



 **SANTOS**
PORT AUTHORITY

CONNECTING
BRAZIL
WORLDWIDE

PORT OF SANTOS IS A UNIQUE ASSET

Primary Market

81
MILLION PEOPLE



51%
OF BRAZILIAN GDP



47%
OF COMMERCIAL CHAIN



1. LOCATION

70 km from SP, the Latin America economic heart

**PORT OF SANTOS
AND BRAZIL**

**#1 MARKET SHARE
PER PRODUCT***

26%
SOY

44%
CORN

78%
BEEF

74%
SUGAR

81%
COFFEE

90%
ORANGE
JUICE

99%
COTTON

*in US\$ (2021)



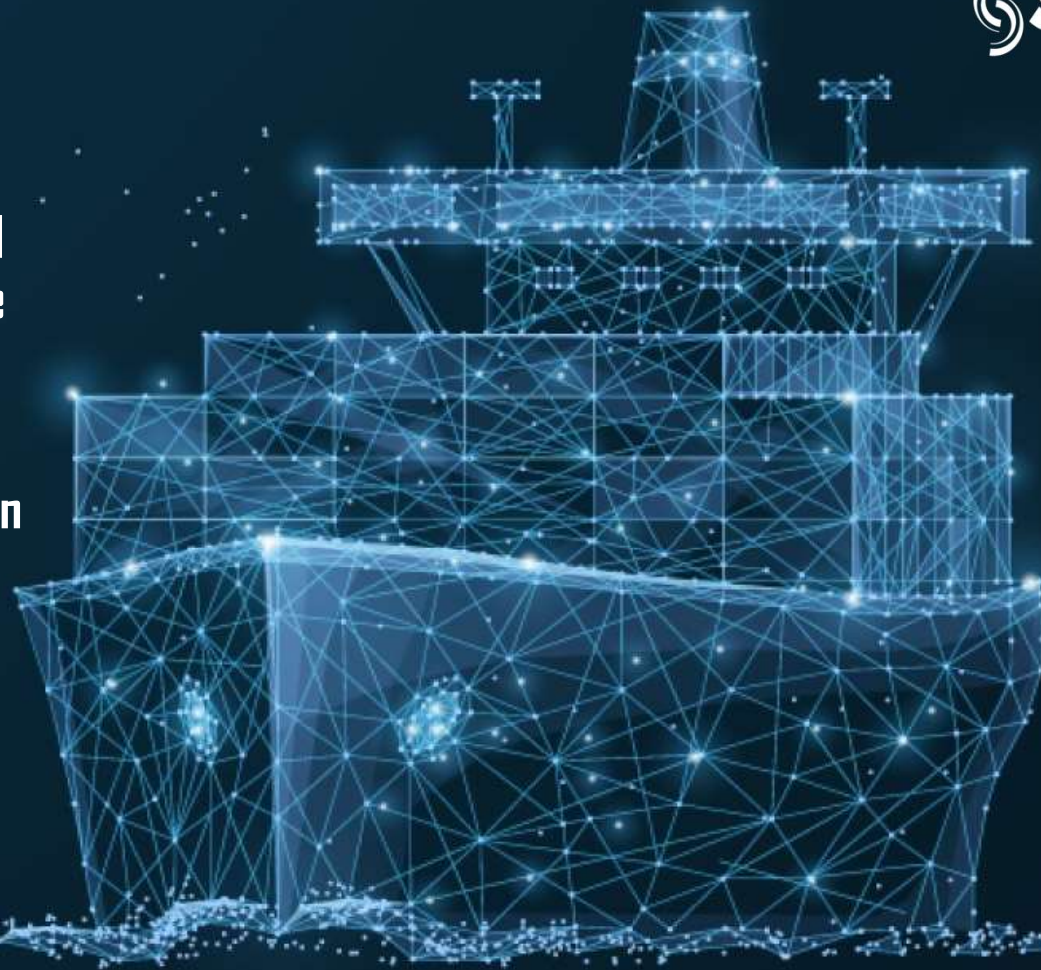
147 mi/ton
2021

An aerial view of a container ship's deck, showing rows of colorful shipping containers (red, blue, yellow, and orange) extending towards the horizon. The scene is overlaid with a digital grid and data points, suggesting a focus on technology and innovation. The sky is filled with dramatic, colorful clouds, likely at sunrise or sunset.

PORT OF SANTOS OPEN INNOVATION PROGRAM

OBJECTIVES

- Encourage the creation of a port and logistics innovation ecosystem in the region of the Port of Santos ;
- Advance on the digital transformation agenda;
- Develop new solutions and business opportunities.



MAIN ACTIONS



- Partnerships with educational institutions



- Innovation Internship Program



- Promote and support innovation events



- Partnerships with startups



Port Authority Regulation for Innovation Partnerships

- This is a Port Authority regulation that seek to reduce bureaucracy in the process of sharing information with companies that need to develop or validate new technologies.



NORMA DA AUTORIDADE PORTUÁRIA (NAP)

NAP.GEPLO.PPO.002, de 15 de setembro de 2021.

**NORMAS PARA CELEBRAÇÃO DE PARCERIAS
PARA DESENVOLVIMENTO DE INOVAÇÕES
TECNOLÓGICAS.**

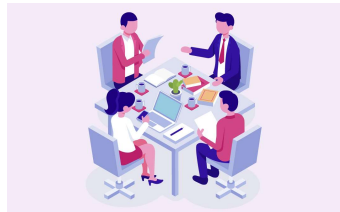
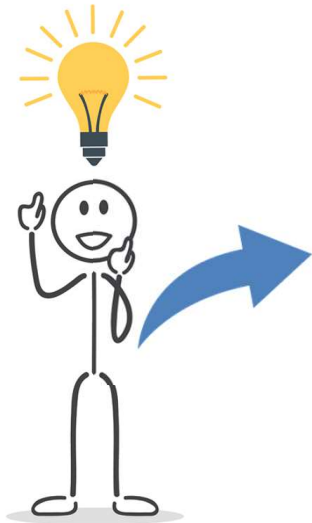
A DIRETORIA EXECUTIVA DA AUTORIDADE PORTUÁRIA DE SANTOS (“Santos Port Authority – SPA”), no uso das atribuições que lhe são conferidas pelo inciso V do art. 63 do Estatuto Social da Companhia;

Considerando as diretrizes estabelecidas para incentivar inovação e pesquisa científica e tecnológica no ambiente produtivo nacional e regional do País, apoiadas pela Lei nº 10.973/2004 e Decreto nº 10.332/2020;

Considerando a necessidade de se estabelecer diretrizes para normatizar a celebração de parcerias com empresas privadas que objetivem o desenvolvimento e implantação de tecnologias inovadoras no Porto de Santos;

Considerando a nova arquitetura normativa da Autoridade Portuária de Santos; e,

HOW DOES IT WORK?



BOARD OF DIRECTORS



ACORDO DE COOPERAÇÃO AC.01.2021	COOPERATION AGREEMENT AC.01.2021
ACORDO DE COOPERAÇÃO ENTRE A AUTORIDADE PORTUÁRIA DE SANTOS S.A. E AS EMPRESAS WILSON SONS SERVIÇOS MARÍTIMOS LTDA. E DOCKTECH LTD. PARA O APERFEIÇOAMENTO DE SOLUÇÃO DE MONITORAMENTO DINÂMICO DA PROFUNDIDADE DO CANAL DE NAVEGAÇÃO E ACESSO AOS BERÇOS DE ATRACAÇÃO.	COOPERATION AGREEMENT BETWEEN THE AUTORIDADE PORTUÁRIA DE SANTOS S.A. AND THE COMPANIES WILSON SONS SERVIÇOS MARÍTIMOS LTDA. AND DOCKTECH LTD. FOR THE IMPROVEMENT OF A SOLUTION FOR THE DYNAMIC MONITORING OF THE DEPTH OF THE NAVIGATION CHANNEL AND ACCESS TO THE DOCKING BERTHS.
A AUTORIDADE PORTUÁRIA DE SANTOS S.A., empresa pública inscrita no Cadastro Nacional de Pessoas Jurídicas do Ministério da Fazenda ("CNPJ") sob o nº 44.837.524/0001-07, com sede na Av. Conselheiro Rodrigues Alves s/nº, Macuco, CEP 11015-900, na cidade de Santos, no Estado de São Paulo, neste ato representada por seu Diretor-Presidente, FERNANDO HENRIQUE PASSOS BIRAL, seu Diretor de Infraestrutura, AFRÂNIO DE PAIVA MOREIRA JUNIOR, e seu Diretor de Operações, MARCELO RIBEIRO DE SOUZA, abaixo assinados, doravante designada "SANTOS PORT AUTHORITY" ou "SPA"; WILSON SONS SERVIÇOS MARÍTIMOS LTDA., inscrita no CNPJ sob o nº 03.562.124/0001-59, com sede na Rua Eng. Fábio Goularte, 605, ilha da Conceição, CEP 24050-090, na cidade de Niterói, no Estado do Rio de Janeiro, neste ato representada por seus Diretores abaixo assinados, de	The AUTORIDADE PORTUÁRIA DE SANTOS S.A., a public company enrolled with the Brazilian Corporate Taxpayers Registry ("CNPJ") under No. 44.837.524/0001-07, having its headquarters at Av. Conselheiro Rodrigues Alves S/N, Macuco, Zip Code 11015-900, in the city of Santos, State of São Paulo, herein represented by its Chief Executive Officer, FERNANDO HENRIQUE PASSOS BIRAL, its Infrastructure Officer, AFRÂNIO DE PAIVA MOREIRA JUNIOR, and its Operations Officer, MARCELO RIBEIRO DE SOUZA, herein undersigned, hereinafter referred to as "SANTOS PORT AUTHORITY" or "SPA"; WILSON SONS SERVIÇOS MARÍTIMOS LTDA., enrolled with the CNPJ under No. 03.562.124/0001-59, having its headquarters at Rua Engenheiro Fábio Goularte, 605, Ilha da Conceição, Zip Code 24050-090, in the city of Niterói, State of Rio de Janeiro, herein represented by its undersigned Officers, in accordance with its by-laws, hereinafter referred to as



IA

Port
Automation

Big
Data

Blockchain

Environment

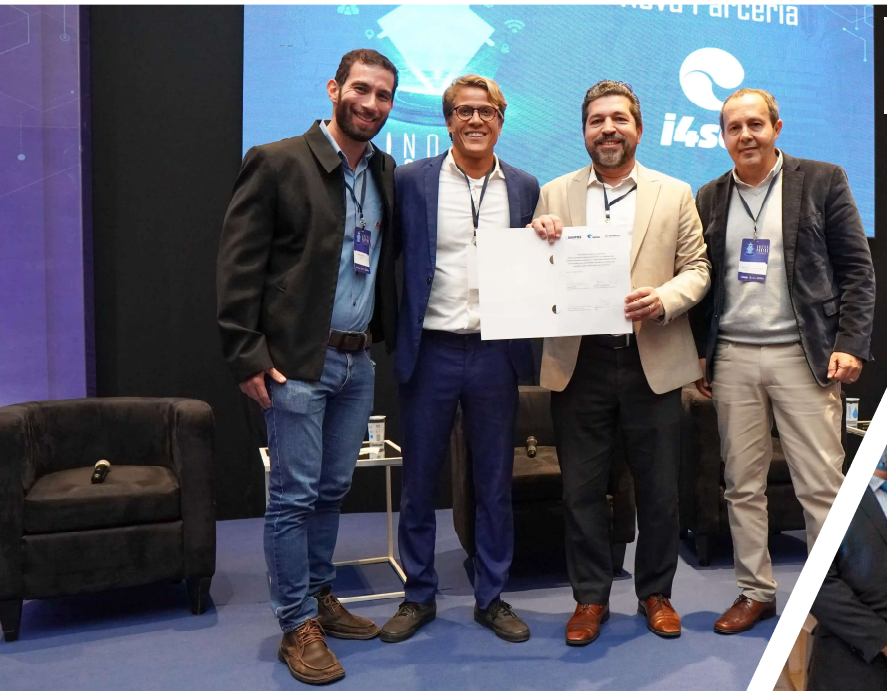
5G

Digital twin

Cyber
Security



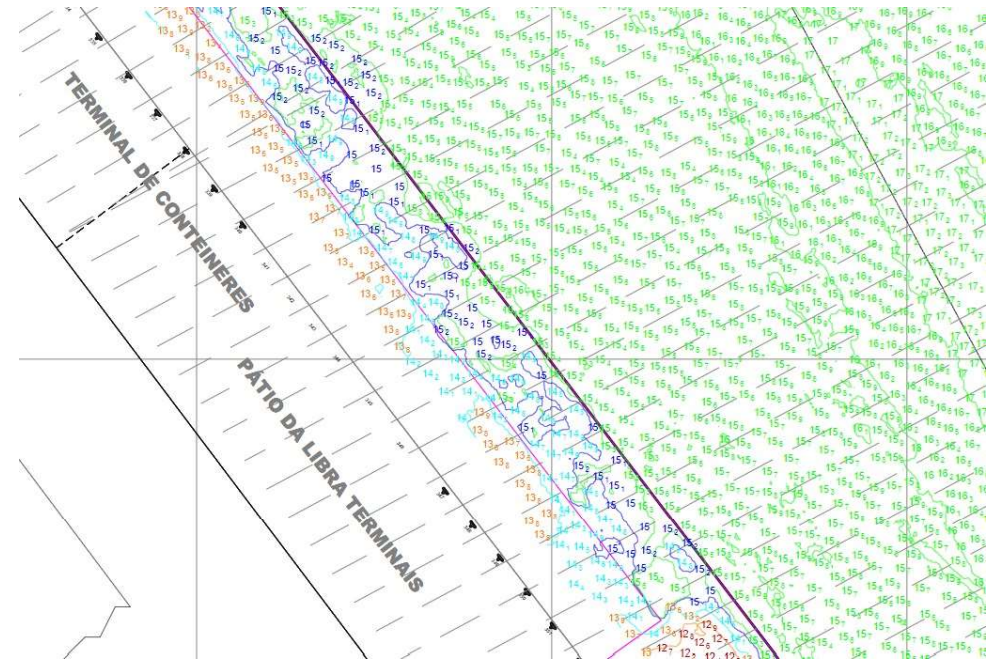
INNOVATION PARTNERSHIPS





PROBLEM

- The port of Santos requires a lot of dredging to maintain its operations;
- However, the visualization of the conditions of the channel was done only by means of bathymetry, which are expensive and portray only a snapshot of a moment.



WHAT THE PARTNERSHIP DOES

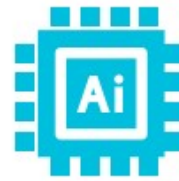
Creates a Digital Twin of the Port of Santos channel



Data collected by the tugboats



Bathymetry information collected by the Santos Port Authority

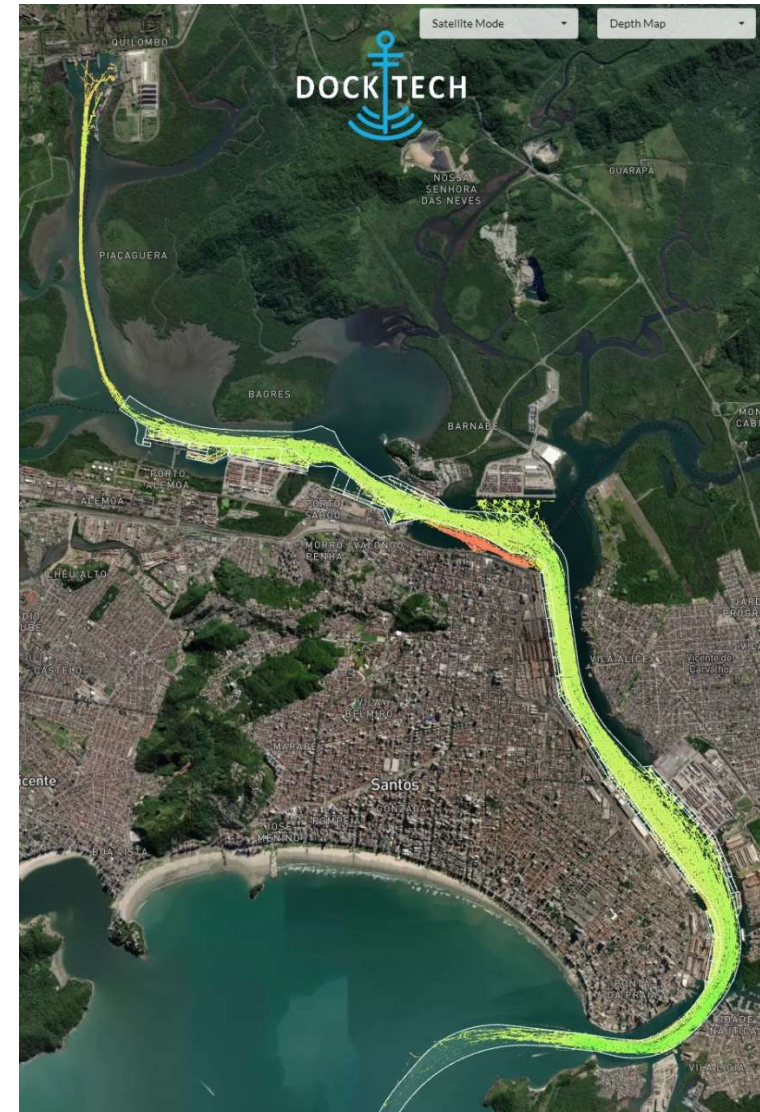


Data processing in the Docktech system



RESULTS

- Depth monitoring in real time;
- Pattern identification of silting;
- Anticipate need of dredging;
- Increase security navigation.



Port Authority of Santos
is the Winner of
the 2022 Port Industry
Award of Excellence in
the category Public-
Private Partnerships



**2022 PORT
INDUSTRY AWARD
OF EXCELLENCE**

Recognizing Outstanding Ports in the Americas



The awards will be presented during the
XXX LATIN AMERICAN CONGRESS OF PORTS





PROBLEM

- Weather-related factors 1st cause of cargo delays (voyage) and up to 60% of scheduling inefficiencies in ports-

RESULTS

- 5000x more resolution than general forecasts;
- Twice more accurate than generic forecasts;
- Significant improvement in operational decision-making (Ex- ship hold closure, risks).

WHAT THE PARTNERSHIP DOES

Using mathematical models, the partnership is helping the Santos Port Authority to stay in control of planning with hyperlocal sea and weather forecasts translated into impact and risk for operations.





PROBLEM

- The Port of Santos receives more than 2.5 million trucks per year;
- 38% of the truck trips occurs empty or almost empty, resulting in wasted fuel and increased carbon emissions.

RESULTS

- Go live in August;
- 9 operations carried out in October;
- 30 operations carried out in November.

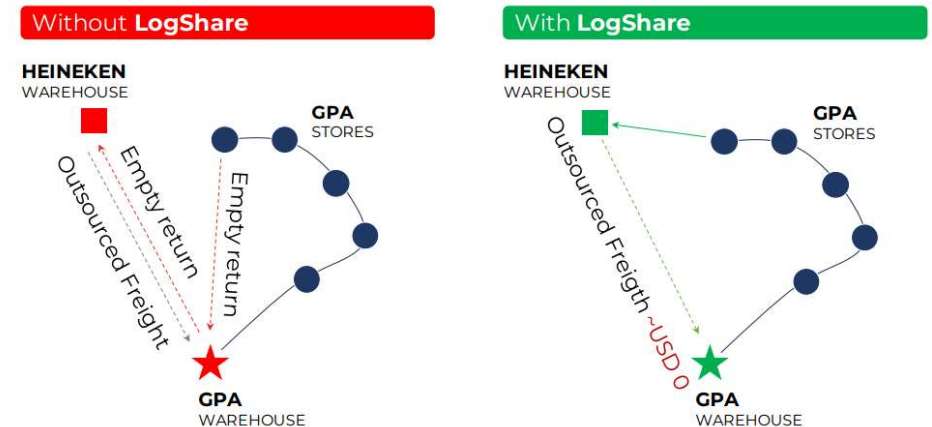
WHAT THE PARTNERSHIP DOES

Integrates the Port Authority's scheduling system with Logshare's route sharing system to support port backhaul operations.

Put yourself on a fleet manager shoes



Imagine you managing a fleet of hundreds of daily trucks departures returning empty with no technology and little network integration to optimize it.



Real case of LogShare

Heineken & Grupo Pão de Açúcar: 2021 savings of USD 0.2 MM (7%) | 2022 savings of USD 0.6 MM (22%)



PROBLEM

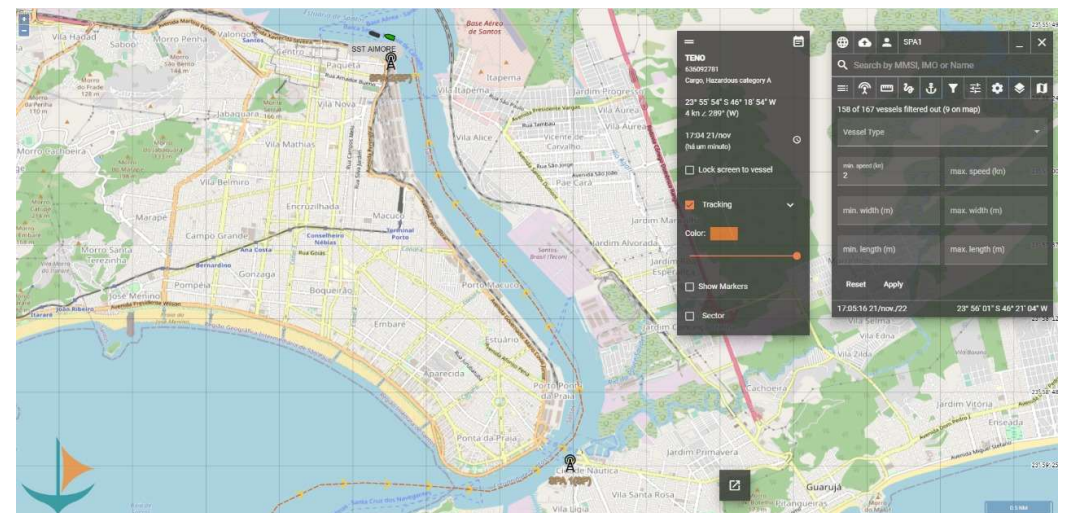
- Almost 5000 ships per year;
- The Port of Santos does not have tools for managing ship scheduling;
- Difficulties in monitoring the anchorage area, as well as in recording the operations that took place in the port.

RESULTS

- Optimization in the ship scheduling process;
- Creation of a system capable of using algorithms to monitor the presence of vessels in areas of interest and differentiate the steps in the docking process.

WHAT THE PARTNERSHIP DOES

Develops an intelligent waterway management platform, which uses the integration of ship scheduling, AIS Stations with notifications, to provide situational awareness, in real time, of the status of the stages, automatically, for the port community of interest.



FINAL CONSIDERATIONS

- There is no transfer of financial resources between the Port Authority and the Startups;
- The partner must provide some benefit to the Port Authority (example: free access to the developed platform);
- **It is not just about exchanging data, it is about cooperation!**





**THANKS!
MUITO OBRIGADO!**



LinkedIn



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