LEARNING BOX OF UNPLUGGED ACTIVITIES

The flight disruption recovery plan

In this unplugged challenge-based activity, participants are placed in a realistic travel disruption scenario: their flight has been cancelled unexpectedly, and they must urgently reorganize their entire travel plan. This includes rethinking routes, timing, costs, and available alternatives such as other flights, trains, buses, or multi-step journeys.

The challenge is framed as a time-sensitive problem:

"How can you reach your destination as efficiently as possible after your original flight is cancelled?"

Participants are given a set of travel options with different constraints (price, duration, availability, transfers, and departure times). They must evaluate alternatives, adapt their plan under pressure, and justify their decisions based on trade-offs between cost, time, and feasibility.

Target Group

- ☑ Low-skilled adults with low digital competences
- ☑ Low-skilled adults with limited formal education or qualifications
- ☑ Low-skilled adults with low participation in lifelong learning / training opportunities

Learning Objectives

- Analyze a complex problem involving multiple constraints and alternative solutions
- Apply decomposition to break down a problem into routes, costs, and time-related components
- Identify patterns in options and trade-offs between competing variables such as efficiency, cost, and feasibility
- Apply abstraction to focus on key decision factors such as time, cost, and dependencies

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Theme

Travel logistics and decision-making under unexpected disruption

Duration

60 mins

Level

Advanced

Computational Thinking Steps Used

- ☑ Decomposition
- ☑ Pattern recognition
- ☑ Abstraction
- ☑ Algorithmic thinking

Methodological Approach

- ☐ Gamification
- ☑ Challenge-Based Learning
- ☐ Collaborative learning
- ☐ Experiential learning

Competence Areas

a) Innovation Competences

- ☑ Creativity
- ☑ Critical thinking
- ☑ Problem solving
- ☐ Communication
- ☑ Collaboration

b) Information Literacy Competences

- ☑ Ability to access, understand and critically analyse information
- ☐ Interpretation of digital and visual content
- ☐ Awareness of media influence and biases

c) Life and Career Competences

- ☑ Flexibility and adaptability
- ☑ Initiative and autonomy
- ☑ Sociability and intercultural competence
- ☐ Productivity
- ☐ Leadership and responsibility

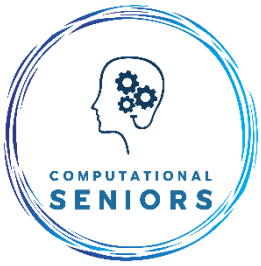
Learning Outcomes

- Reorganize a plan after unexpected disruptions or changes in conditions
- Evaluate alternative options based on multiple criteria such as time, cost, and feasibility
- Break down complex problems into manageable segments and decision points
- Recognize patterns in available options and common trade-offs between alternatives
- Focus on the most relevant factors when making decisions under time constraints

Notes

- Make the scenario realistic and emotionally engaging (e.g., missed connection, cancelled last-minute flight, tight arrival deadline).
- Provide a clear destination goal and deadline, so participants understand what “success” means.

- Design travel options with meaningful trade-offs (e.g., cheaper but slower routes, faster but expensive alternatives, indirect connections).
- Ensure there is no single obvious optimal solution, multiple valid routes should exist depending on priorities.
- Keep data simple and readable (avoid overly complex timetables or airline logistics).
- Encourage participants to explicitly state their decision criteria (e.g., prioritize time vs cost vs reliability).



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Step 1: Understand the disruption and define the goal

Participants are presented with the challenge:

“Your flight has been cancelled. You must reach your destination as efficiently as possible.”

They receive key information: current location, destination, deadline (e.g., arrival time), and a set of available alternative transport options (flights, trains, buses, combinations).

Participants analyze the situation and clarify constraints such as time limits, budget, and connections.

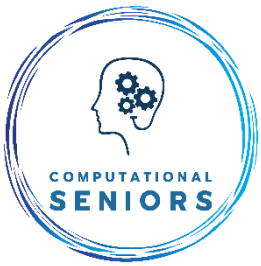
Computational thinking focus: Decomposition, breaking the problem into travel segments, constraints, and available options.

Step 2: Explore alternatives and make decisions

Participants evaluate different travel routes, comparing options based on duration, cost, number of transfers, and reliability. They identify trade-offs (e.g., faster but expensive vs. slower but cheaper).

The facilitator may introduce new disruptions (e.g., delays, unavailable seats), requiring participants to adapt their plan.

Computational thinking focus: Pattern recognition, identifying common trade-offs and viable route structures. Abstraction, focusing on key variables such as time, cost, and feasibility.



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Step 3: Build and justify the recovery plan

Participants design a final step-by-step travel plan, detailing each segment (departure, transfers, arrival) and ensuring it meets the goal within constraints.

They present their solution and justify their decisions, explaining how they adapted to disruptions and optimized their route.

Computational thinking focus: Algorithmic thinking, creating a structured, logical sequence of actions to reach the destination efficiently under changing conditions.

The fight disruption recovery plan

ACTIVITY CARDS

The flight disruption recovery plan

Card Categories

Profile

Travel alternative

Disruption event

Priority Levels

Essential
Extremely necessary to take into consideration

High
Importance

Medium
Helpful to take into consideration

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Print and cut the cards on the following slides to use in the activity.

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BUSINESS TRAVELLER

Destination Deadline

Attend an important meeting by 10:00 a.m. tomorrow

Budget: €600

Priority

Arrive as early as possible.

FAMILY ON HOLIDAY

Destination Deadline

Hotel check-in before 8:00 p.m.

Budget: €500

Priority

Keep travel simple and affordable.

UNIVERSITY STUDENT

Destination Deadline

Arrive before an important exam.

Budget: €250

Priority

Choose the lowest-cost solution.

CONFERENCE SPEAKER

Destination Deadline

Conference presentation at 2:00 p.m. tomorrow

Budget: €700

Priority

Reliable travel with the lowest risk of further delays.

ALTERNATIVE FLIGHT A

Departure: 08:30

Travel Time: 2 hours

Cost: €350

Transfers: None

Seats Available: Yes

ALTERNATIVE FLIGHT B

Departure: 13:45

Travel Time: 2 hours

Cost: €220

Transfers: None

Seats Available: Limited

HIGH-SPEED TRAIN

Departure: 09:00

Travel Time: 5 hours

Cost: €120

Transfers: None

BUS

Departure: 07:30

Travel Time: 8 hours

Cost: €50

Transfers: None

TRAIN + FLIGHT

Departure: 06:30

Travel Time: 6 hours

Cost: €280

Transfers: One

TRAIN + BUS

Departure: 08:00

Travel Time: 7 hours

Cost: €90

Transfers: One

CAR RENTAL

Available Immediately

Travel Time: 6 hours

Cost: €200

Driver Required

OVERNIGHT FLIGHT

Departure: 22:30

Travel Time: 2 hours

Cost: €180

Arrival: Next Morning

TRAIN DELAY

Your train is delayed by 45 minutes.

Review your plan.

Priority: Essential

HEAVY TRAFFIC

Road travel takes one additional hour.

Priority: Essential

MISSED CONNECTION

You arrive too late for your next journey.

Choose another route.

Priority: Essential

HELPFUL AIRLINE

The airline offers a €100 travel voucher.

Will this change your decision?

Priority: High