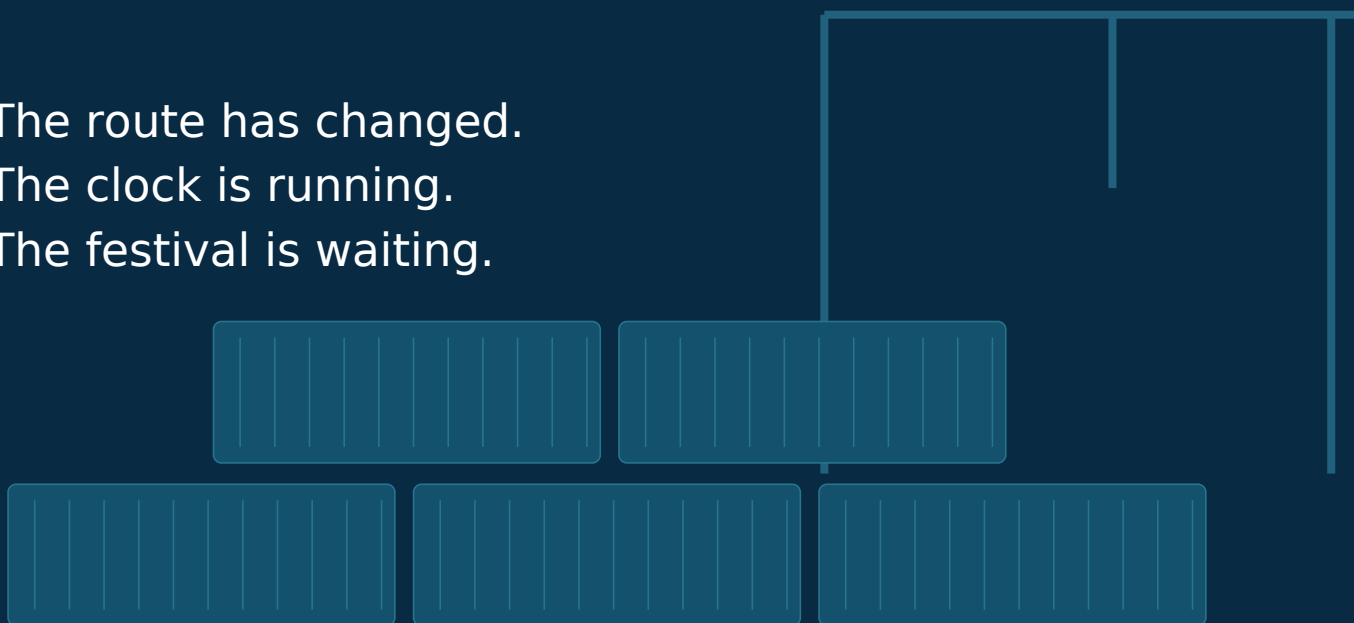


CARGO 2040

MASTER EDITION

The route has changed.
The clock is running.
The festival is waiting.



Match the freight. Rebuild the journey.
Unlock a delivery your team can defend.

AGES 15+ / 3-5 PLAYERS / 60 MIN / C1

PRINT AT 100% / A4 / SINGLE-SIDED



Co-funded by
the European Union



Set up the operation

HOST ONLY / PRINT AND PLAY / NO REAL LOCKS REQUIRED

Teams of 3-5, ages 15+. Allow 5 minutes for briefing, 45 for play and 10 for discussion. Use pens, optional calculators, scissors for preparation and five envelopes per team.

CHOOSE YOUR DOCUMENT

MASTER contains the entire game.

HOST contains setup, hints, solutions and the reveal.

PLAYERS contains only the briefing, ledger and five evidence files.

At the start	Envelope contents
Give P01 + P02 to each team	File 01: P03 freight cards AND order strip
Keep H01-H06 with the host	File 02: P04 route map
Cut P03 and P06 cards	File 03: P05 timetable
Keep evidence notes with P06	File 04: P06 evidence notes AND messages
Keep all previous files in play	File 05: P07 release grid

Preparation

Print A4 at 100%, single-sided. Cut only dashed card outlines. Retain every instruction and evidence strip. Use H02 labels on envelopes. Separate H03 hint slips if useful. Read H04 before facilitating; keep H05 hidden until the final lock is accepted.

Hosting

Release each file after checking its code and explanation. Offer hints without penalty. Allow spoken or written reasoning and additional time. Rotate reader, mapper, calculator and checker. Do not lock doors or require access to transport equipment.



Label the five files

HOST MATERIAL / CUT AND ATTACH TO ENVELOPES

01**FREIGHT RECORDS**

CARGO 2040 / C1 / P03

OPEN WHEN THE HOST RELEASES THIS FILE

02**PORT ROUTE**

CARGO 2040 / C1 / P04

OPEN WHEN THE HOST RELEASES THIS FILE

03**CONNECTION TIMETABLE**

CARGO 2040 / C1 / P05

OPEN WHEN THE HOST RELEASES THIS FILE

04**GREEN CLAIMS**

CARGO 2040 / C1 / P06

OPEN WHEN THE HOST RELEASES THIS FILE

05**RELEASE GRID**

CARGO 2040 / C1 / P07

OPEN WHEN THE HOST RELEASES THIS FILE

Keep the order strip with File 01 and the evidence notes with File 04. File 05 requires the actual freight and service IDs from earlier files.



Hints for the dispatch team

HOST ONLY / HINT 1 BEFORE HINT 2 / NO PENALTY

FILE 01 / HINT 1

Match more than the item name.

FILE 01 / HINT 2

Check order F40 and the requested seal.
Sum the three selected masses.

FILE 02 / HINT 1

Apply your load's mass to every link.

FILE 02 / HINT 2

Exclude the closed upper link and the first lower link if the load is too heavy.

FILE 03 / HINT 1

Calculate readiness before choosing a departure.

FILE 03 / HINT 2

After the next-stop time, add both extra intervals. Check the full price.

FILE 04 / HINT 1

Keep the same baseline and evidence boundary.

FILE 04 / HINT 2

B uses saving divided by 600. A concerns one stage; C concerns reduced loading.

FILE 05 / HINT 1

Retrieve the underlying IDs, not full access codes.

FILE 05 / HINT 2

The row comes from a freight card; the column comes from the selected service.

The complete solution

HOST ONLY / CHECK REASONING AS WELL AS THE CODE

01 / 628 / KEEP 2

Sound: ID 6, F40, seal 42. Lights: ID 2, F40, seal 35. Refill: ID 8, F40, seal 61. The other cards fail the order or seal test. Combined mass: $2 + 2 + 2 = 6$ tonnes.

02 / 473 / KEEP 7

The complete load follows QUAY $\rightarrow$ 4 $\rightarrow$ 7 $\rightarrow$ 3 (HUB). The upper path is broken by the closure 9 $\rightarrow$ 1. The lower branch allows only 4 tonnes, below the 6-tonne load.

03 / 515 / KEEP 1

Ready at 09:50. Service 5 departs at 09:50 and arrives at its next stop at 10:25; add 20 + 30 minutes to reach the festival at 11:15. It costs 140 credits. ID 9 leaves too early; ID 8 arrives at 11:30; ID 2 costs 170; ID 6 arrives at 12:10. ID 5 + minute digits 15 = 515.

04 / 791 / KEEP 9

A $\rightarrow$ 7: one electric stage does not prove a zero-emission chain. B $\rightarrow$ 9: $(600 - 450) / 600 \times 100 = 25\%$. Card 6 wrongly uses 450 as denominator. C $\rightarrow$ 1: reduced loading may require extra trips or routing.

05 / 346 / KEEP 4

Rows 6, 2, 8 in that order; column 5. Intersections: 3, 4, 6. Seal numbers and previous three-digit codes are not row or column labels.

FINAL / 27194

Retain middle digits in file order: 2, 7, 1, 9, 4. Ask for the chosen freight, safe route, feasible service, final arrival and one justified environmental claim. Then release H05.



Dispatch authorised

FINAL REVEAL / GIVE TO PLAYERS AFTER THE FINAL LOCK

MISSION COMPLETE

The equipment has a workable journey.

YOUR DELIVERY ORDER

FREIGHT / 6 + 2 + 8 / 6 TONNES
PORT ROUTE / QUAY → 4 → 7 → HUB 3
ONWARD SERVICE / 5 / RAIL + FINAL ROAD
FESTIVAL ARRIVAL / 11:15
ONWARD COST / 140 CREDITS

You checked the freight rather than trusting a familiar label. You respected a closure and a capacity limit. Your service meets the deadline and budget, and your public message stays within the evidence.

This is a fictional dispatch authorisation, not a real transport clearance. Its timetable and constraints are game rules. A real operation would require professional checks and current local information.

Before the festival opens

Give a two-sentence update to the organiser. State what will arrive and when, then make one environmental claim that the evidence supports. Avoid promising that the delivery is “zero carbon”.



Connect the game to reality

HOST NOTES / LANGUAGE / DISCUSSION / SOURCES

Language edition: C1

Probe the conjunction of constraints, the emissions baseline and the limits of evidence. Ask teams to justify why each alternative is excluded.

Offer seated roles, enlarged print, read-aloud support and written explanations. Do not assess speed or accent. The codes are consistent across editions, so keep teams' work private during play.

DISCUSS THE BLUE ECONOMY

How does an inland port connect to sea trade? Why can more than one mode improve flexibility without guaranteeing a perfect route? What changes when river levels fall? Why does a comparison need a common emissions boundary?

Duisburg connects water, rail and road. [1] Low water can limit safe vessel loading. [2] The EU Blue Economy Observatory includes inland freight in its maritime transport scope. [3] The game is inspired by these connections, not a model of the actual Duisburg port.

Sources and reuse

Original fictional game and artwork. All 2040 schedules, capacities, prices and emissions figures are invented, not forecasts. Free educational use and adaptation; not for resale. Supplied logo rights remain unchanged. Not an official duisport product.

[1] duisport. Water. <https://duisport.de/en/water/>

[2] CCNR. Annual Report 2024, water levels and navigation conditions.
https://www.ccr-zkr.org/files/documents/om/om24_II_en.pdf

[3] European Commission. Maritime transport.
https://blue-economy-observatory.ec.europa.eu/eu-blue-economy-sectors/maritime-transport_en

Last visited: 14 October 2026.



The festival is waiting

START HERE / FICTIONAL INLAND PORT / YEAR 2040

2040: a youth festival's equipment is held at an inland logistics hub. Low water and a severed connection have invalidated the original plan. Reconcile the consignment records, establish a feasible delivery chain and substantiate its environmental claims before authorising release.

DISPATCH / YOUR BRIEF

Move three freight units as one load. Delivery deadline: 11:20. Keep the freight together and respect every closure and capacity limit. The organiser needs a workable plan and an accurate public message.

How the game works

Solve five files in order. Each gives a three-digit code. Show the host the code and your reasoning to receive the next file. Retain the middle digit in your ledger. The five retained digits form the final lock.

Keep earlier evidence: File 5 needs the freight IDs from File 1 and the service ID from File 3.

Play together

Rotate reader, mapper, calculator and evidence checker. Use paper and a calculator if useful. Ask for a hint without penalty. No phones, port access or actual cargo handling are required. Nobody is locked in.

THE REAL CONNECTION

Inland ports connect water, rail and road networks. Low water can restrict safe vessel loading. [1, 2] Every route, mass limit, schedule, price and emissions total in this 2040 game is invented, not a forecast or real operating instruction.



Your dispatch ledger

KEEP THIS PAGE / SAVE EARLIER EVIDENCE FOR THE FINAL FILE

TEAM NAME

01	Freight records		KEEP	
02	Port route		KEEP	
03	Timetable		KEEP	
04	Green claims		KEEP	
05	Release grid		KEEP	

FINAL LOCK

Read middle digits in File 1-5 order. Explain which load and service you selected, when it arrives and why the environmental message is justified.



Find the real consignment

FILE 01 / CUT ALL SIX FREIGHT CARDS / KEEP THE ORDER STRIP

Reconcile each requested item against the records using the conjunction of item description, order reference and seal identifier. Retain only exact matches. Their IDs in SOUND, LIGHTS, REFILL order form the code; their aggregate mass constrains the next stage.

ORDER F40 / SOUND: 42 / LIGHTS: 35 / REFILL: 61

9

FREIGHT UNIT

SOUND

Order reference: F40 | Security seal: 24 |
Mass: 2 tonnes | Item: Sound equipment

6

FREIGHT UNIT

SOUND

Order reference: F40 | Security seal: 42 |
Mass: 2 tonnes | Item: Sound equipment

7

FREIGHT UNIT

LIGHTS

Order reference: F41 | Security seal: 35 |
Mass: 2 tonnes | Item: Lights equipment

2

FREIGHT UNIT

LIGHTS

Order reference: F40 | Security seal: 35 |
Mass: 2 tonnes | Item: Lights equipment

8

FREIGHT UNIT

REFILL

Order reference: F40 | Security seal: 61 |
Mass: 2 tonnes | Item: Refill equipment

4

FREIGHT UNIT

REFILL

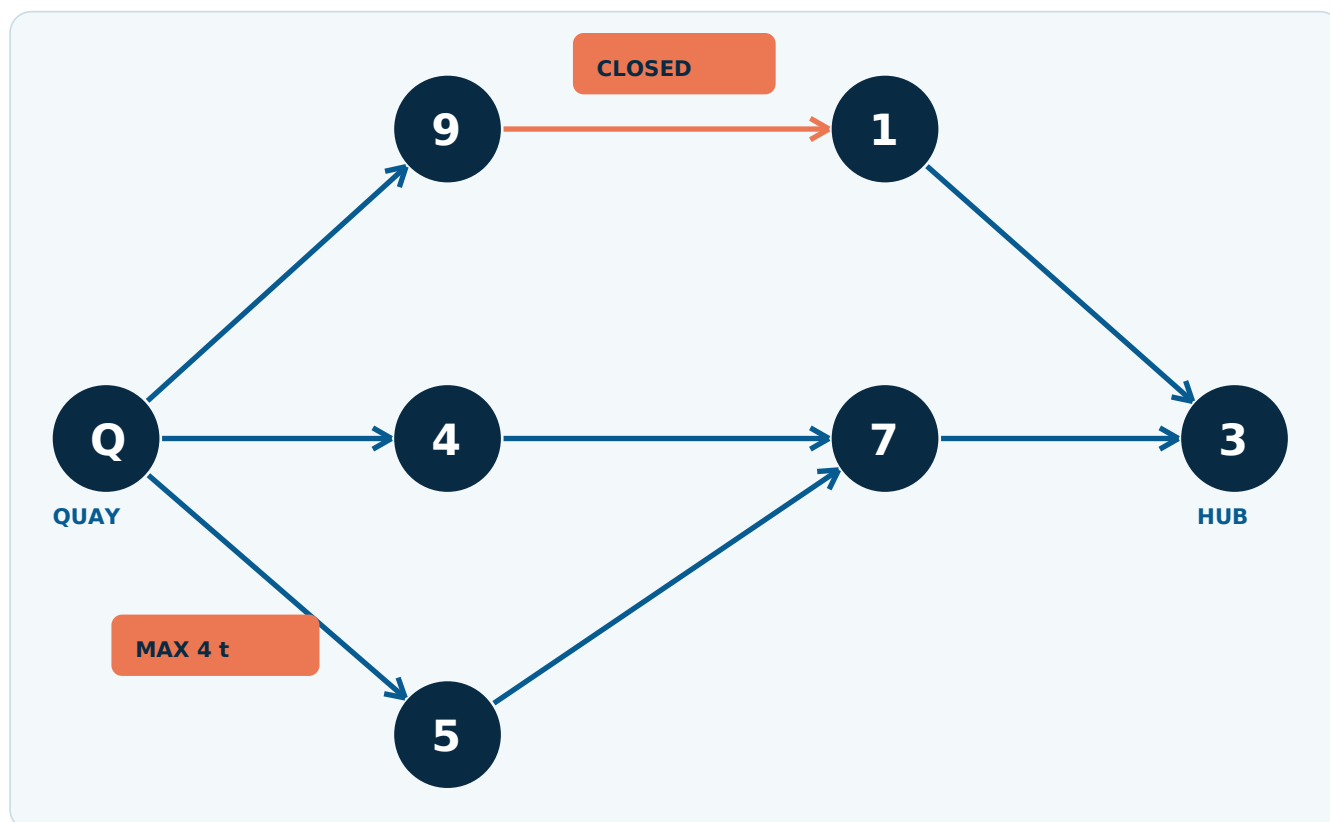
Order reference: F40 | Security seal: 16 |
Mass: 2 tonnes | Item: Refill equipment



Rebuild the port route

FILE 02 / USE THE COMBINED MASS FROM FILE 01

Determine the unique feasible directed path from QUAY to HUB for the indivisible consignment established in File 1. Apply both the link closure and capacity constraints. Read checkpoint identifiers in traversal order, including the destination but excluding the origin.



Every other link permits up to 8 tonnes. The 4-tonne restriction applies to QUAY → checkpoint 5. The only closed link is 9 → 1. Arrows show permitted travel. No splitting, backtracking or hidden links.

ACCESS CODE

Show your code and evidence to the host. Keep its middle digit.

Schematic for a fictional port. The limits describe this game only.



Catch the connection

FILE 03 / ONE SERVICE SATISFIES EVERY REQUIREMENT

Given HUB arrival at 09:20 and a non-negotiable 30-minute handling interval, identify the sole service satisfying departure readiness, an inclusive 150-credit ceiling and delivery by 11:20. Incorporate all onward intervals. Encode its ID followed by the minute component of final arrival: ID 4 at 10:08 becomes 408.

ID	Mode	Departs	Next stop	Extra min	Credits
9	Rail	09:40	10:10	20 + 30	120
5	Rail	09:50	10:25	20 + 30	140
8	Rail	10:10	10:40	20 + 30	130
2	Direct road	09:55	10:55	0 + 0	170
6	Barge	10:00	11:20	20 + 30	100

Read the schedule correctly

Extra minutes = transfer + final road delivery, added AFTER arrival at the next stop. For direct road, that stop is the festival. Costs cover the full onward journey for all three units; capacity is sufficient. You may depart exactly when handling finishes. All times are on the same day.

Use the supplied complete journey, not an invented combination of two services. No extra delays or fees apply beyond those stated.

ACCESS CODE

Show your code and evidence to the host. Keep its middle digit.



Clear the green claims

FILE 04 / CUT ALL SIX MESSAGES / KEEP THE EVIDENCE NOTES

Select the sole statement warranted by each evidence note, preserving the stated system boundary and baseline. Concatenate card IDs in A, B, C order. Distinguish a conditional operational implication from a universal modal claim.

A Only the final vehicle is known to be electric.

B Old total: 600 kg CO₂e. New total: 450 kg CO₂e. Same load, delivery task and emissions boundary.

C In this scenario, low water reduces a vessel's safe loading limit.

4

MESSAGE OPTION

A / DELIVERY CLAIM

The final vehicle's electric propulsion substantiates a zero-emission claim for the delivery as a whole.

9

MESSAGE OPTION

B / EMISSIONS CLAIM

On the stated comparable boundary, the 150 kg difference is a 25% reduction against the baseline.

8

MESSAGE OPTION

C / LOW-WATER CLAIM

A reduction in permissible loading is compatible with maintaining the vessel's original full cargo on each trip.

7

MESSAGE OPTION

A / DELIVERY CLAIM

A technology observation confined to the final stage cannot substantiate a zero-emission claim beyond that boundary.

1

MESSAGE OPTION

C / LOW-WATER CLAIM

A lower permissible load may entail additional trips or rerouting; it does not establish a universal ranking of modes.

6

MESSAGE OPTION

B / EMISSIONS CLAIM

The 150 kg difference establishes a 33.3% reduction against the original delivery baseline.



Unlock the release grid

FILE 05 / TWO EARLIER RESULTS / ONE RECOVERY SEQUENCE

Recover the release sequence by cross-indexing the consignment IDs from File 1 against the selected service ID from File 3. Rows follow SOUND, LIGHTS, REFILL order; the service determines the column. Do not substitute previous access codes for the underlying identifiers.

ID / service	2	5	6	8
2	8	4	1	7
4	3	8	5	2
6	7	3	9	1
7	4	1	6	8
8	2	6	4	5
9	5	9	3	6

DISPATCH RULE

Use the selected FREIGHT IDs as rows, not seal numbers. Use the selected SERVICE ID as the column, not an arrival time. Read the three intersection values in the order specified.

Enter this code on P02. Then assemble all five retained middle digits and present your final delivery plan to the host.

