

TERMINAL INDUSTRY
COMMITTEE 4.0

July 2023



TIC4.0 NEWSLETTER





Embracing the 4th Industrial Revolution in the Port Industry

TIC4.0 NEWSLETTER

Introduction

2023 started as the year where the **shipping and logistics chains** would **slowly return to “normal”** after the pandemic-induced bottlenecks and disruptions. However, the **overall situation remains challenging**. The **conflict in Ukraine** is **still ongoing** and both sides are **far from** arriving to a **negotiated solution**. Regarding the economic situation, governments and central banks are **tightening monetary policies and stimuli** to fight **persistent high levels of inflation**. All these factors are **contributing to a slowdown of the global economy**, with **countries like Germany** already in a **technical recession**. However, the **economic slowdown** is **helping** the logistics industry and ports to **“normalise” the situation** at their facilities.

The **advent of ChatGPT** in 2022 has **brought AI and modern disruptive technologies** into the **social spotlight**, **accelerating the market uptake** of these technologies by **citizens and enterprises** alike. **Companies** are **starting to see the benefits of automated AI tasks**, and the **port industry** is **not an exception**.

Concerning TIC4.0, our organisation has **gained momentum**: **two publications (2003.007 and 2023.008)** have been **published** and the **2023.009 publication** is already **in the works**. Moreover, during this first semester we have **welcomed six more members** coming from **different parts of the world** and covering **different aspects** of the **terminal industry**.

Last, but not least, **TIC4.0** is **spreading its message** at the **world’s top port industry conference events**. **TIC4.0 representatives** participated as speakers at the **TOC Conference in Rotterdam (Netherlands)** and at the **Black & Caspian Sea Ports Conference in Istanbul (Türkiye)**. As part of these, we conducted **several interviews with leading executives of top companies**. We also **met new potential company members** who **approached us** at our stand in both conferences.

IN THIS JULY 2023’S NEWSLETTER, WE WILL COVER THE MAIN TIC4.0 HIGHLIGHTS OF THE FIRST SEMESTER, NAMELY

1 - TIC4.0 PUBLICATIONS 2023

2 - TIC4.0 GENERAL ASSEMBLY HAMBURG - MARCH 2023

3 - TIC4.0 NEXT GENERAL ASSEMBLY

4 - PARTICIPATION IN CONFERENCES AND CONGRESSES

5 - NEW MEMBERS IN THE FIRST SEMESTER OF 2023



1- TIC4.0 PUBLICATIONS

ADVANCING ON STANDARDISATION

1st semester 23' - TIC4.0

As part of its development program, TIC4.0 has issued two publications in the first semester of 2023. Below is a summary of its features:

All publications are freely available for download from our website www.tic40.org

2023.007 PUBLICATION

- **Cycle:** extension of the 2021.002 release with regards to terminal, berth, yard, train and horizontal transport cycle.
- **Carrier Visit:** included the Data Model and the fundamental definitions to digitalise any carrier visit process.
- **Cargo Visit:** included the Data Model and the fundamental definitions to describe what status of cargo, being part of the TOS Data Model.
- **Health:** included the initial definitions and the Data Model to describe the "vitality" of CHE and systems.
- **Drive and Movement:** included extensive definitions addressing the direction and possible movements of CHE and their subsystems.

2023.008 PUBLICATION

- **TIC4.0 Health White Paper:** CHE are the most important assets to physically move goods. Their "health" (monitoring and managing the proper functioning) is a vital production factor for any terminal. This document gives an overview of the health ecosystem and its relevance in the port industry. It complements the existing definitions and provides the outlook to develop a complete health ecosystem, including taxonomies for health signals, diagnosis, and root causes, to enhance maintenance operations and facilitate predictive maintenance.
- **Cycle:** The existing definition Cycle 2022.004 was updated and reviewed with the following changes: the new definition "deliver" was included and the context between "deliver" and "end of cycle" was clarified. The links of related TIC4.0 standards were updated.
- **Carrier Visit:** The definition of "FirstTimeCarrierReadyforDeparture" was added to the extensive overview of events of the 2022.006 Release.
- **Job instruction:** The definition of the events "collect" and "deliver" in relation to moving cargo have been added. Both are important concepts to be able to describe the complete process from the terminal operation perspective.
- **Spreader:** In this third set of definitions for the topic spreader very important guidance is given to identify the unique position of devices located on a spreader in relation to a reference mark. Also the following definitions are being published: Flipper, FlipperIsUp and FlipperIsDown.





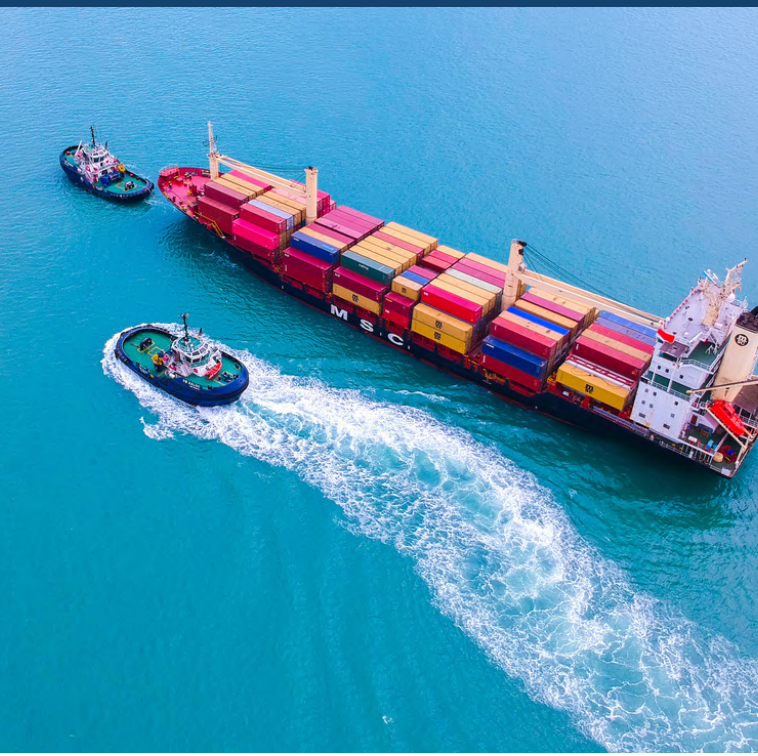
2 - TIC4.0 GENERAL ASSEMBLY HAMBURG - MARCH 2023

On March 16th, 2023, TIC4.0 celebrated the first General Assembly of the year, hosted by RBS in their main EMEA office in the AKQUINET building in Hamburg, following a hybrid format and having a growing in-person attendance, which enhance the dynamic and collaboration towards the progress of TIC4.0.

The meeting opened with a keynote address given by Friedrich Stuhmann – Chief Commercial Officer Port Authority of Hamburg –, who emphasised the importance of innovation in the industry and praised the collaborative work done by TIC4.0 and its members to facilitate the adoption of standards for the industry. The meeting was chaired by Vice-President Norbert Klettner, who acknowledged the significant progress in defining the TIC4.0 language that has been produced by the association, congratulated the TIC4.0 members for the efforts carried out in the last five years and remarked the value of the contributions of all members to keep TIC4.0 growing.

The Secretary General – José Andrés Giménez Maldonado - presented the main objectives for 2023, emphasizing the continuing growth and consolidation of the association to further increase its industry representativeness, and its recognition by both industry and external stakeholders as the reference organisation for operational and digital standardisation in the port terminal industry. One of the main strategic goals of TIC4.0 is that the TIC4.0 Semantics, definitions and language become endorsed by a recognised standardisation entity such as ISO. The Operations Council Chair informed the Assembly about the ongoing contacts with the British Standardisation Institute (BSI), a relevant member of ISO.

The consistent growth of TIC4.0 was confirmed with the entry of Elme Spreader, RAM Spreaders, S-Cube and NextPort (Full Members), as well as SPLIA and Solid Port Solutions (Affiliate Members), which were presented as TIC4.0's new members that joined in the first half of 2023. The new members were warmly welcomed and introduced to the Assembly.



3 - TIC4.0 NEXT GENERAL ASSEMBLY

DELHI - INDIA, 21ST – 22ND
SEPTEMBER 2023



On behalf of the TIC4.0 Executive Council, we would like to announce the next TIC4.0 General Assembly Meeting, which will take place in Delhi (India) the 21st and 22nd of September kindly hosted by ATAI.

The next General Assembly will be a great opportunity to discuss and share TIC4.0's progress, reflect on the next steps to take and continue building and nurturing relationships between members and stakeholders.

It is important to value and appreciate the efforts of the members to attend such an important event and in this way to know directly the contributions that each one can make.

The program for this special TIC4.0 General Meeting in Delhi will include a conference with leading representatives of India Government and ports and the Indian terminal operator industry.

PRELIMINARY EVENT AGENDA

DAY 1 (21st , 2023):

- 9:00 AM to 1:00 PM: Trade and Logistics India Story, India's digital journey Role of standardization, Global Trade and Role of Technology (Mini Conference)
- 2:00 PM to 7:00 PM: India's biggest Inland depot visit (Demonstration of Digital Transformation and Operational Digital Twin)
-

DAY 2 (22nd , 2023):

- 9:00 AM - 1:00 PM: Red Fort/ Aksharadham Visit
- 2:30 PM - 6:30 PM: General Assembly Meeting



4 - PARTICIPATION IN CONFERENCES AND CONGRESSES

TOC Europe 2023 - Rotterdam



TOC Europe returned after pandemic-related cancellations and limitations. TIC4.0 was strongly represented by its members, many of whom acknowledged their link to TIC4.0 by displaying the TIC4.0 logo or the "WeTalkTIC!" logo on their stand. TIC4.0 also managed its own booth, which attracted a lot of interest from the visitors. TIC4.0 Executive and Operations Council members, as well as the Secretary General, participated in the conference programme and in various panels at the TOC Theatres, namely: TechTOC, Business Intelligence, Sustainability and Digital.

Secretary-General José Andrés Giménez Maldonado had the honour to share the floor in the conference session "The Road towards Digital Interoperability" and discussed with Pascal Ollivier (IAPH Data Collaboration Committee Chairman), Bertrand Chen (Global Business Shipping Network CEO), Slavia Jumelet (DCSA Digital Business Transformation Lead), Sanna Vainionpää (Silli Solutions Director of Maritime Strategy), Ben van Scherpenzeel (International Port Call Optimisation Task Force Chairman) and Hans Rook (International Port Community Systems Association Ambassador) about the need for collaboration among the existing international standardization organisations and ongoing initiatives on the e-BL, the European Maritime Single Window Environment and the Just-in-Time Operations Concept at port-ship operational interfaces.

Vice-President Norbert Klettner took part in the session "Innovative Digital Solutions" to present the integration and capabilities of the TIC4.0 language standards within the "Digital Twins" conference.

The session "The Operational Language of Ports" saw Operations Council Chair Francisco Blanquer, Vice-Chair Luisa Kempf and David Moosbrugger (Künz CTO Managing Director) in action. Fruitful discussions took place around the questions: "How can the TOS and cargo handling equipment speak the same language?" "What are the business implications of embracing a standardized operational language?" and "Can a harmonized cargo handling language format optimize container stacking and storage?".



This time, TIC4.0's presence consisted of both a booth, participations in the conference programme and the different panels at the TOC Theatres, namely: TechTOC, Business Intelligence, Sustainability and Digital.



During TOC Europe, a series of interviews conducted by TIC4.0's Executive team with leading industry representatives took place at the exhibition area:

TIC4.0 Vice President, Norbert Klettner, interviewed Bart Overgaaw, Business Unit Manager of ICT Group. Bart expressed its interest in standardisation due to the great efforts they required to integrate new machinery and terminal equipment every time they acquired new equipment, and reflected on how TIC4.0's developments are helping to develop standards that ease these processes, lowering risks, costs and paving the way for new investments and developments at ports. Furthermore, the ICT executive shared that "TIC4.0's publications have the potential to become a global standard and become a reference for the uptake of standards by the port industry to improve their operational performance".

Link to the video: <https://www.youtube.com/watch?v=7MyGF9aphEA>

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TOC Europe 2023 - Rotterdam



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Bart Overgaaw, Business Unit Manager, ICT Group

Francisco Blanquer interviewed Raymond Höhle, Chief Technical Officer of Yilport Holding. In his opinion, with the uptake of automation of RTGs, the communication between the equipment and TOS is crucial and the industry is struggling to find a "common language" to harmonize communication between port players. The biggest impact in the industry would be the development of a common API for anyone to use, and TIC4.0's contribution would be a game-changer in this respect.

Link to the video: <https://www.youtube.com/watch?v=rA9Kom67H6k>

You can find the interviews, and many more at our YouTube channel:

<https://www.youtube.com/@tic4.0>



4 - PARTICIPATION IN CONFERENCES AND CONGRESSES

Black and Caspian Sea 2023 Ports and Shipping Conference - Istanbul



The Black and Caspian Sea 2023 Ports and Shipping Conference took place from July 4th to July 6th in Istanbul supported by YILPORT Holding Inc, MARPORT and DP World and organized by Transport Events Limited.

This event brought together maritime and port community, with a more regional focus that provided a spotlight on the impact of the ongoing war in Ukraine, and introduced regional players and lesser known supply chain solutions offered by the Middle Corridor.



TIC4.0 was represented by the President, Boris Wenzel, who gave the opening Keynote Address of the Conference, the Vice-President, Norbert Klettner, and the Secretary General, José Andrés Giménez. Norbert participated as a speaker in the session "Fostering Industry Synergy: Embracing Trade and Investment Liberalisation for Seamless Cooperation". TIC4.0 also participated with a booth in the exhibition area represented by our TIC4.0 Project Manager, Gonzalo Sandiás, by meeting with Turkish and other regional stakeholders port industry players.

Within the organisation of the event there was also the opportunity to visit the terminals of Marport, Yilport Gemlik and DP World Yarimca port. This represented the opportunity to witness how these terminals provide value for its customers.

Finally, this type of event represents an opportunity to have a close contact with some of the members of the association. Members such as Prodevelop (Lee Sutton), DSP (Marco Fehmer and Despina Solomou), DMSLOG.Ai - AI for port terminals (Lucas Roche-Poggi and Olivier Raveau Piorkowski), RAM Spreaders - RAM Lifting Technologies (Frank Van Laarhoven), Stinis Lifting Equipment (Wiam Afifi and Ruud Westgeest), Bromma, Camco Technologies, Siemens Industry and Navis (Levs Aispurs) have participated in the event in different roles.



In the first half of 2023, four companies have joined TIC4.0 as full members and two affiliated, broadening the scope of the association by providing their extensive experience within the industry and their different points of view that enrich the growth and development of TIC4.0.

FULL MEMBERS



With its more than 22 years of experience, Athenas provides deep business insight and promotes significant gains for its customers via its collaborative platform. Its main contributions are focus on Terminal Operating Systems and the development of M2-Digital Twin 3D in Realtime. Allowing for a simplification in its processes, a better use of its resources and a broad optimization in the operations of the terminals and ports.



With freight forwarding technology and a team that specialises in finding custom solutions, DMS handles the most complex operations via air, road and sea. For more than 30 years now, the company has been collecting achievements through its dutiful work along with a plethora of different industries – from fashion to healthcare, aerospace and many others. DMS has the capability of providing a complete solution independently of the industry or customer requesting it.



Minato – Intelligent Port Platforms as a division of Dubai Technologies is a sustainable automation solution to enhance the Port's Productivity, Safety & Security. It consists of different modules which can complement the Terminal Operating System for Overall Operational Efficiency of ports & logistics facilities.



NextPort is a company that uses artificial intelligence and machine learning for the development and application of digital tools employed in the advancement of operations technology to create SmartPorts. Services: Process engineering, Digital Transformation, Systems Integration, Data and Optimization.





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AFFILIATED MEMBERS



Solid Port Solutions is a Consultancy services for the Port and Terminals industry, specialised in the implementation of port automation systems. It is made up by independent experts in high-level technical projects in the ports, transport and marine industries. Its core strengths lie in manual, semi-automated or fully automated container terminal operations, management and development.



The Shipping and Ports Logistics Information Association (SPLIA) is based in South Korea. Since 1995, it has been developing activities for the digitalisation and standardisation of port logistics in collaboration with government agencies and logistics enterprises. The main objectives of SPLIA as an association are: to promote standardisation of shipping and port logistics information, identify regional and overseas shipping and port logistics information trends, to promote innovation and efficiency in shipping and port logistics by incorporating new IT technology into shipping and port logistics information.



JOIN THE TIC4.0 COMMUNITY



ENDORSED BY



MEDIA PARTNERS





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