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The text "TRACE IT!" is written in large, bold, light blue capital letters. A thick red arrow points from the left, passing through the text, and continues to the right edge of the frame. The background of the central circle features a stylized world map and a colorful, abstract pattern of yellow, red, and blue.

**Transdisciplinary Game to build Capacity
for Chemicals Traceability**

GAME INSTRUCTIONS

Imprint

Trace-It Transdisciplinary Game to Build Capacity for Chemicals Traceability Game Instructions

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Darmstadt University of Applied Sciences, 2025

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Disclaimer

This document is the result of the transdisciplinary research project "ECHT - Enable Digital Product Passports with Chemicals Traceability for a Circular Economy". The project is funded by Interreg North-West Europe (2024-2026) and led by Jonas Rehn-Groenendijk, Darmstadt University of Applied Sciences, Germany.

For more information visit: <https://echt.nweurope.eu/>

Introduction

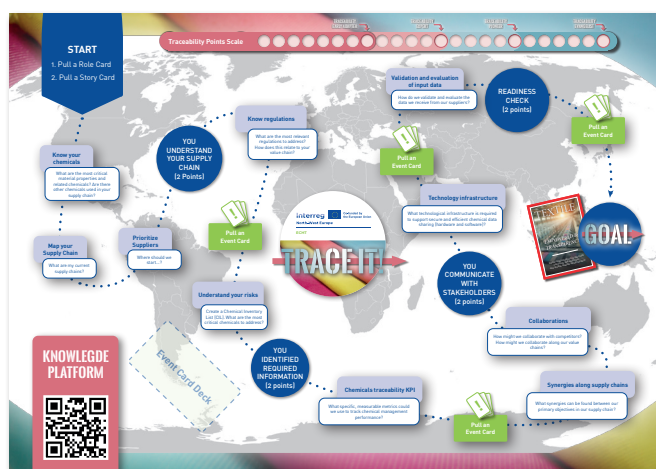
“Trace-It” is a collaborative board game that aims at building capacity of traceability of chemicals in textile value chains. It has been developed in the project “Enable Digital Product Passports with Chemicals Traceability for a Circular Economy - ECHT”.

It is part of the training schemes work package on capacity building in the industry and has been introduced during the third of three workshops with participants from industry, NGOs, academia and the public sector.

Starting from a literature review on simulation games a co-creative process was initiated that fostered several approaches to impart knowledge and know-how on chemicals traceability. After several iterations with the project team and external academic experts the concept of this game was developed and further elaborated in a series of workshops and asynchronous working phases with the authors of this paper.

The aim of this paper is to illustrate the gameplay and reasoning behind the game, and to provide a starting point for ongoing discussions and optimisation of the tool.

Goal of Playing the Game



“Trace-It” was created to build capacity in the textile value chains with a specific focus on SMEs. In line with this, one of the core target groups are representatives

of these SMEs that are working in textile value chains (e.g. fabric manufacturer, garment manufacturer, brands and retailers). However, the game is also suitable and has proven informative to other actors dealing with chemicals traceability in textile value chains and even beyond this sector (e.g. NGOs, governmental agencies, large scale enterprises). The game can be played both in transdisciplinary workshops with participants from companies, NGOs and other actors as well as inside companies in interdisciplinary teams.

Playing the game shall both sensitise for the topic and necessity of chemicals traceability as well as educate on approaches and tools on how to implement traceability in the organisation. By doing so, knowledge gaps and open questions can become visible and be addressed in the future process.

We do acknowledge that implementing traceability is a complex, long-term and iterative process that by no means can be completed in the course of playing the game. Rather, this game can be a starting point for internal discussions and strategy development as well as testing current traceability practises.

Preparation

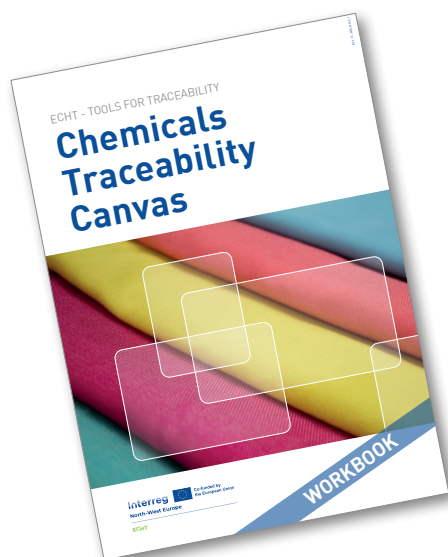
Before playing the game, the game board is placed on the table, event cards are placed as a stack onto the respective field of the game board. The figure is put on the start field.



The team chooses one of the scenarios and by doing so one of the company types (e.g. brand, fabric manufacturer or yarn manufacturer). Each member of the team chooses one role. In smaller groups some

roles might be left over or individuals can choose to take on multiple roles. For larger teams, roles can also be shared.

Each player receives a **“Chemicals Traceability Canvas Workbook”** to write down thoughts, solutions and ideas.



Gameplay

The game is played by moving the figure along the track from one field to the next and completing each task. To do this, the team discusses how to tackle the challenge described in the task. They might use the **“ECHT Knowledge Platform”** as support. To facilitate this process, a special chatbot is available by scanning the QR-code on the board.



Tasks are completed by filling out the **“Task Fulfilment Sheet”**. In the top part the answer or solution to the task is written, sketched or similar. On the bottom of the sheet, a responsible person or department has to be selected. This helps the team to understand the

internal processes in the organisation and the actual responsibilities to various challenges. In pre-tests to this game, it became obvious that oftentimes players have a different perspective on the actual responsibility regarding specific tasks. Therefore, substantial discussions and clarifications can be expected.



After two to three task fields teams reach a blue round milestone. Here, teams call for the game master who will check the task fulfilment sheets and if accepted approve the two game points indicated on the blue field. The team is then allowed to take these colourful stones (“substances of concern”) and place them onto the scale on top of the game board.

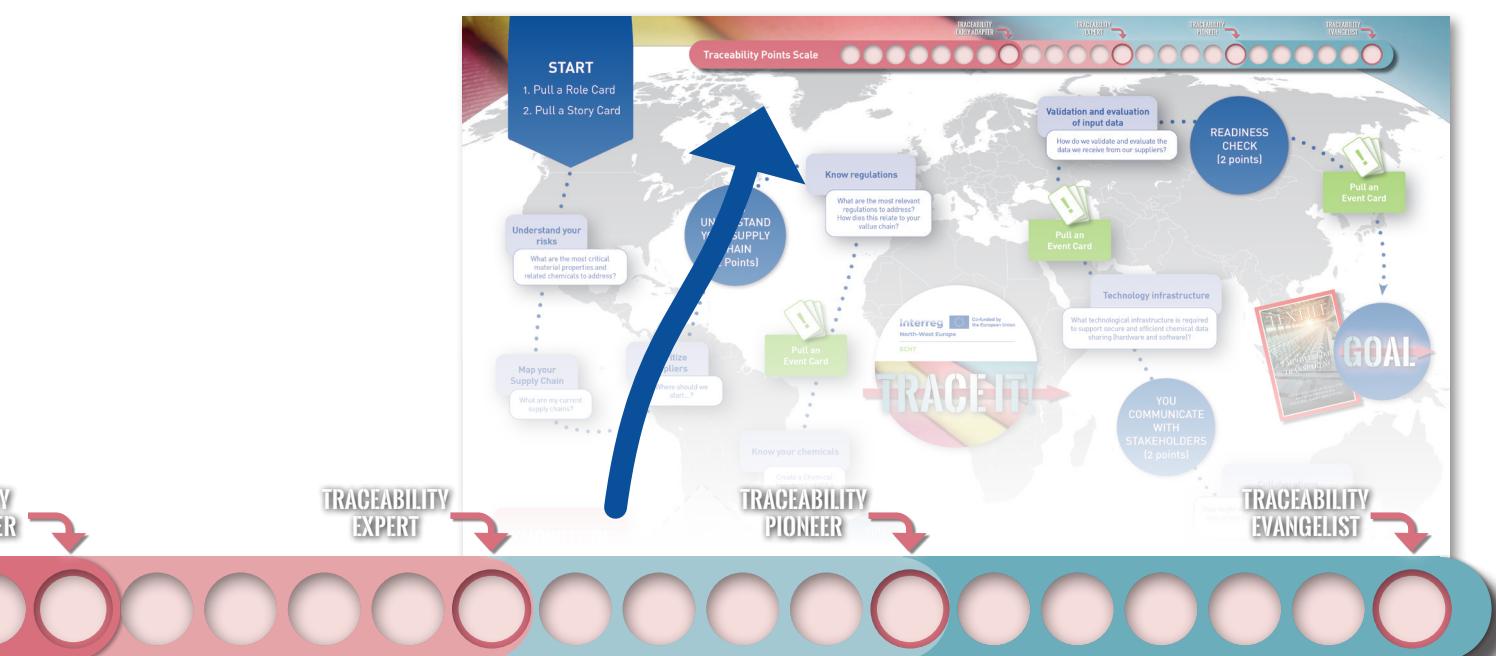


If teams reach a green **event card** field, they have to pull the top card of the stack on the board and have the chance to complete this extra task and receive additional game points. If they cannot complete the task, they can move forward without extra game points.

End of the Game

The game ends either after a certain time that has been agreed upon before the game started or when the team reached the goal.

The goal of this game is to collect as many game points as quickly as possible. It is recommended to play the game with several teams in parallel and compare the amount of game points between each team.



Impressions of Gameplay

