Sustainability Indicators



- Emissions
- Waiting Time
- Energy
- Explore



ADD/REMOVE PARAMETERS

Date

2023

2024

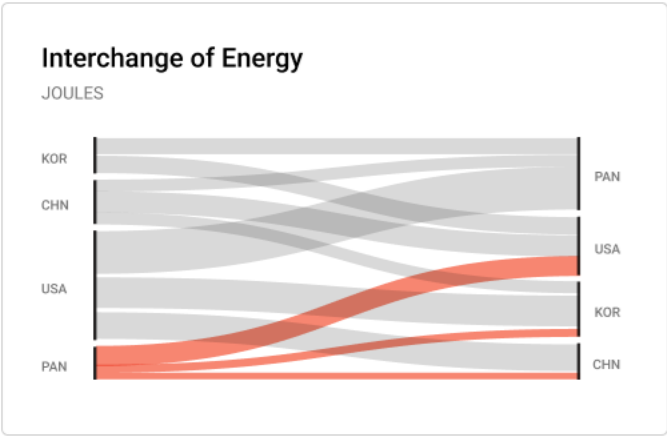
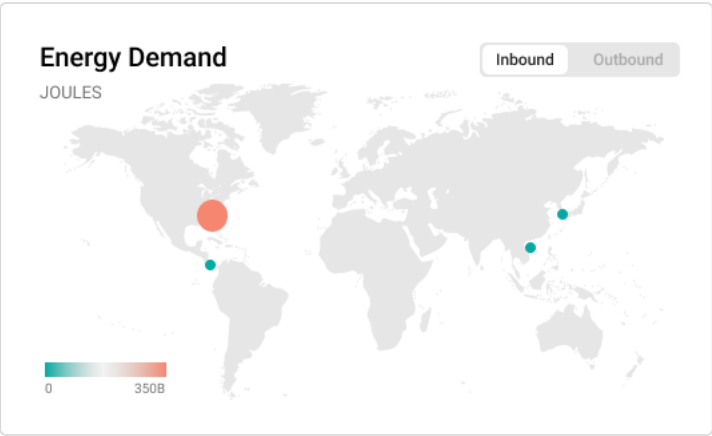
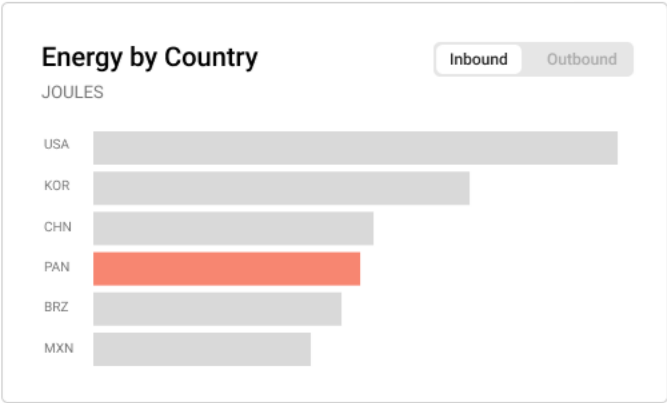
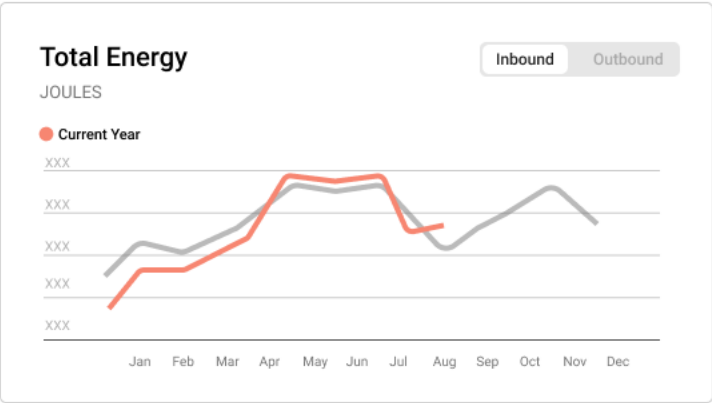
Origin

All

Destination

All

Latest Updated: 17 Feb 2025



Fuente: Data Impacta para el proyecto Corredores Marítimos Verdes en Panamá

USER PERSONA: UNDERSTANDING THE KEY ACTORS

RESEARCH GROUP



DR ERIK HANSEN
DATA SCIENTIST & RESEARCH
NORWEGIAN BUSINESS SCHOOL

FIELD WORKERS



CARLOS ORTEGA
OPERATIONS MANAGER

MEDIA & JOURNALISTS



SOFIA RAMIREZ
ENVIRONMENTAL JOURNALIST
LATAM ECONOMY MAGAZINE

EXPERTISE

- STRONG IN DATA SCIENCE, ML, MODELING
- WORKS WITH PYTHON, R, and SQL

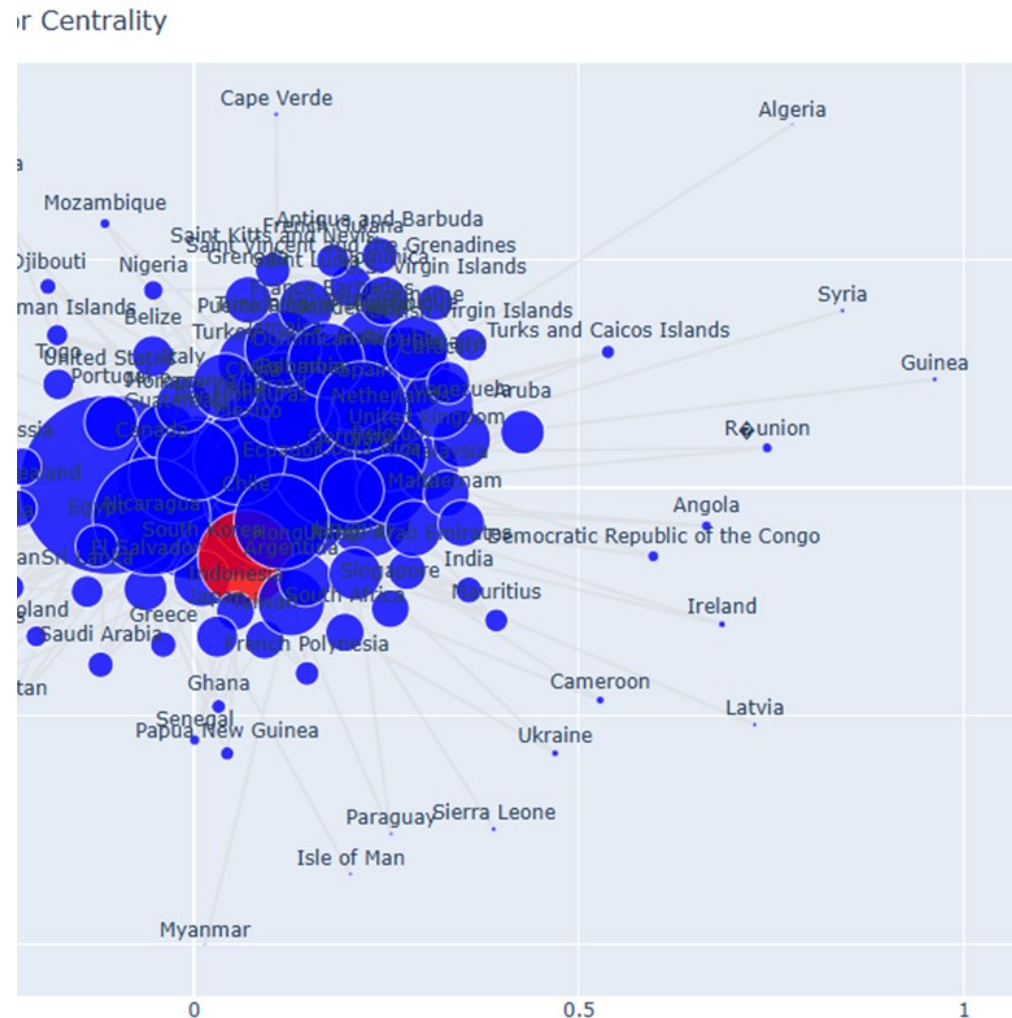
- ENGINEERING & LOGISTICS
- EXPERIENCE IN OPERATIONS BUT NOT DATA SCIENTIST
- WORKS IN REAL-TIME TRAFFIC MONITORING AND SCHEDULING

- x NOT A DATA SCIENTIST
- x COMFORTABLE WITH DATA STORYTELLING
- x USE SIMPLE CHARTS TO COMMUNICATE INSIGHTS

Fuente: Data Impacta para el proyecto Corredores Marítimos Verdes en Panamá

Recursos

- Tiempos de fondeo
- Tiempo de servicio en puerto
- Tiempo de tránsito en el Canal
- Demanda energética por país
- Emisiones locales y alcance 3
- Gráficas de centralidad
- Ranking de rutas por demanda energética



Country	Eigenvector Centrality
United States	0.28
Canada	0.25
Chilean Republic	0.24
	0.23
India	0.23

Nuestra vision de futuro -> Dashboard v3 ?

- Sugerencia de asignación de tránsitos y puertos basado en datos históricos y optimización
- Dashboard y sus métodos certificado por una sociedad clasificadora
- Retroalimentación de las decisiones sugeridas para entrenar un sistema para la toma de decisiones
- Escenarios de riesgo climático y predicción de afectaciones
- Eventualmente un modelo de IA que permita sugerir alternativas operativas para la reducción de emisiones y mejoras operativas
- Dashboard integrado al corredor verde que pase por Panamá





Gracias