

# The Sychromodality Game

## 1. Introduction

Logistics is gaining more and more importance in today's economy. Trends like Physical Internet, sychromodality and Blockchain are revolutionizing the way how goods are being transported, stored and handled.

This game focuses on sychromodality and its related changes and possibilities. The geographical setting of this game is the Danube Corridor and all the Danube countries as due to globalization transnational transports are increasing.

The players, acting as logistics providers, have to fulfil transport orders of their customers by using the three transport modes road, rail and inland waterway. Who will cause the least CO2 and who the most? Who will be most cost efficient? And what is sychromodality? Play the game and find out all the answers to these questions.

**Players:** everything is possible between 2 and 10, but 4 is recommended

**Game time:** depends on number of transport orders and intensity of the discussion



## 2. Game target

The players have to fulfill transport orders while causing as little CO2 as possible and earn as much profit as they can. They have to find an optimal balance regarding the use of different transport modes.

## 3. Game material

- game board
- CO2 cards
- transport coins
- action cards
- transport order cards

- “Quick rules”
- FAQ’s
- calculation sheet (just a template, scan it so you can duplicate it)
- game tokens (not included, please provide them yourself)

#### 4. Game preparation

Before you can start with the game, make sure you have the following things:

- game board
- transport coins
- CO2 cards
- action cards (need to be shuffled)
- Quick Rules
- tokens
- calculation sheets
- transport order cards

Each player should get:

- a token
- calculation sheet
- two transport orders (randomly picked)
- starting capital



The starting capital depends on the amount of players, as there is limited money available (unless you print more).

If there are four players, each player receives the following starting capital:

transport coin	amount	sum
10	*2	20
50	*1	50
100	*3	300
500	*3	1500
1000	*2	2000
	<b>total</b>	<b>3870</b>

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The total starting capital varies if there are more than four players. Each player should have at least 3000 and you have to make sure that everybody has the same starting capital.

One player acts as a bank. This player receives the rest of the transport coins and the CO2 cards. It is possible that one player handles the CO2 and another player handles the transport coins.

## 5. Game procedure

The game is played in two separate rounds, followed by a discussion. The differences between the two rounds will show you the main characteristics of synchronomodality.



## Round 1

During the first round all players play by themselves and have to fulfil their transport orders. The players take turns.

1. Everybody looks at their transport order and decides where they want to start.
2. All the players place their tokens on their starting point on the game board.
3. The first player starts with his first draw

Each draw follows these steps:

1. You have seven steps for each draw
  - a. Seven is the total number of your steps. It is irrelevant which transport modes you use.
  - b. You can divide the seven steps between different transport modes.
  - c. The requested transport mode has to be used, if it is available. If it is not available, you may use a different transport mode.
2. If you place your token on a field with an action card symbol ●, you have to pick an action card
  - a. It does not matter if your draw ends in this town or if you are just passing through. You have to pick an action card, e.g. your 5<sup>th</sup> step is on an action card symbol, so you have to pick an action card.
  - b. Before you pick an action card, you have to decide which transport mode you want to use next – **the action card depends on the transport mode that you are going to use next**
3. At the end of your draw, after you have completed your seven steps, you calculate the costs and the CO<sub>2</sub>, you pay the costs to the bank and you receive the CO<sub>2</sub> you have caused.

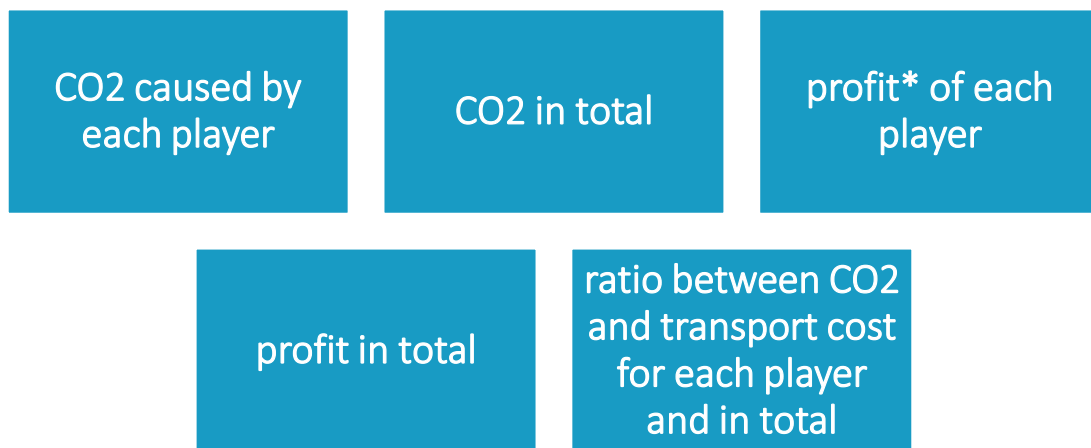
Once you have fulfilled a transport order you receive your revenue from the bank.

### Empty trips

After fulfilling your first transport order, you may have an empty trip to the start of your second transport order. Empty runs are completed within one draw regardless of the amount of steps, BUT you have to calculate and collect the CO<sub>2</sub> and you have to pay the costs.

The first round is completed when all players have fulfilled all their transport orders. If a player finishes his/her transport orders before the rest of the group, this player can take a break until the rest of the group has finished their transport orders.

At the end of each round, write down the following results on a Flipchart or a piece of paper:



\* what you have at the end of the round minus your starting capital

Calculating the ratio between the CO2 and the transport cost, please divide the total CO2 by the total costs.

These notes will help you during the discussion at the end.

## Round 2

During the second round the players act as a team and they have to fulfil the same transport orders as they had during the first round.

The transport mode requested by the customer is no longer applicable, you can ignore this information. You are free to use whatever transport mode you want to use.

As the players are acting as a team, they have one starting capital together (the sum of the starting capitals during the first round) and they plan and execute their transports together.

After picking an action card it is possible to switch to another transport mode. If you switch the transport mode after picking an action card, the effect of the action card becomes invalid and you do not have to pay the fine.

Round 2 ends when you have fulfilled all the transport orders. At the end, please write down the following results:

CO2 in total

profit in total

ratio between  
CO2 and profit

## Discussion

Compare the two rounds:

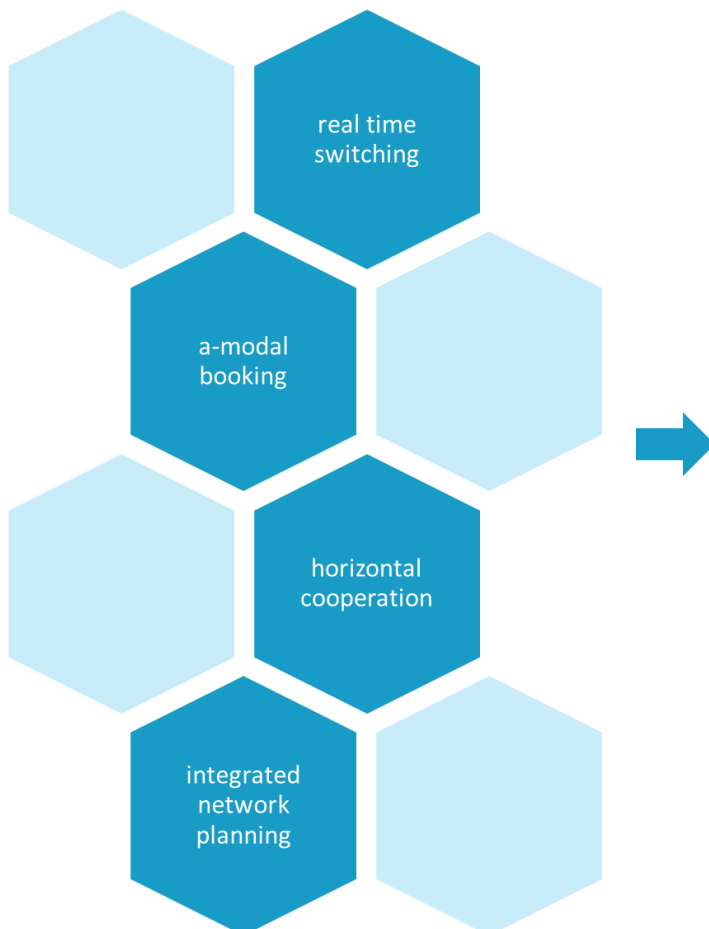
- Are there differences between the results?
- What were the differences in the game play?

What changed through synchronomodality?

Characteristics of  
synchronomodality



Advantages of  
synchronomodality



Optimization  
Better efficiency  
Better flexibility  
Reliability  
Better usage of  
resources

Have fun! 😊

### **Does the player who acts as a bank get to play too?**

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Usually, the player who acts as bank also plays the game, but it is up to you. Maybe you have an instructor, who can also act as a bank.

### **At the beginning of the first round, are we allowed to look at our two transport orders?**

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Yes, you get two transport orders at the beginning of the first round and you are allowed to look at both of them at the same time.

### **When do I have to pay the costs and when do I collect the CO2, which I have caused?**

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After you have completed the seven steps of your draw, you calculate your costs and your CO2. Then you pay the costs to the bank and the bank gives you your CO2. It is important for your gaming experience and your learning effect that you do so.

During the second you can pay and collect CO2 after you completed a transport order.

### **Do I always have to use the requested transport mode?**

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The requested transport mode is only relevant during the first round. You can ignore it during the second round.

In the first round, you have to use the requested transport mode, whenever it is possible. For example, if the transport mode "road" is requested and you are standing in a city where road and rail are possible transport modes, you have to use the road. For example, you are standing in Novi Sad and you want to travel to Belgrade. If your transport order is requesting you to use road then you have to use the road to get to Belgrade.

It might be the case that the requested transport mode is available but leads into the opposite direction. In that case, you may use a different transport mode. For example, you have the transport order starting in Sfântu Gheorghe with the destination Turin. The requested transport mode is "rail". You are standing in Sfântu Gheorghe, where a train to Galati is available. You do not have to take this



train as it is going into the opposite direction. You may use the road in this situation.

The requested transport mode has to be used as much and as quickly as possible. If the requested transport mode is not available, you can use another transport mode.

### **How many game tokens do we have during the second round?**

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You have as many game tokens as your team has players. You can use them all, but you do not have to. Sometimes due to bundling you will not need them all.

### **What happens if I go bankrupt on the way to a destination of my transport order?**

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If you go bankrupt during the fulfilling of a transport order, you can get a credit from the bank. The credit will be as high as the profit of the transport order you are currently working on.