



P•CUBE

Playing • Public • Policy

User Manual for the Digital Educational P-CUBE Game



POLITECNICO
MILANO 1863



o. Contents

1. Introduction	5
1.1. What is P-cube?	5
1.2. Why this manual?	5
1.3. Disclaimer	6
1.4. Legal Statement	6
1.5. Acknowledgements	6
2. Where to find the app?	7
3. Glossary	8
4. System Overview	10
4.1. Flow Chart	10
4.2. Sitemap	11
4.3. Explanation Main Screens	15
5. How to:	19
5.1. <u>Facilitator</u>	19
5.1.1. Create a scenario	19
5.1.2. Create a mission	22
5.1.3. Create a strategy	24
5.1.4. Change the order of strategies	26
5.1.5. Create a module	28
5.1.6. Modify a module	30
5.1.7. Change the order of modules	31
5.1.8. Actor distribution module	32
5.1.9. Multiple-choice module	35
5.1.10. Strategy branch module	37
5.1.11. Information module	39
5.1.12. Create an actor database	41
5.1.13. Host and create a game session	43
5.1.14. Download data of a game session	45
5.1.15. Change your account's password	47
5.1.16. Change the password of another account	48
5.1.17. Change an account's name	50
5.1.18. Add a new account	50
5.1.19. Delete an account	55
5.1.20. Delete an institution	57
5.2. <u>Player</u>	59
5.2.1. joining a game session	59
5.2.2. playing a game session	60
5.2.3. see mission information	64
5.2.4. play through the actor-distribution module	65
5.2.5. play through the multiple-choice module	69
5.2.6. play through the strategy branch module	70
5.2.7. play through the information module	71
5.2.8. see my history	71
5.2.9. see my game progress	72
5.2.10. see the actor list	73

5.2.11. see the mission timer	73
5.2.12. see my performance (action points)	74
5.2.13. see the learning goals	75
5.2.14. see the performance board screen	75
5.2.15. return to the main menu	76

1. Introduction



1.1 What is P-cube?

Public policy making is the process whereby changes in the handling of collective problems are introduced.

These changes can be small or very big. When changes are small, they usually involve well-established procedures. Big changes are generally rare and are usually connected with some sort of external shock (wars, economic or political crises, natural events, emergence of charismatic leaders, etc.).

In the P-cube project, we will concentrate on changes that are neither small nor very big. We will look at what we have called policy innovations, i.e. significantly altered solutions to existing collective problems and/or definition of the problems themselves. These changes can take the form of new regulations, new infrastructure, new services and/or new projects.

Policy innovation is difficult to achieve, yet essential to the advancement or even the survival of our democratic political systems. Irrespective of their scale, these processes have several elements in common: they are the result of interaction between different actors with diverse interests and goals, and the outcome is heavily influenced by how resources are distributed between the actors, as well as by the different ways in which the actors interact. Even more importantly, innovation is only possible when driven by an individual or collective actor (known as a policy entrepreneur), who is able to manage the process and overcome the ensuing obstacles.

With the P-cube Educational Game, we are proposing a digital game designed to teach the elements that policy entrepreneurs must take into consideration in their planning, and the ways in which they can try to alter these elements in order to introduce the desired innovation.

1.2 Why this manual?

This manual is intended for the users, mainly the facilitators or teachers of the P-cube Educational Game. Here you can find instructions on how to create game sets in the CMS (content management system), host game sessions and play the game (*Chapter 5*), as well as explanations of the different main screens and an overview of the digital education game (*Chapter 4*). In *Chapter 2* you can find the instructions on where to find the game and how to get an account as a facilitator. Finally, in *Chapter 3* you can find a glossary with most used terms in the P-cube project.

1.3 Disclaimer

The P-cube Educational Game is an educational tool. The material and information contained in the game is for educational purposes only. You should not rely upon the material or information as a basis for making any business, legal or any other decisions. Whilst we have endeavored to keep the information up to date and correct, the developers make no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability, or availability with respect to the information, related graphics or links contained in the P-cube Educational Game for any purpose. Any reliance you place on these materials is therefore strictly at your own risk.

The material as presented in the P-cube Educational Game and related materials do not necessarily represent the opinions of the project members. The views expressed at, or through, this game are those of the individual authors writing in their individual capacities only -- not those of their respective employers or any of its members.

1.4 Legal Statement

All rights reserved. All content (like texts, trademarks, illustrations, photos, graphics, files, designs, and arrangements) in this document are protected by copyright and other protective laws. Intellectual Property of serious game P-cube Educational Game, including all learning materials are in the hands of the consortium partners. This document can contain elements that are protected by copyright and by other laws that are subject to the copyright or other rights of third parties and that are correspondingly protected for these third parties.

1.5 Acknowledgements

This game is developed as part of the Erasmus+ project P-cube: Playing Public Policy. Project partners are Fondazione Politecnico di Milano (project leader), Politecnico di Milano, La Science pour la Democratie, Association des Agencies de la Democratie Locale, Universite du Luxembourg, Universitat Autonoma de Barcelona and Delft University of Technology.

Digital game development was done by Delft University of Technology Gamelab based on the analogue card game of Bruno Dente. The digital user manual has been written by Delft University of Technology Gamelab. The case and game set and their accompanying handbooks of Urban Innovation are developed and written by Politecnico di Milano. The case and game set and their accompanying handbooks of Social Inclusion are developed and written by Universitat Autonoma de Barcelona. The case and game set and their accompanying handbooks of Science and Public Policy are developed and written by La Science pour la Democratie. The case and game set and their accompanying handbooks of EU Decision Making are developed and written by Universite du Luxembourg.

We would like to thank all project partners for their contribution to the development of the game and learning materials and all students and teachers who playtested the game in the development phase.

2. Where to find the app?



The website of the P-cube project is found at:

<https://www.p-cube-project.eu/>

Here you can sign-up for a facilitator account to create and host your own game sets or host the game sets of our partners.

The link you can share for your users to play your game is (as of writing this manual):

<https://pcube.next.gamelab-dev.tbm.tudelft.nl/>

Please keep an eye on the P-cube project website to check-out the latest website link.

If you have any questions, please see the contact information on our project website. This website has the most updated information.

3. Glossary

Scenario

A scenario is a set of missions - otherwise called cases. The P-cube game tool has 4 base scenario's delivered with it: Urban Innovation, EU Policies, Social Innovation & Inclusion and Science for Democracy. A scenario is a given theme or context for different cases within. A scenario can consist of 1 or more missions. Another word used for a scenario is game set.

Mission

A mission is a certain case that players can complete on a specific topic within the scenario theme. For example, the topic of 'Assisted Dying (Euthanasia)' in the scenario 'Science for Democracy'. Missions can consist of 1 or more strategies. A mission always starts with an introduction to the topic and ends with learning objectives.

Strategy

The strategy is the element that sits within a mission and handles the different policy strategies. 1 strategy element corresponds to 1 policy strategy. In a mission you can teach the player about 1 specific strategy or even more.

Modules

A strategy consists of 1 or more modules. Modules are elements that create the gameplay flow in the strategy. Modules can be 1 of 4 types:

- actor distribution module
- multiple-choice module
- information module
- strategy branch module.

Actor distribution module

When you add this module to your strategy, players will see different actors and need to decide for each actor if they are a supporter, opposer or inactive for this specific strategy in the mission.

Multiple-choice module

A multiple-choice module is used when you want to ask a multiple-choice question to your player.

Information module

An information module is a module which you can use to show the player a piece of new information through text.

Strategy branch module

You use a strategy branch module when you want to give the player a choice on what (policy) strategy they should use. This module can only be used at the end of a strategy, because when the player selects a choice here, they get redirected to a different strategy with its own set of modules.

Actor

A participant in policy making: most of the time it is a certain group or representation of people.

Group stance

The standpoint of an actor group to a certain statement or policy. They can be supporting, opposing or irrelevant / inactive to the statement.

Reaction

An example reaction that the actor could have based on their standpoint.

Resources

Actors mobilise resources depending on their interest in a specific decision. Resources are those goods, skills and capacities that are of value to other actors in the decision-making process and that can be used to block or promote innovation. There are four types of resources:

- political (the capacity to mobilise consensus and votes);
- legal (the legal power to veto a decision);
- cognitive (data, information, knowledge and methods to find solutions);
- economic (funds).

The resources that actors decide to spend in a specific process (expressed by the numbers in the game) depend on two features: a) how many resources the actor could potentially mobilise (e.g., a political party can certainly mobilise more political resources than a local councilor) and b) how intense the actor's interest is in that specific process, i.e. his/her intensity of preferences (e.g. the political party may be uninterested to that issue and decide to spend none of its political resources, being inactive and showing zero resources in the game).

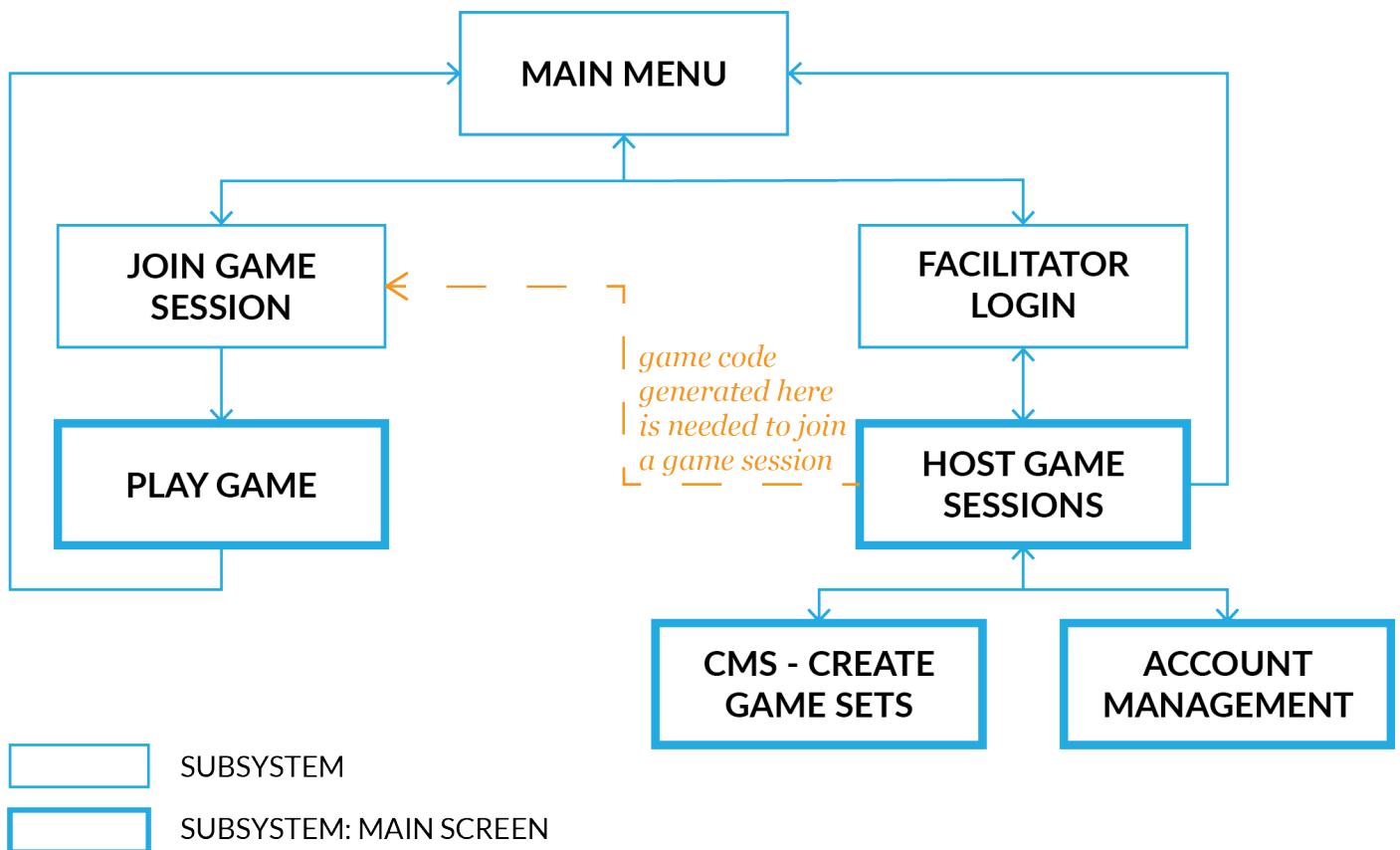
Learning points

In the learning points you describe what the player should take away from the mission and act as a debriefing for the player. This is also the perfect place to ask critical questions to the player to make the player reflect on the mission and what they just learned through critical thinking.

4. System Overview

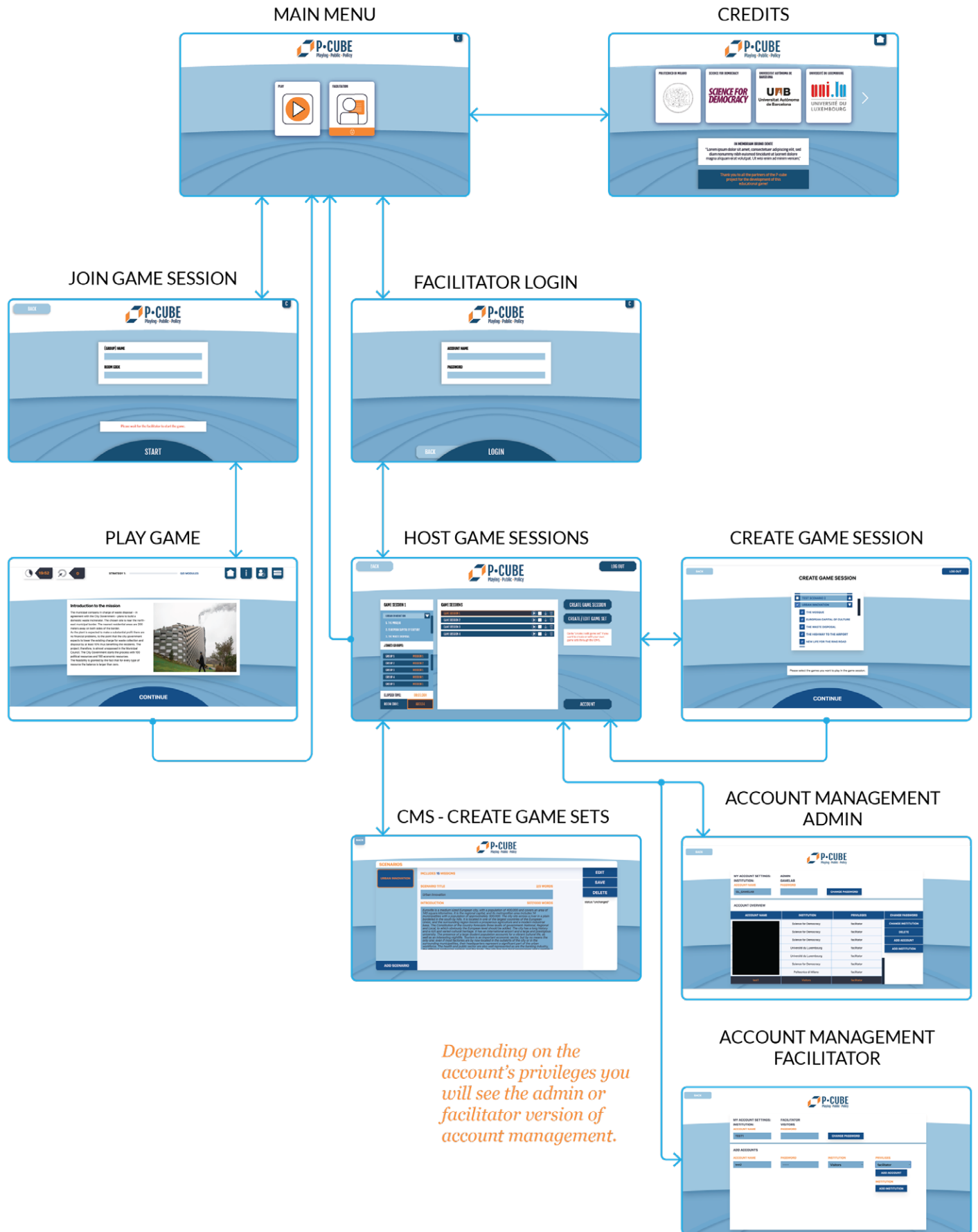
In this chapter an overview of the system of the P-cube digital, educational game is visualised and described. First, a flowchart is presented to show the general system of the game. Secondly, a sitemap is used to describe the flow in more detail and which screen leads to which screen. And finally the 4 most used main screens are described in detail with all their functions: 1) Game Session Overview, 2) CMS, 3) Game, 4) Account Management.

4.1 Flowchart



4.2 Sitemap

Main Process



Content Management System Process

ADD SCENARIO



ADD MISSION



ADD STRATEGY



ADD MODULE



ACTOR DIS. MODULE



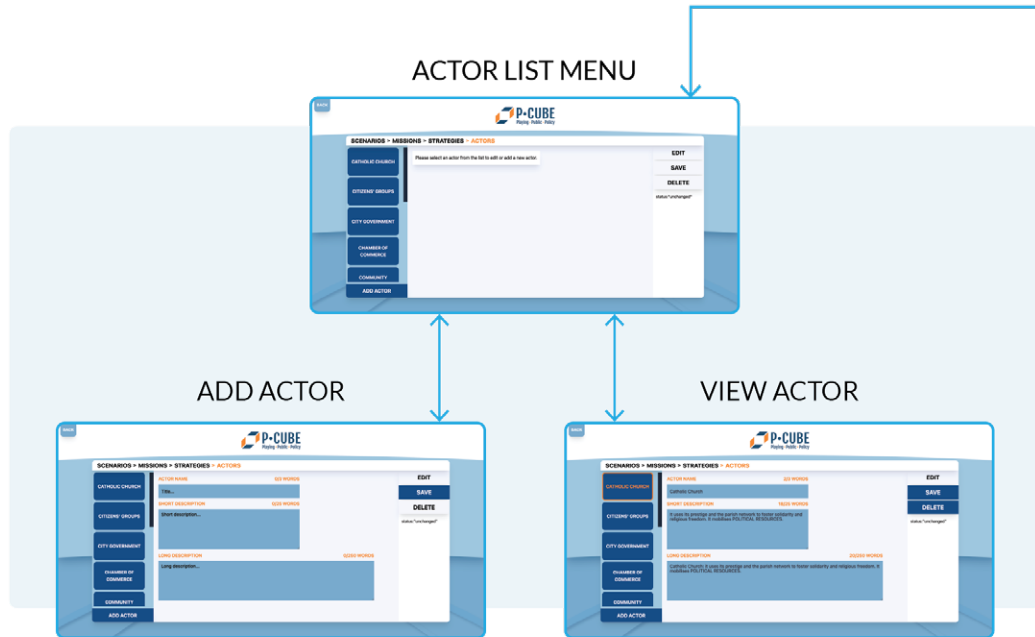
ACTOR LIST MENU

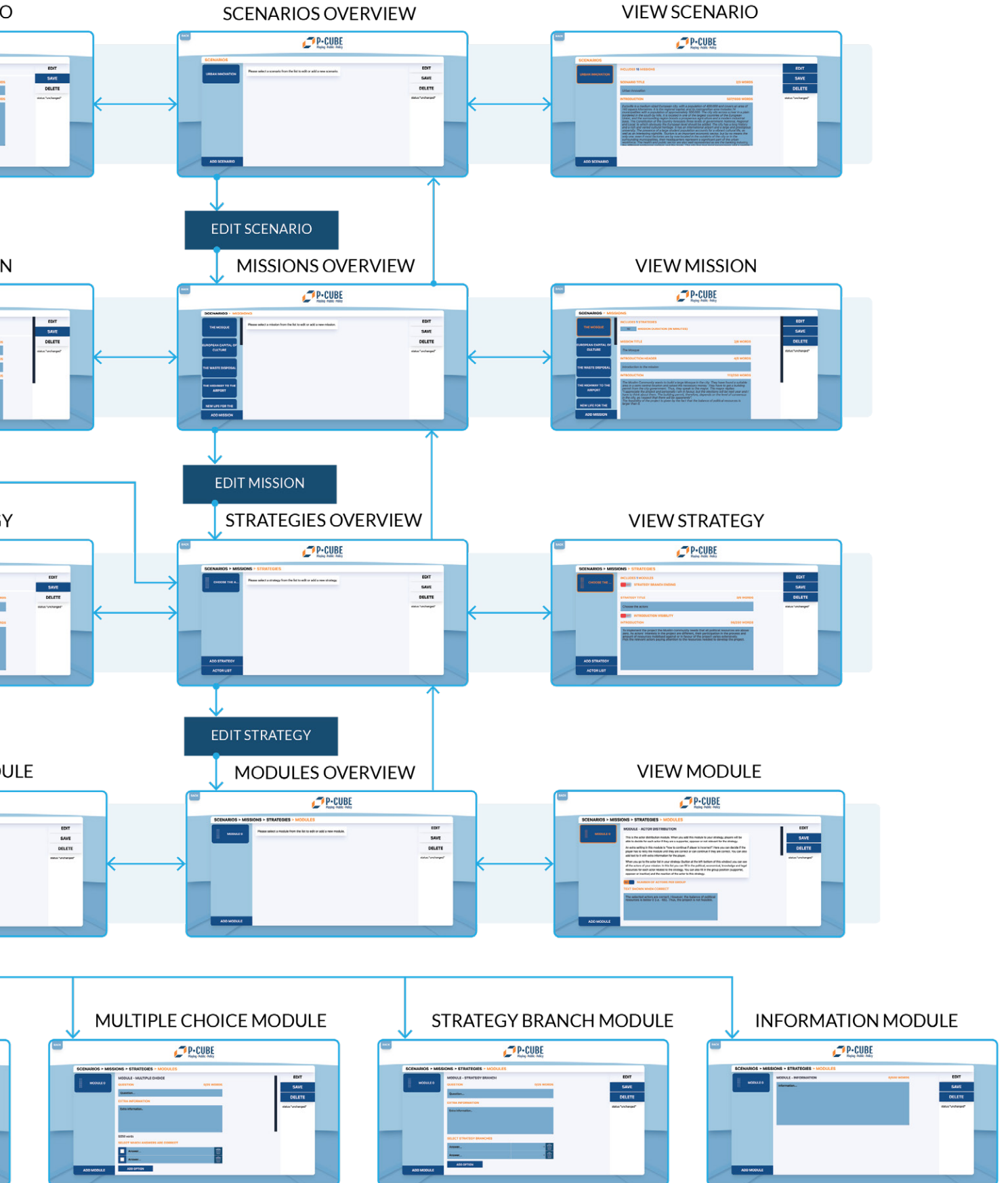


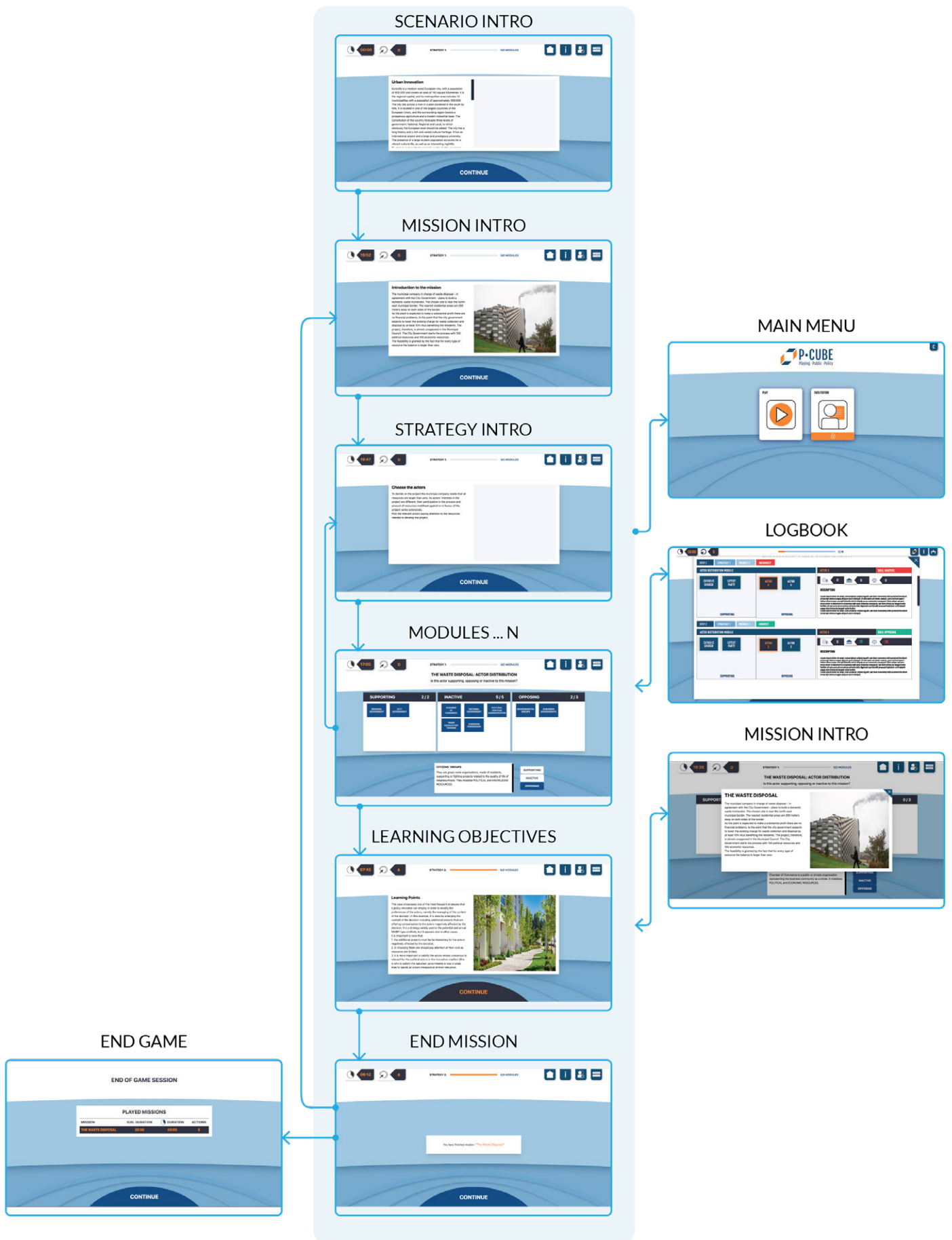
ADD ACTOR



VIEW ACTOR







4.3 Explanation Main Screens

BACK → return to the main screen

LOG OUT ← log out from facilitator account

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GAME SESSION 1

URBAN INNOVATION

1. THE MOSQUE
2. EUROPEAN CAPITAL OF CULTURE
3. THE WASTE DISPOSAL

JOINED GROUPS:

- GROUP 1 MISSION 1
- GROUP 2 MISSION 2
- GROUP 3 MISSION 1
- GROUP 4 MISSION 1
- GROUP 5 MISSION 1

ELAPSED TIME: 00:05:36H

ROOM CODE: AXG124

GAME SESSIONS

- GAME SESSION 1 (highlighted in orange)
- GAME SESSION 2
- GAME SESSION 3
- GAME SESSION 4

CREATE GAME SESSION

CREATE / EDIT GAME SET

Go to "create / edit game set" if you want to create or edit your own game sets through the CMS.

ACCOUNT

PLAYED SCENARIO AND MISSIONS OF SELECTED GAME SESSION → the players that have joined the selected game session

ELAPSED TIME OF THE SELECTED GAME SESSION → the elapsed time of the selected game session

ROOM CODE OF THE SELECTED GAME SESSION TO BE GIVEN TO THE PLAYERS → the room code of the selected game session to be given to the players

A CREATED GAME SESSION: ORANGE MEANS SELECTED;

1. you can start the game session;
2. download player data of it;
3. delete the game session.

DIRECTS YOU TO THE SCREEN WHERE YOU CAN CREATE A GAME SESSION → directs you to the screen where you can create a game session

DIRECTS YOU TO THE ACCOUNT MANAGEMENT SCREEN → directs you to the account management screen

DIRECTS YOU TO THE CONTENT MANAGEMENT SYSTEM (CMS) FOR YOUR GAME SETS (SCENARIOS) → directs you to the content management system (CMS) for your game sets (scenarios)

BACK

return to the game session overview screen



MY ACCOUNT SETTINGS:

INSTITUTION:

ACCOUNT NAME

GL_GAMELAB

ADMIN

GAMELAB

PASSWORD

your account privileges

CHANGE PASSWORD

ACCOUNT OVERVIEW

ACCOUNT NAME	INSTITUTION	PRIVILEGES	ACCOUNT NAME
	Science for Democracy	facilitator	
	Science for Democracy	facilitator	
	Science for Democracy	facilitator	
	Université du Luxembourg	facilitator	
	Université du Luxembourg	facilitator	
	Science for Democracy	facilitator	
	Politecnico di Milano	facilitator	
test1	Visitors	facilitator	

CHANGE PASSWORD

CHANGE INSTITUTION

DELETE

ADD ACCOUNT

ADD INSTITUTION

your account name

overview of all the accounts in the database (only visible to admin accounts). You can see the:

- account name
- institution it belongs to
- account privileges (admin or facilitator)

change password of the selected account

change institution

delete selected account

add a new account

add a new institution

your password (encrypted): type in a new password a press button to change your password

BACK

return to the game session overview screen



SCENARIOS

URBAN INNOVATION

INCLUDES 0 MISSIONS

SCENARIO TITLE

Name...

INTRODUCTION

Introduction...

0/3 WORDS

0/1000 WORDS

EDIT

SAVE

DELETE

status: "unchanged"

ADD SCENARIO

- current location in the CMS
- a created scenario, mission, strategy, actor or module depending on your location in CMS: click on it to see the details
- depending on your location in the CMS: add a new scenario, mission, strategy, actor or module
- depending on your location in the CMS: add details of the selected or new scenario, mission, strategy, actor or module
- depending on your location in the CMS: delete a selected scenario, mission, or strategy
- status of the selected scenario, mission, strategy, actor or module
- save the selected scenario, mission, strategy, actor or module
- depending on your location in the CMS: edit a selected scenario, mission, or strategy

mission timer → 16:48

action points → 0

mission title + section subtitle → STRATEGY 1: THE WASTE DISPOSAL: ACTOR DISTRIBUTION

current strategy → current strategy

progress bar → 0/2 MODULES

mission title + section subtitle → Is this actor supporting, opposing or inactive to this mission?

current step / total # steps of current strategy → 0/2

main menu mission intro button → [Home icon]

actor list → [Info icon]

history → [Actor List icon]

CONTINUE → continue to the next step

BACK → back to beginning of the module

+1 → action point marker (appears only when continuing adds an action point)

Important Infrastructure → [Bar chart icon]

REGIONAL GOVERNMENT

[Bar chart]	[Gears]	[Person]	[Person]	[Person]
10	10	0	0	0

CITY GOVERNMENT

[Bar chart]	[Gears]	[Person]	[Person]	[Person]
100	100	0	0	0

SUBURBAN GOVERNMENT

[Bar chart]	[Gears]	[Person]	[Person]	[Person]
-50	0	0	0	0

ENVIRONMENTAL GROUPS

[Bar chart]	[Gears]	[Person]	[Person]	[Person]
-50	0	0	0	0

CITIZENS' GROUPS

[Bar chart]	[Gears]	[Person]	[Person]	[Person]
-30	0	0	0	0

In the middle of the screen the module of the mission shown (actor distribution; multiple-choice; strategy/branch; information) as well as the introduction & learning objectives at the end

back to beginning of the module

continue to the next step

action point marker (appears only when continuing adds an action point)

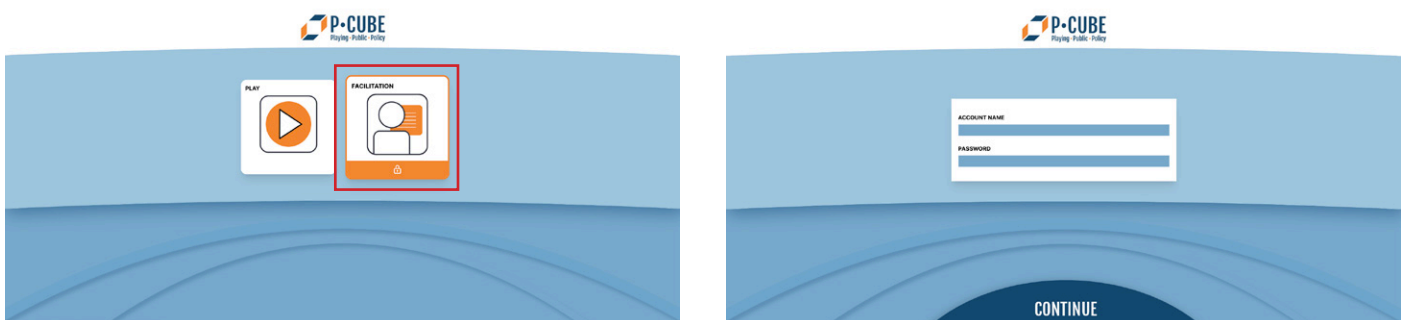
5. How To:

In this chapter you can find the instructions, both written and visualised, of different tasks you may take in the digital, educational P-cube game. The first section shows instructions that are facilitator-only. The second section shows instructions for the player.

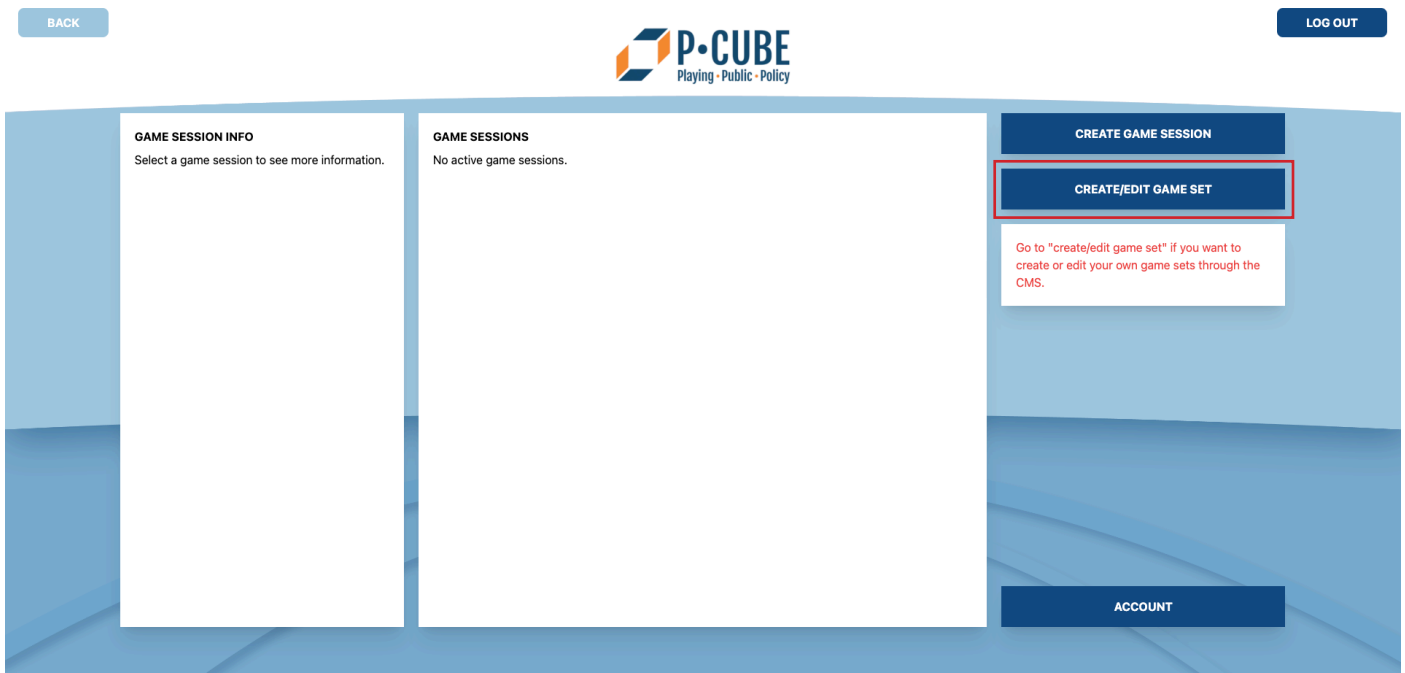
5.1 Facilitator

5.1.1 Create a Scenario

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password and press **Continue**.



Step 1. After logging in, click the **Create/Edit Game Set** button in the Game Session Overview screen.



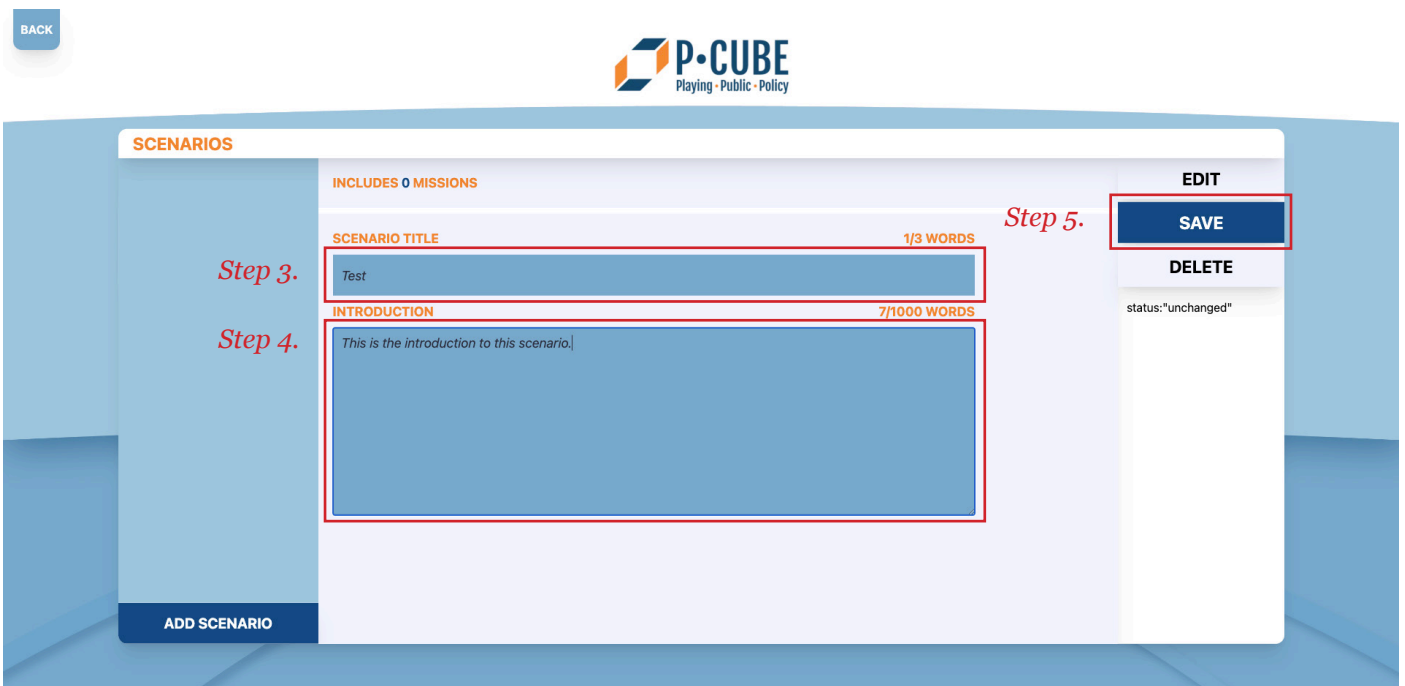
Step 2. Click the **Add Scenario** button in the left-bottom of the screen to create a new scenario.



Step 3. Fill in a name for your scenario in the **Scenario Title** text field (*max 3 words*).

Step 4. Fill in an introduction for your scenario in the **Introduction** text field. This introduction is always shown when a user plays your scenario or a part of your scenario (*max 1000 words*).

Step 5. Click the **Save** button to save your data.



Step 6. To fill your scenario with content like missions, select the scenario from the list on the left-side of the screen and click the **Edit** Button.



Step 7. You are now in the Missions screen.



5.1.2 Create a Mission

Step 0. First follow the steps from *Create a scenario* to create a scenario for your missions. If you already have a scenario then start from *Step 6. of Create a scenario.*

Step 1. Click the **Add Mission** button in the left-bottom of the screen to create a new mission.

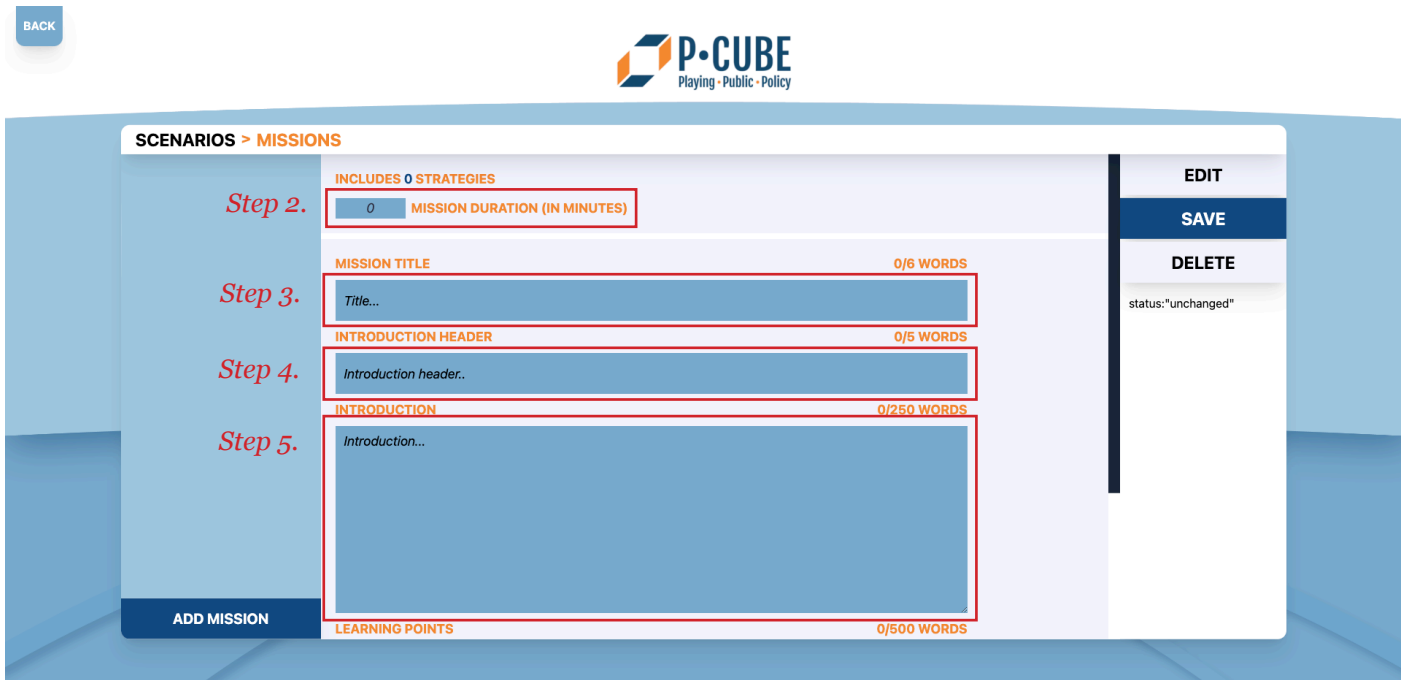


Step 2. Fill in the suggested play duration of the mission in the amount of minutes in the **Mission Duration (In Minutes)** field.

Step 3. Fill in a name for your mission in the **Mission Title** text field (*max 6 words*).

Step 4. Fill in a name for the title of your introduction in the **Introduction Header** text field (*max 5 words*).

Step 5. Fill in an introduction for your mission in the **Introduction** text field. This introduction is always shown when a user plays your mission (*scroll down if you can't see the textfield, max 250 words*).



Step 6. Fill in the learning points for your mission in the **Learning Points** text field. This is always shown at the end of the mission when a user plays your mission (*scroll down if you can't see the textfield, max 500 words*).

Step 7. Click the **Save** button to save your data.

The screenshot shows the 'SCENARIOS > MISSIONS' form. At the top left is a 'BACK' button. The P-CUBE logo 'Playing - Public - Policy' is at the top center. The form has a left sidebar with an 'ADD MISSION' button. The main content area is divided into sections: 'Introduction header..' (0/250 WORDS), 'INTRODUCTION' (0/250 WORDS), 'LEARNING POINTS' (0/500 WORDS), and 'LEARNING POINTS' (2/500 WORDS). A red box highlights the 'LEARNING POINTS' (0/500 WORDS) field, labeled 'Step 6.'. To the right, a vertical panel contains 'EDIT', 'SAVE', and 'DELETE' buttons. A red box highlights the 'SAVE' button, labeled 'Step 7.'. Below the buttons, the text 'status:"unchanged"' is visible. An 'ADD MISSION' button is at the bottom left.

Step 8. To fill your missions with content like strategies and modules, select the mission from the list on the left-side of the screen and click the **Edit** Button.

The screenshot shows the 'SCENARIOS > MISSIONS' form. At the top left is a 'BACK' button. The P-CUBE logo 'Playing - Public - Policy' is at the top center. The form has a left sidebar with a 'TEST' button and an 'ADD MISSION' button. The main content area is divided into sections: 'INCLUDES 0 STRATEGIES' (MISSION DURATION (IN MINUTES) 10), 'MISSION TITLE' (1/6 WORDS), 'INTRODUCTION HEADER' (1/5 WORDS), 'INTRODUCTION' (1/250 WORDS), and 'LEARNING POINTS' (2/500 WORDS). A red box highlights the 'TEST' button, labeled 'Step 8.'. To the right, a vertical panel contains 'EDIT', 'SAVE', and 'DELETE' buttons. A red box highlights the 'EDIT' button. Below the buttons, the text 'status:"unchanged"' is visible. An 'ADD MISSION' button is at the bottom left.

Step 9. You are now in the Strategies screen.



5.1.3 Create a Strategy

Step 0. First follow the steps from *Create a mission* if you have not done that already. If you already have a scenario with a mission then start from *Step 8. of Create a mission*.

Step 1. Click the **Add Strategy** button in the left-bottom of the screen to create a new strategy.



Step 2. [IMPORTANT!] Toggle the switch **Strategy Branch Ending** on if you want to mark the strategy as the correct strategy in a Strategy Branch Module (see 5.1.4.3 Strategy Branch Module).

Step 3. Fill in a name for your strategy in the **Strategy Title** text field (*max 6 words*).

Step 4. Toggle the switch **Introduction Visibility** on if you want the introduction to be shown to players when playing your strategy. When the switch is off, the introduction of the strategy will not be shown when playing the strategy.

Step 5. Fill in an introduction for your strategy in the **Introduction** text field. This introduction is shown when a user plays your strategy (*max 250 words*).

Step 6. Click the **Save** button to save your data.

SCENARIOS > MISSIONS > STRATEGIES

INCLUDES 0 MODULES

Step 2. OFF STRATEGY BRANCH ENDING

Step 3. STRATEGY TITLE 0/6 WORDS

Name...

Step 4. OFF INTRODUCTION VISIBILITY

Step 5. INTRODUCTION 0/250 WORDS

Introduction...

ADD STRATEGY

ACTOR LIST

EDIT

Step 6. SAVE

DELETE

status:"unchanged"

Step 7. To fill your strategy with modules, select the strategy from the list on the left-side of the screen and click the **Edit** Button.

SCENARIOS > MISSIONS > STRATEGIES

INCLUDES 0 MODULES

OFF STRATEGY BRANCH ENDING

STRATEGY TITLE 2/6 WORDS

Strategy 1

OFF INTRODUCTION VISIBILITY

INTRODUCTION 4/250 WORDS

Introduction to strategy 1.

ADD STRATEGY

ACTOR LIST

EDIT

DELETE

status:"unchanged"

Step 8. You are now in the Modules screen.



5.1.4 Change the Order of Strategies

Step 0. When in the Strategies screen (see *Create A Strategy*) you will see a list of strategies on the left-side of the screen if you have made strategies (otherwise follow the instructions from *Create A Strategy*).

Step 1. Strategies in the list have a dot marking on them. This indicates that the order of the strategies can be changed by using **drag-and-drop**.



Step 2. Click and hold the strategy in the list you want to change the order of.

Step 3. Drag the strategy to the position in the list you want it to go and **release** the mouse button to let it snap in its place.

BACK

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SCENARIOS > MISSIONS > STRATEGIES

INCLUDES 2 MODULES

OFF STRATEGY BRANCH ENDING

STRATEGY TITLE 3/6 WORDS

Choose the actors

OFF INTRODUCTION VISIBILITY

INTRODUCTION 57/250 WORDS

To decide on the project the municipal company needs that all resources are larger than zero. As actors' interests in the project are different, their participation in the process and amount of resources mobilised against or in favour of the project varies extensively. Pick the relevant actors paying attention to the resources needed to develop the project.

EDIT

SAVE

DELETE

status:"unchanged"

CHOOSE THE A...

ABANDON THE ...

WAIT

OFFER COMPEN...

ADD STRATEGY

ACTOR LIST

Step 4. The order of your strategy has now been changed. The strategy at the top of the list appears first, following the list down.

BACK

Strategies reordered

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SCENARIOS > MISSIONS > STRATEGIES

INCLUDES 2 MODULES

OFF STRATEGY BRANCH ENDING

STRATEGY TITLE 3/6 WORDS

Choose the actors

OFF INTRODUCTION VISIBILITY

INTRODUCTION 57/250 WORDS

To decide on the project the municipal company needs that all resources are larger than zero. As actors' interests in the project are different, their participation in the process and amount of resources mobilised against or in favour of the project varies extensively. Pick the relevant actors paying attention to the resources needed to develop the project.

EDIT

SAVE

DELETE

status:"unchanged"

ABANDON THE ...

CHOOSE THE A...

WAIT

OFFER COMPEN...

ADD STRATEGY

ACTOR LIST

5.1.5 Create a Module

Step 0. First follow the steps from *Create a strategy* if you have not done that already. If you already have a scenario with missions and strategies then start from *Step 7. of Create a strategy.*

Step 1. Click the **Add Module** button in the left-bottom of the screen to create a new module.



Step 2. Select which type of module you want to create: **actor distribution, multiple-choice, strategy branch or information module.**



Step 3. Fill in the different data for the module (see the instructions of the specific module to see exactly what). Scroll down to see all the input fields.

Step 4. Click the **Save** button to save your data.



Step 5. You are now back in the Modules screen.



5.1.6 Modify a Module

Step 0. First follow the steps from *Create a module* if you have not done that already. If you already have modules then go to the Modules screen in the CMS.

Step 1. Select the module you want to modify from the list on the left-side of the screen.

Step 2. The data of the module now appears in the middle of the screen. Here you can immediately change / fill in your data just like you do when creating a module.

Step 3. Click the **Save** button to save your data.



Step 4. You are now back in the Modules screen.



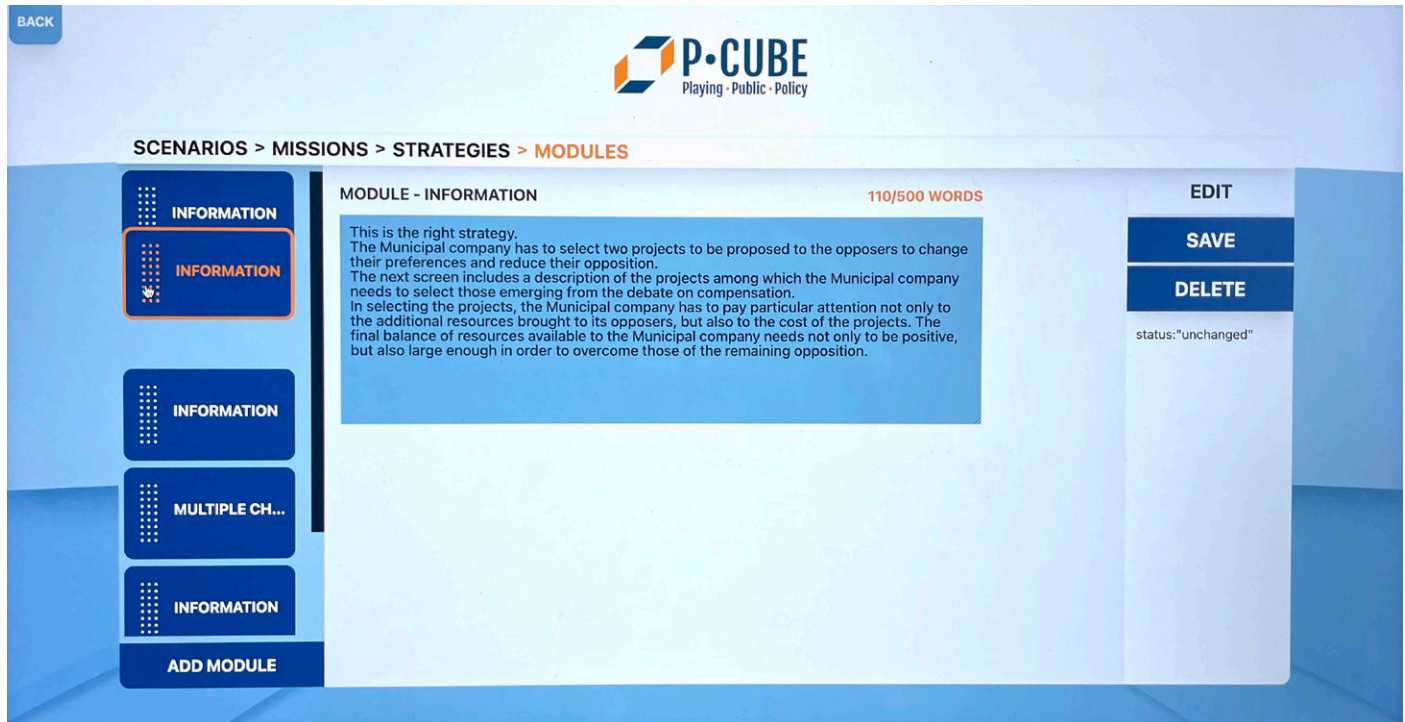
5.1.7 Change the Order of Modules

Step 0. When in the Modules screen (see *Create a module*) you will see a list of modules on the left-side of the screen if you have made modules (otherwise follow the instructions from *Create a module*).

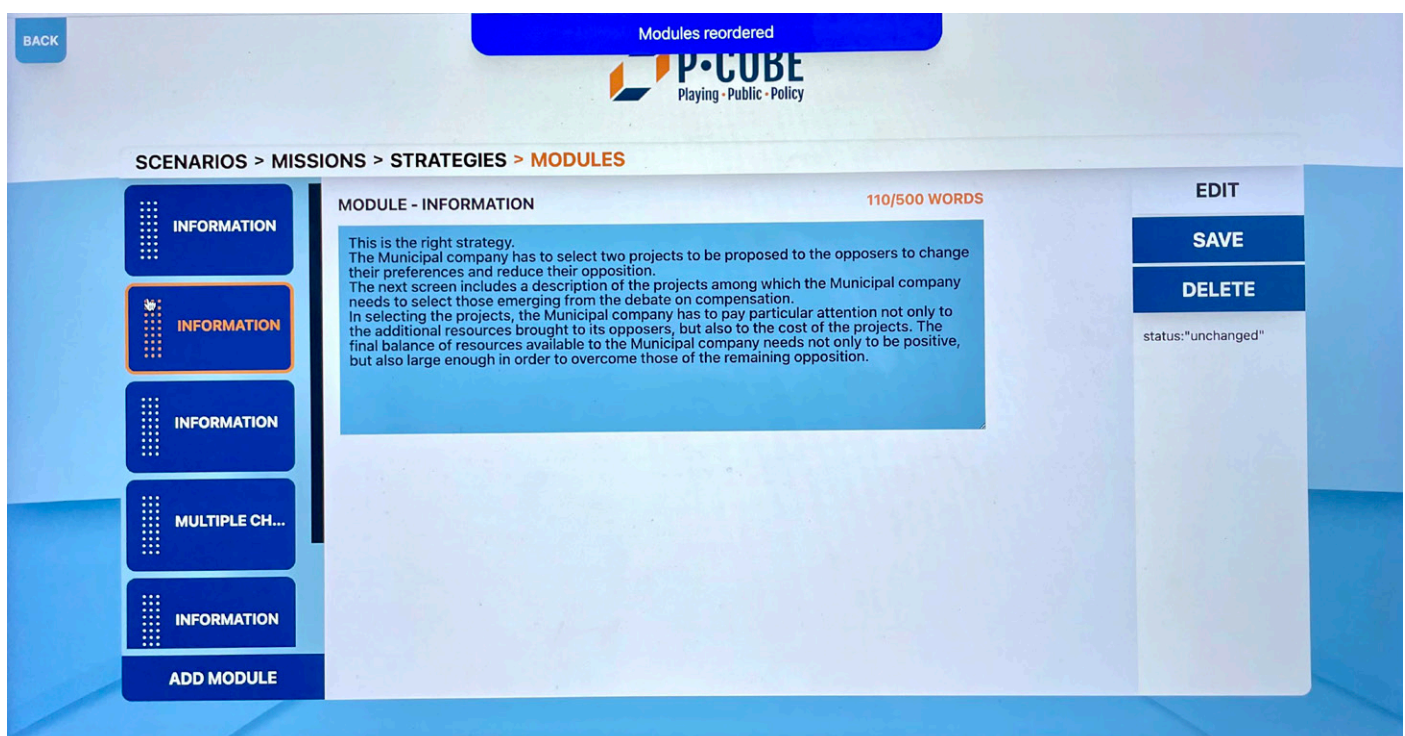
Step 1. Modules in the list have a dot marking on them. This indicates that the order of the strategies can be changed by using **drag-and-drop**.

Step 2. **Click and hold** the module in the list you want to change the order of.

Step 3. **Drag** the module to the position in the list you want it to go and **release** the mouse button to let it snap in its place.



Step 4. The order of your modules has now been changed. The module at the top of the list appears first, following the list down.



5.1.8 Actor-distribution Module

The actor distribution module is used when the player has to divide different actors in 3 different groups: supporter, opposer or inactive related to a certain statement or policy. This module can be used to teach players about relationships between actors and their context and their resources (economic, political, knowledge and legal).

Step 0. When adding a new module (see *Create a module*), choose **Actor Distribution** to create an actor distribution module.



- Step 1.** Toggle the switch **Numbers Of Actors Per Group** on if you want to show the total number of actors in the game that go in the groups of supporting, opposing and inactive. This means that the players know how many actors should go in each group when playing this module.
- Step 2.** Write in the text field **Text Shown When Correct** the text that is shown to players when they have filled in the correct answers in the actor distribution module.

- Step 3.** Determine how the actor distribution module should act if players fill in the wrong answers by using the **drop-down menu**. **Retry** means that they can restart the module and try again. **Continue** means that they can go to the next module even though they have filled in the wrong answers. Retry is the standard setting of the module. The text field is used for text that is shown when players fill in the wrong answers in the actor distribution module.

Step 4. At the *Actor Configuration* section fill in the number of the different **resources** for each actor. The numbers can be negative, 0 or positive. There are 4 different resources: **political, economical, legal and knowledge** (see the glossary for their meaning).

Step 5. At the *Actor Configuration* section choose the **group stance** for each actor by using the **drop-down menu**. Their group stance can be **inactive (default setting), supporting or opposing**.

Step 6. At the *Actor Configuration* section write the reaction of the actors in the **Actor Reaction** text field. These are shown at the end of the actor distribution module when the players have chosen their answers (see the glossary for the meaning of actor reactions).

Step 7. At the *Actor Configuration* section check the checkbox for the actor if the actor is *available* in this module. If it is unchecked the actor will not show up when the players play this module.

Step 8. Click the **Save** button to save your data.

The screenshot shows the 'ACTOR CONFIGURATION' section of the P-CUBE interface. The breadcrumb trail is 'SCENARIOS > MISSIONS > STRATEGIES > MODULES'. A 'BACK' button is in the top left. The main content area has a title 'ACTOR CONFIGURATION' and a descriptive text box. Below this, there are two actor entries: 'ACTOR 1' and 'ACTOR 2'. 'ACTOR 1' is marked as 'AVAILABLE' (checked checkbox) and has a 'Resources' table with columns for POLITICAL, ECONOMIC, LEGAL, and KNOWLEDGE, each with a value of 0 and +/- buttons. A 'Group position' dropdown is set to 'inactive', and a 'Reaction' text field is empty. 'ACTOR 2' is marked as 'UNAVAILABLE' (unchecked checkbox) and has a 'Resources' table with the same columns and values. Its 'Group position' dropdown is also set to 'inactive', and its 'Reaction' text field is empty. On the right side, there is an 'EDIT' panel with 'SAVE' and 'DELETE' buttons, and a status indicator 'status: "unchanged"'. Red annotations highlight specific elements: 'Step 4' points to the 'AVAILABLE' checkbox; 'Step 5' points to the 'Group position' dropdown; 'Step 6' points to the 'Reaction' text field; and 'Step 7' points to the 'AVAILABLE' checkbox. A 'Step 8' annotation points to the 'SAVE' button in the 'EDIT' panel. An 'ADD MODULE' button is located at the bottom left of the main content area.

Step 9. You are now back in the Modules screen.

The screenshot shows the 'MODULES' screen of the P-CUBE interface. The breadcrumb trail is 'SCENARIOS > MISSIONS > STRATEGIES > MODULES'. A 'BACK' button is in the top left. The main content area has a title 'ACTOR DISTRIB...' and a message: 'Please select a module from the list to edit or add a new module.' On the right side, there is an 'EDIT' panel with 'SAVE' and 'DELETE' buttons, and a status indicator 'status: "unchanged"'. An 'ADD MODULE' button is located at the bottom left of the main content area.

5.1.9 Multiple-choice Module

The multiple-choice module is a module where you can ask your players a multiple-choice question. In this module you have the ability for players to give multiple, correct answers or just one, depending on what you want.

Step 0. When adding a new module (see *Create a module*), choose **Multiple-Choice** to create a multiple-choice module.



(see next page for the screen accompanying step 1-5)

Step 1. Type in the multiple-choice question in the first text field called **Question** (*max. 25 words*).

Step 2. In the field **Extra Information** you can write some extra information you deem necessary to answer the multiple-choice question (*max. 250 words*).

Step 3. At the *Select Which Answers Are Correct* section you can write the different possible answers for the question. Check the checkbox of the answers that are correct.

Step 4. You can add more answers to your question by clicking the **Add Option** button in the *Select Which Answers Are Correct* section.

Step 5. Remove answers by clicking the **Trash Can** button next to the answer you want to delete (*this action is irreversible*).

BACK



SCENARIOS > MISSIONS > STRATEGIES > MODULES

MODULE - MULTIPLE CHOICE

QUESTION 0/25 WORDS

Step 1.

EXTRA INFORMATION

Step 2.

0/250 words

SELECT WHICH ANSWERS ARE CORRECT

Step 3. Answer... Answer... *Step 5.*

Step 4.

EDIT

status:"unchanged"

Step 6. At the *Enter The Required Number Of Answers* section you can choose the number of answers a player must select before the Continue button in-game appears.

Step 7. At the *Enter The Minimum Required Number Of Correct Answers* section you can choose the number of answers a player must have correct before the player can move on to the next module.

Step 8. Determine how the multiple-choice module should act if players choose the wrong answers by using the **drop-down menu**. **Retry** means that they can restart the module and try again. **Continue** means that they can go to the next module even though they have filled in the wrong answers. Retry is the standard setting of the module. The text field is used for text that is shown when players fill in the wrong answers in the actor distribution module.

Step 9. Click the **Save** button to save your data.

BACK



SCENARIOS > MISSIONS > STRATEGIES > MODULES

SELECT WHICH ANSWERS ARE CORRECT

Answer... Answer...

Step 6.

ENTER THE REQUIRED NUMBER OF ANSWERS

Step 7.

ENTER THE MINIMUM REQUIRED NUMBER OF CORRECT ANSWERS

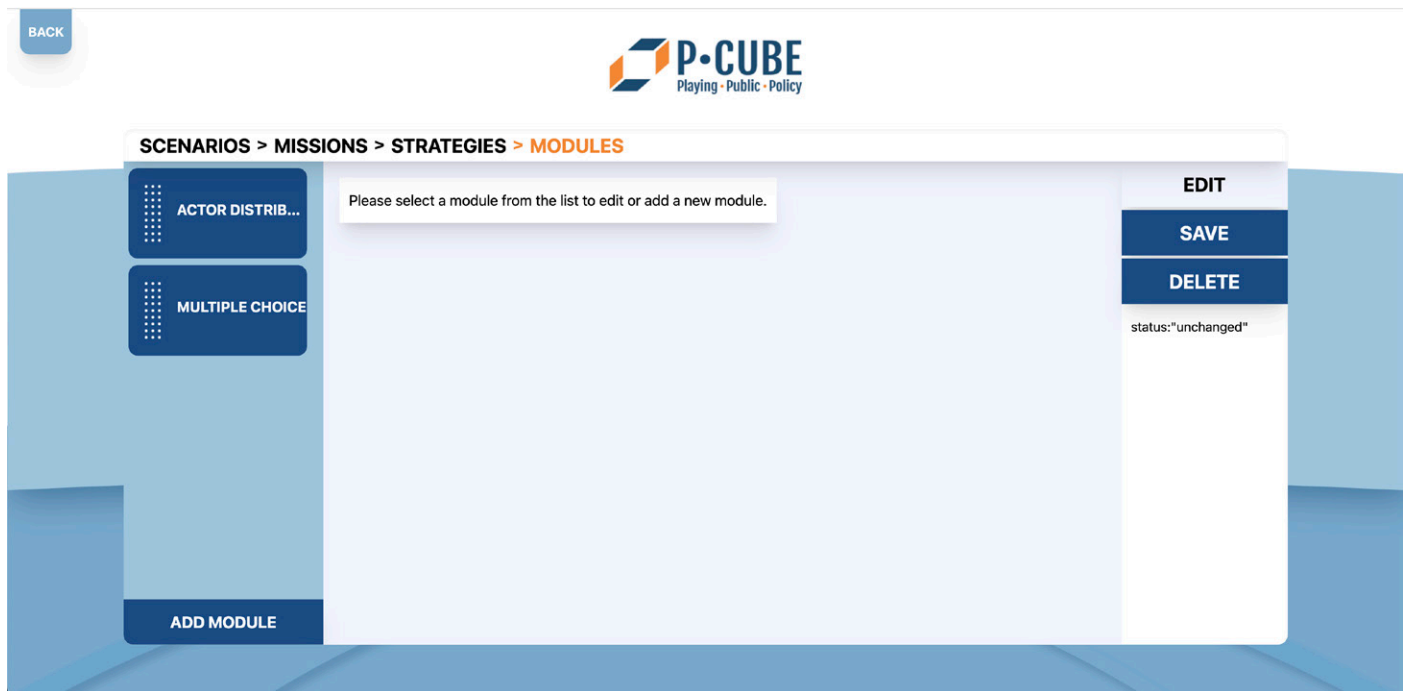
Step 8. Incorrect explanation...

EDIT

Step 9.

status:"unchanged"

Step 10. You are now back in the Modules Screen.



5.1.10 Strategy Branch Module

The system is set up in a way that strategies are played through the order they are listed in the CMS. However, by creating and using a strategy branch module you can give the player the option to go to another strategy based on their answer. This can make a mission more dynamic to play through.

Step 0. When adding a new module (see *Create a module*), choose **Strategy Branch** to create a strategy branch module.



Step 1. Type in the strategy branch question in the first text field called **Question** (*max. 25 words*).

Step 2. In the field **Extra Information** you can write some extra information you deem necessary to answer the strategy branch question (*max. 250 words*).

Step 3. At the *Select Strategy Branches* section you can write the different possible answers for the question.

Step 4. For each answer select a strategy from the **drop-down** list. The strategy you select is the strategy the answer leads to. *Note: The strategy where the strategy branch module is part of, cannot be selected.*

Step 5. You can add more answers to your question by clicking the **Add Option** button in the *Select Strategy Branches* section.

Step 6. Remove answers by clicking the **Trash Can** button next to the answer you want to delete (*this action is irreversible*).

Step 7. Click the **Save** button to save your data.

SCENARIOS > MISSIONS > STRATEGIES > MODULES

MODULE - STRATEGY BRANCH

QUESTION 0/25 WORDS

Step 1. Question...

EXTRA INFORMATION

Step 2. Extra information..

SELECT STRATEGY BRANCHES

Step 3. Answer... Strategy 1 *Step 6.*

Answer... Strategy 1

Step 5. **ADD OPTION** *Step 4.*

EDIT

SAVE *Step 7.*

DELETE

status: "unchanged"

ADD MODULE

Step 8. You are now back in the Modules screen.

Step 9. [IMPORTANT!] Don't forget to toggle the switch **Strategy Branch Ending** on at least for one strategy (see 5.1.4.3 Strategy Branch Module). If you do not select a strategy as a branch ending, you will create a loop and cannot continue after this module when playing this mission.



5.1.11 Information Module

The information module is a module that adds an extra step in the game where the player can read more information in the form of text. The information module does not count as an action in-game. It is just for the purpose to give relevant information to the player when needed.

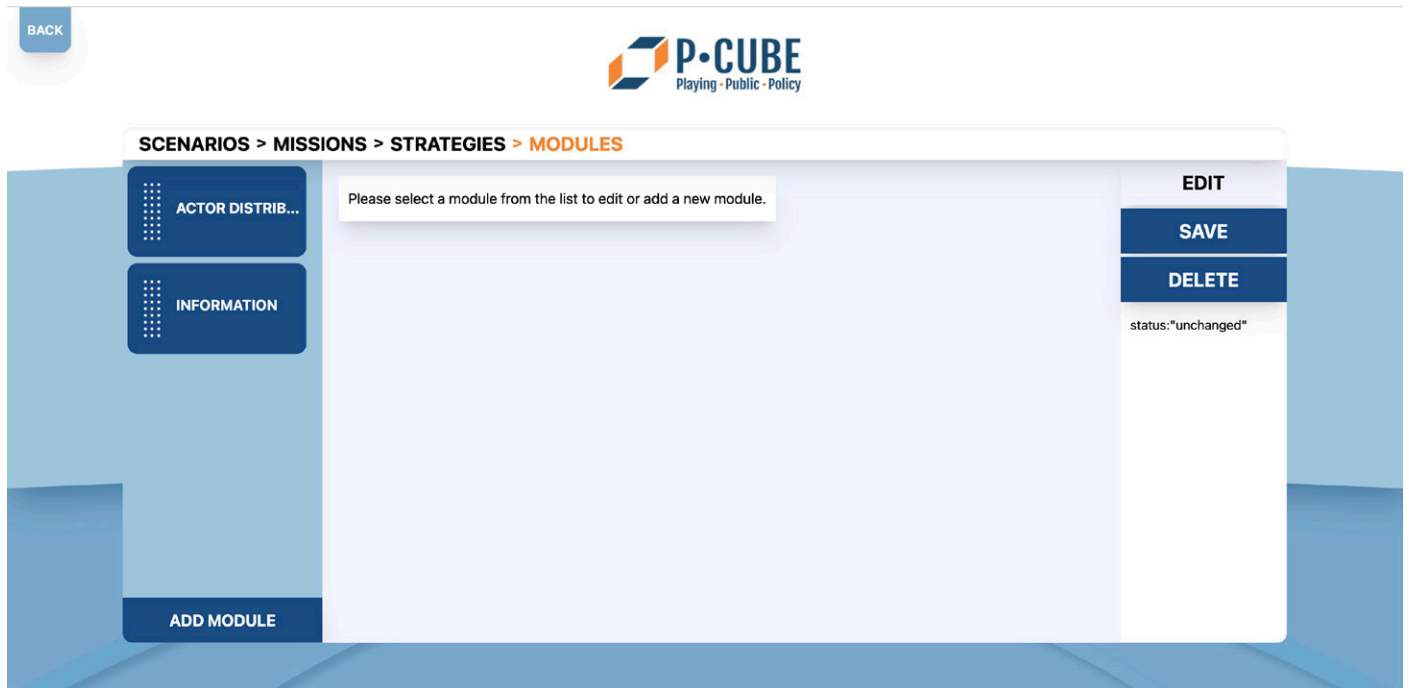
Step 0. When adding a new module (see Create a module), choose **Information** to create an information module.



- Step 1.** Type in the information you want the player to read in the text field (*max. 500 words*).
- Step 2.** Click the **Save** button to save your data.



Step 3. You are now back in the Modules screen.



5.1.12 Creating an Actor Database

Step 0. First follow the steps from *Create a mission* if you have not done that already. If you already have a scenario with a mission then start from *Step 8. of Create a mission*.

Step 1. In the Mission screen select the mission you want to create the Actor Database for and click the **Edit** button to go the Strategy screen.

BACK

P-CUBE
Playing - Public - Policy

SCENARIOS > MISSIONS

INCLUDES 0 STRATEGIES

10 MISSION DURATION (IN MINUTES)

MISSION TITLE 1/6 WORDS
Test

INTRODUCTION HEADER 1/5 WORDS
Intro

INTRODUCTION 1/250 WORDS
Introduction

ADD MISSION

LEARNING POINTS 2/500 WORDS

EDIT

SAVE

DELETE

status:"unchanged"

Step 2. Click the **Actor List** button to go to the Actor List screen.

BACK

P-CUBE
Playing - Public - Policy

SCENARIOS > MISSIONS > STRATEGIES

STRATEGY 1

STRATEGY 2

STRATEGY 3

ADD STRATEGY

ACTOR LIST

Please select a strategy from the list to edit or add a new strategy.

EDIT

SAVE

DELETE

status:"unchanged"

Step 3. Click the **Add Actor** button to add an actor to the actor list. Actors from this actor list can be used in the actor distribution module (see 5.1.4.3 Actor distribution module).

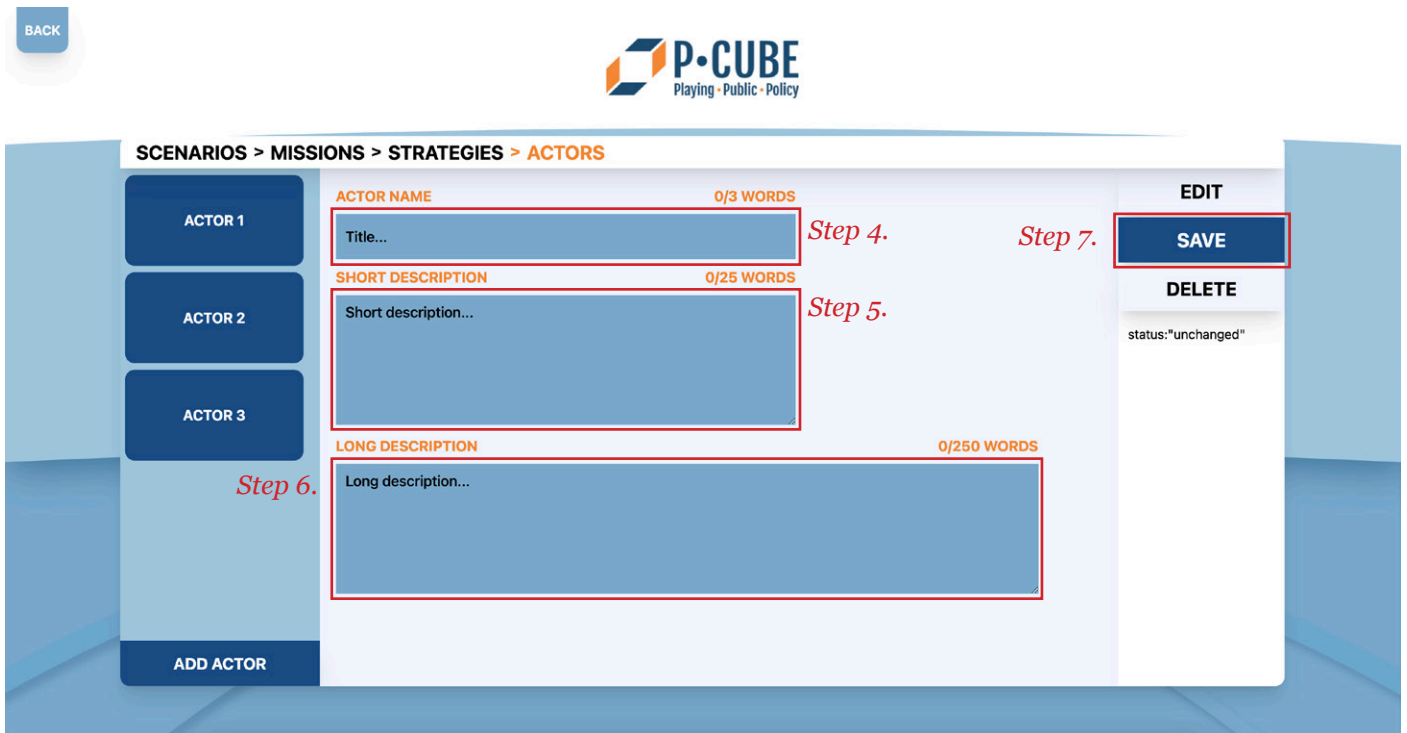


Step 4. Write in the text field **Actor Name** the name of the actor (*max. 3 words*).

Step 5. Write in the text field **Short Description** the short description text of the text (*max. 25 words*). This description appears in the in-game actor distribution module, as well as in the in-game actor list.

Step 6. Write in the text field **Long Description** the long description of the actor (*max. 250 words*). This description appears when the player clicks on the in-game short description of the actor in the actor distribution module. The long description generally gives more detailed information about the actor than the short description.

Step 7. Click the **Save** button to save your data.

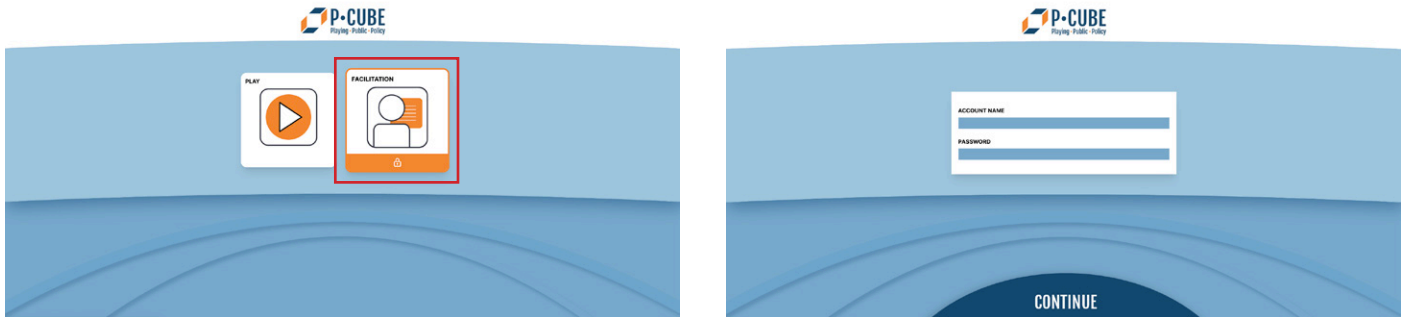


Step 8. You have now added an actor to your actor database. Add more actors to the database by repeating steps 1-6.

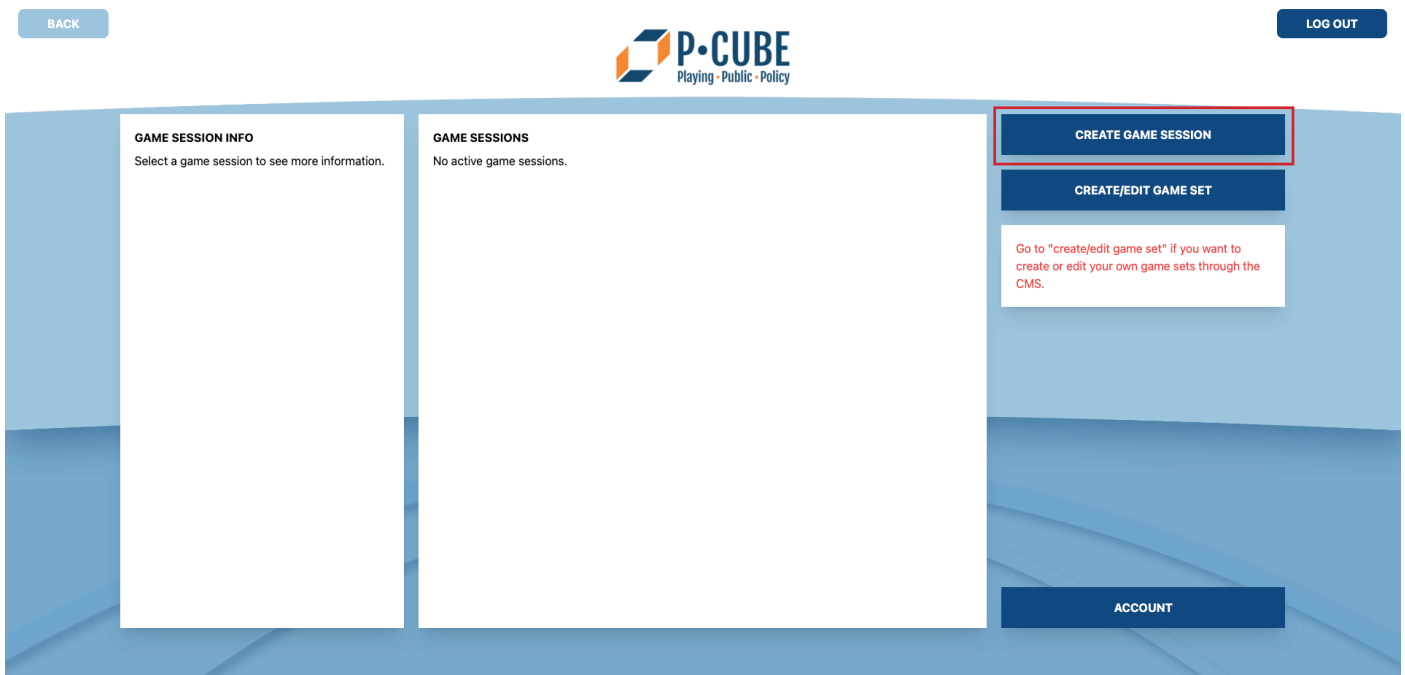
5.1.13 Host & Create a Game Session

For players to play a game set, a facilitator has to create and host a game session first.

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password and press **Continue**.



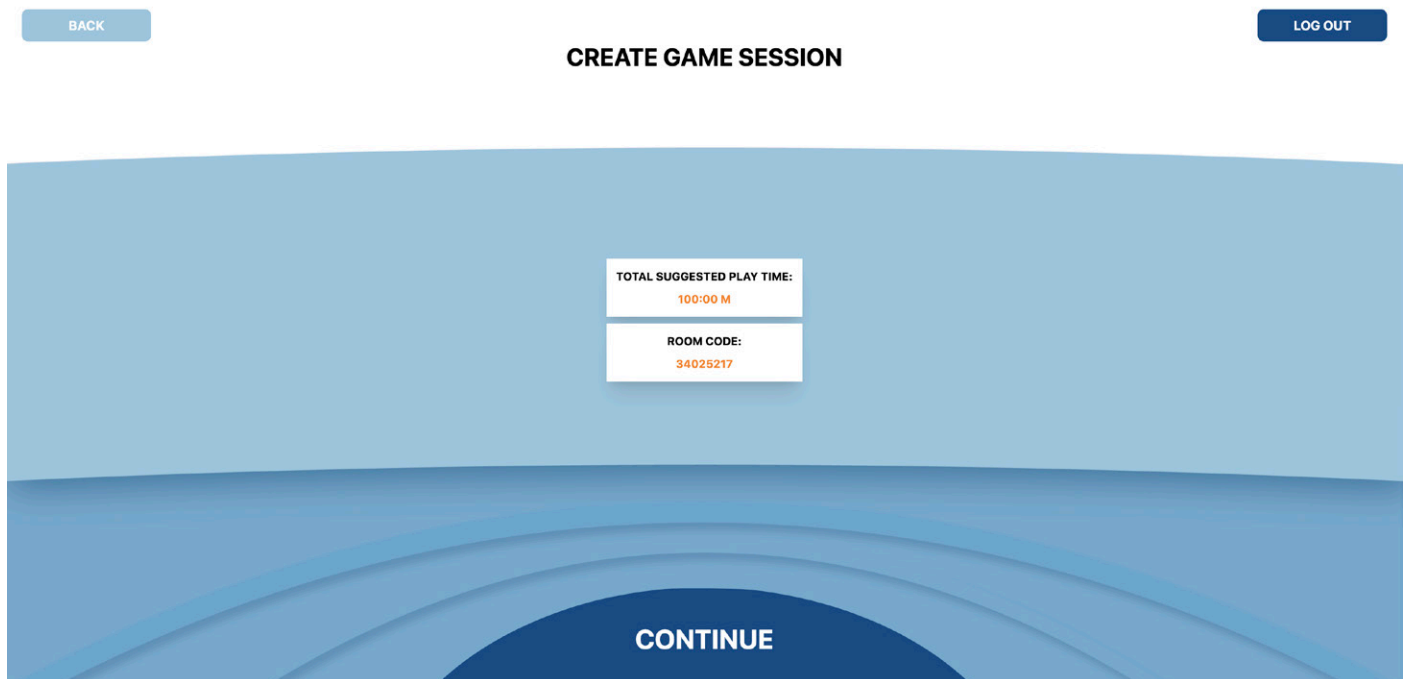
Step 1. After logging in, click the **Create Game Session** button in the Game Session Overview screen.



Step 2. Select the scenarios or missions you want your players to play by clicking the **Checkbox** on the left side of the scenario / mission names. *Note: by clicking the arrow on the right side of the names you can open up the scenario and select individual missions of that specific scenario to play.* Selecting the checkbox of the scenario selects all the missions of that scenario. Click the **Continue** button to create the game session.



Step 3. You see a screen with the Suggested Game Duration, as well as the generated Room Code. Click the **Continue** button to get directed back to the Game Session Overview screen.



Step 4. Share the generated room code of the game session with the players. *Note: you can find this code on the left-side of the screen by selecting your game session in the Game Session Overview screen.*

Step 5. Wait for players to login with their room code and name. You will see logged in players appear on the left-side of the Game Session Overview screen when you have your game session selected.

Step 6. When all players are logged in, click the **Play** button of the selected game session to start the game session.

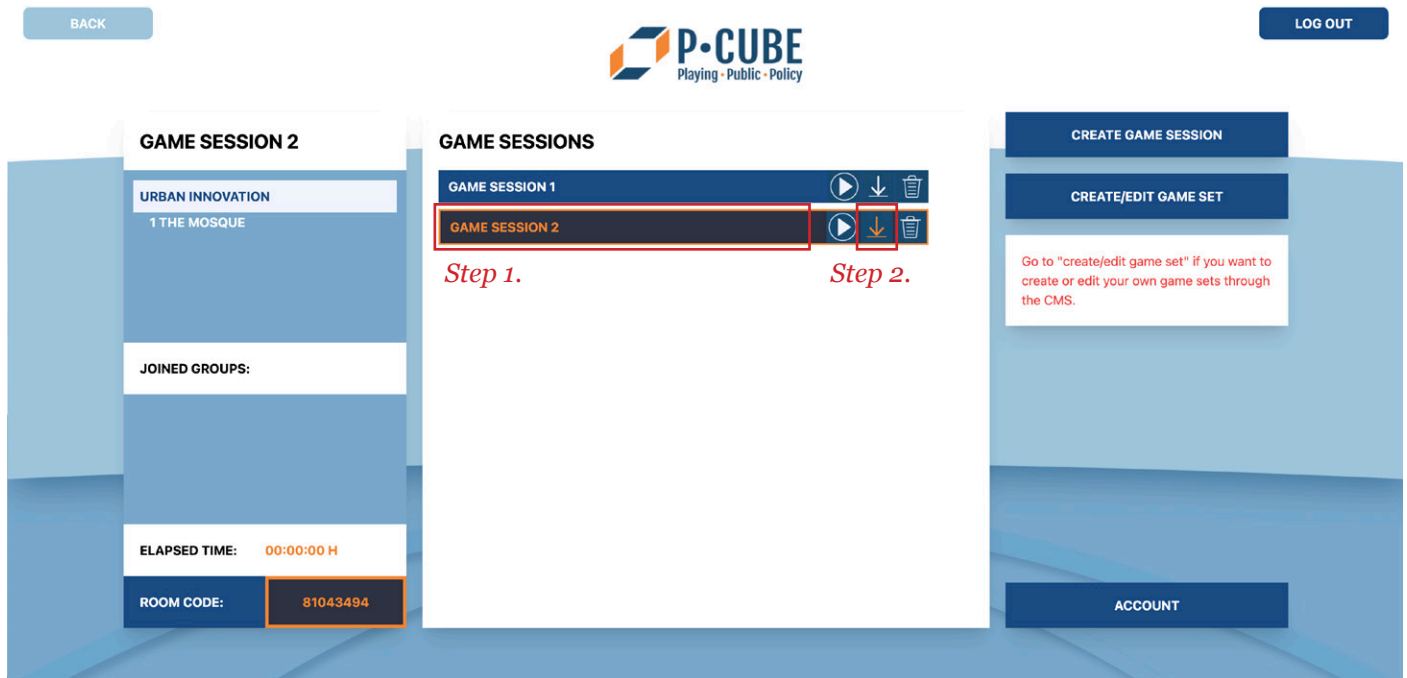
5.1.14 Download Data of a Game Session

Facilitators have the option to download data from a played game session. With this data they have an overview of the answers the players have given for the different missions (including the game set's introductions and information modules), as well as the missions they have played. The data will be saved as a PDF file.

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password.

Step 1. In the Game Session Overview screen select the game session you want to download data from. *Note: the game session should have been played with by users to generate data, otherwise you download an empty file.*

Step 2. Click the **Download Data** button (down-arrow symbol) for a Save File window to pop-up.



Step 3. Write a name for your file and choose a location for your data file to be saved.

Step 4. Click **Save**.

Step 5. Your data file is now saved on the location you have specified.



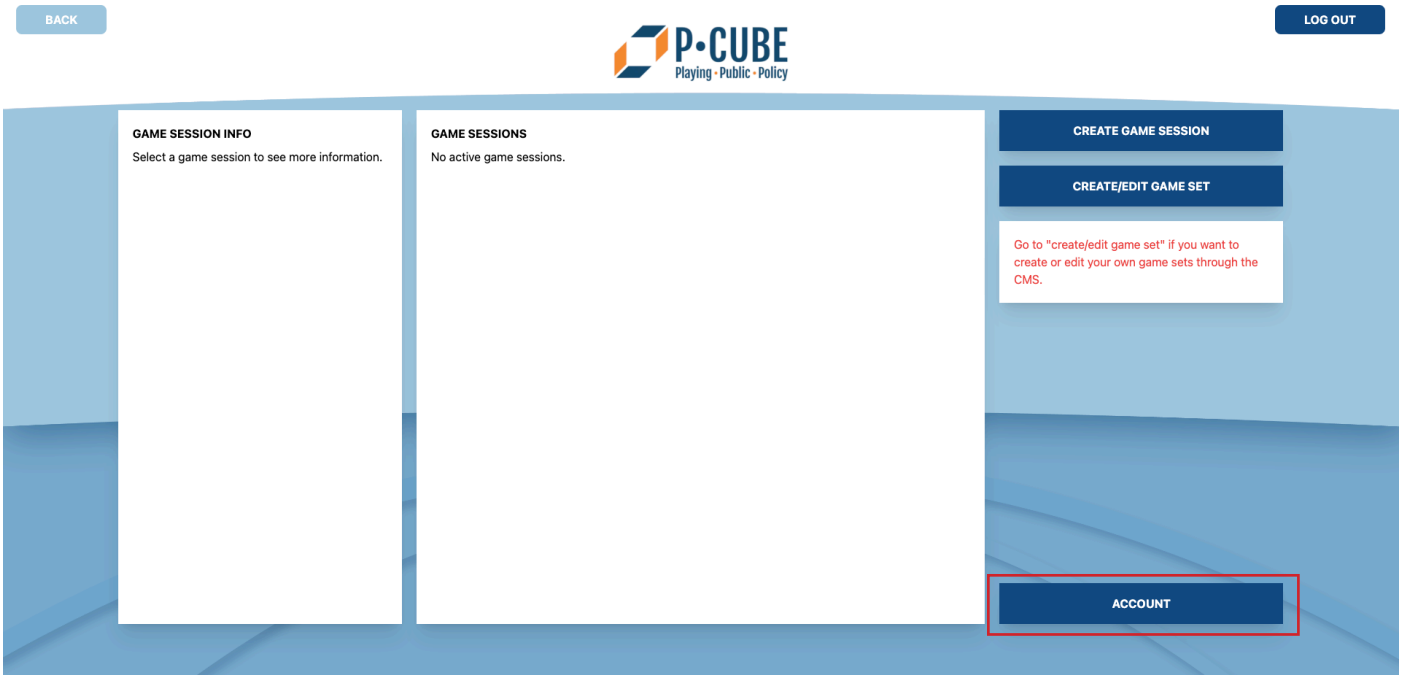
Manage Accounts

5.1.15 Change your Account's Password

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password.



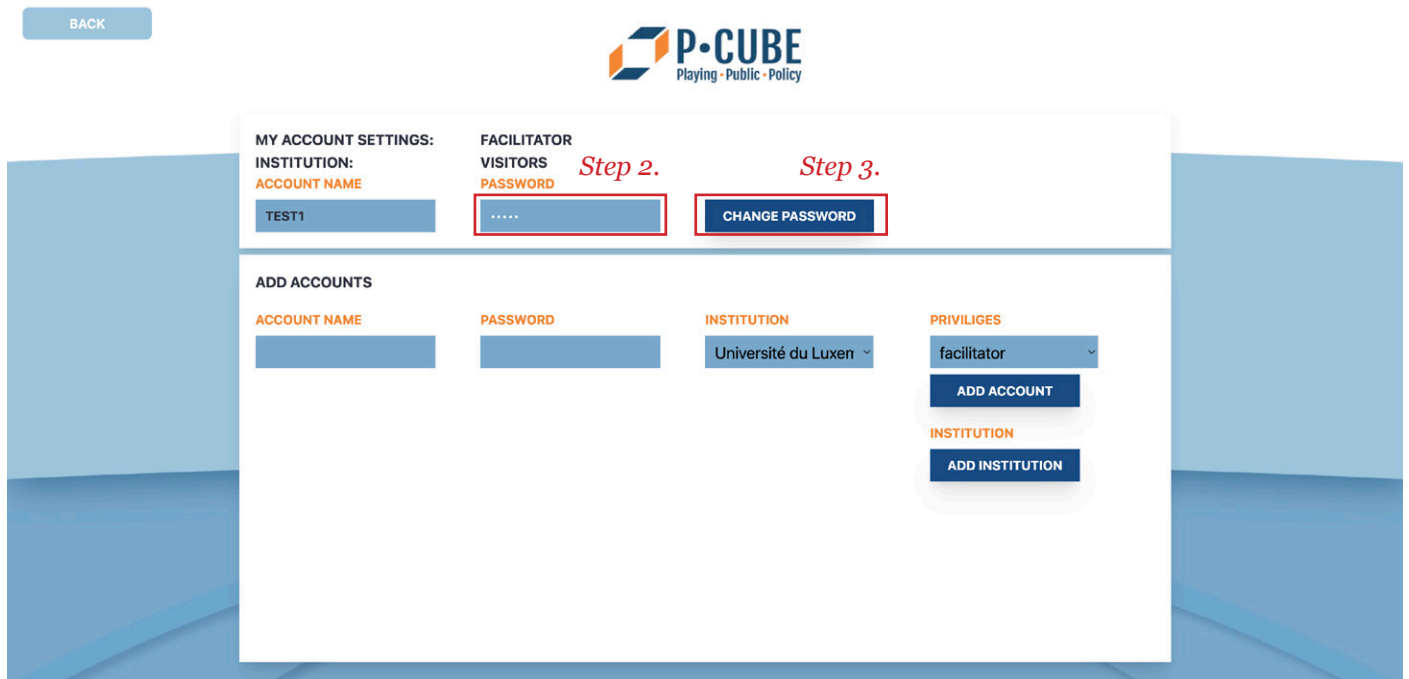
Step 1. In the Game Session Overview screen click the **Account** button to go to the Account Management screen.



Step 2. In the *My Account Settings* area type in a new password in the **Password** textfield. *Note: the password will be shielded for outsiders by depicting the password as dots.*

Step 3. Click the **Change Password** button to change your password to the just typed in password.

Step 4. Your password has now been changed. You can now only login with your new password.



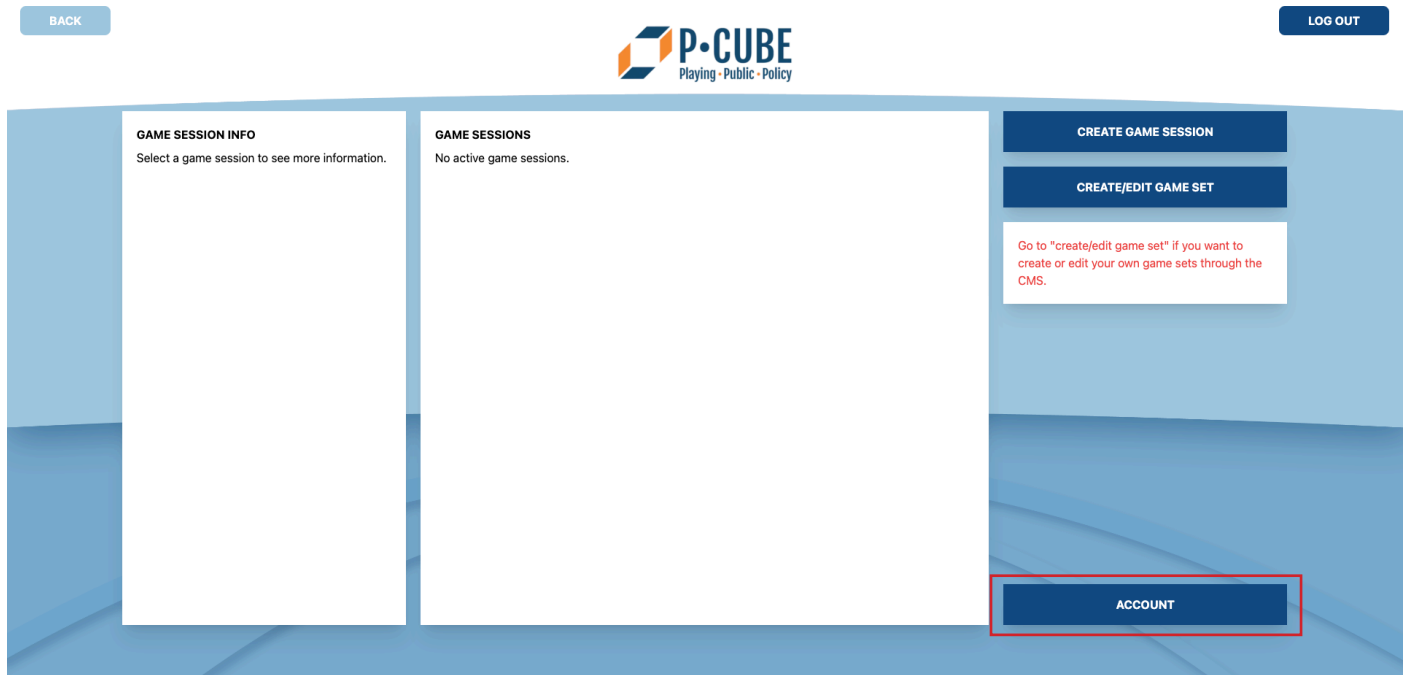
5.1.16 Change the Password of Another Account

Only admins can change passwords of accounts other than their own.

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password.

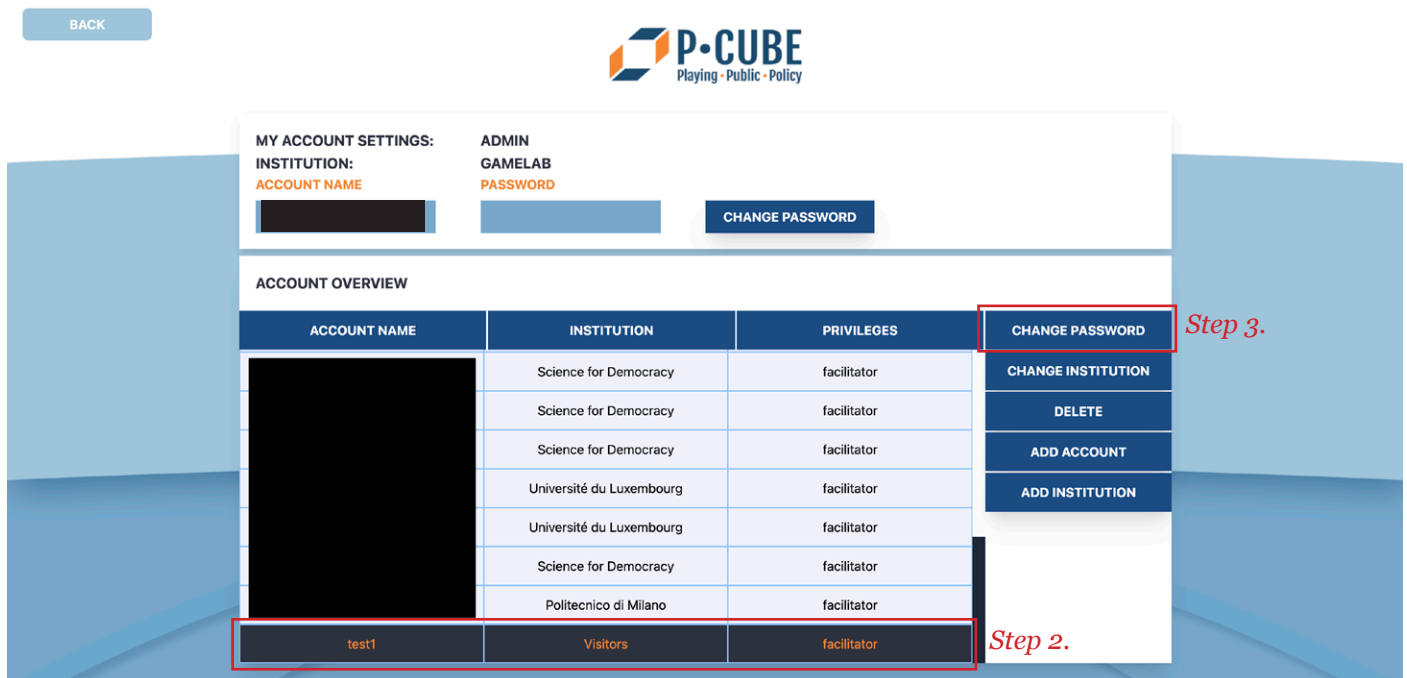


Step 1. In the Game Session Overview screen click the **Account** button to go to the Account Management screen.



Step 2. Select the account you want to change the password of.

Step 3. Click the **Change Password** button next to the database: a window pops up with a text field where you can type in a new password.



Note: The account names in the above screenshot are blacked out to save the privacy of our users.

Step 4. Type in a new password in the text field. *Note: as you cannot see the password in the database itself, make note of the new password to share with the account holder.*

Step 5. Click the **Update** button to change the password. *Note: this action cannot be reversed!* If you are not sure about changing the password click the **Close Window** button (cross symbol) to cancel.

Step 6. The password has been changed. You can now share the new password with the account holder.

The screenshot shows the P-CUBE interface with a 'CHANGE PASSWORD FOR USER' modal window. The modal contains a text input field with 'newpassword' and an 'UPDATE' button. The background shows account settings for 'GAMELAB' and a list of users.

ACCOUNT NAME	ROLE
Science for Democracy	facilitator
Université du Luxembourg	facilitator
Université du Luxembourg	facilitator
Science for Democracy	facilitator
Politecnico di Milano	facilitator
test1	Visitors
	facilitator

5.1.17 Change your Account's Name

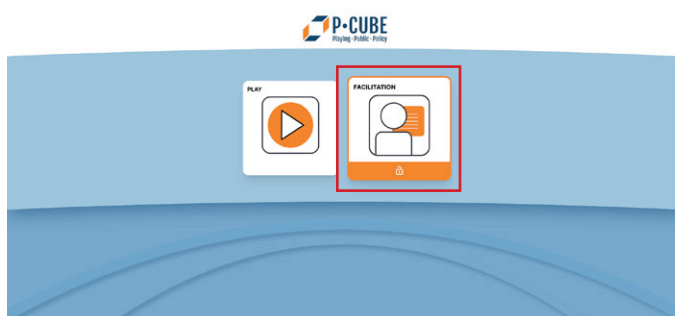
Account names cannot be changed. If you want to have an account with a different name, a new account should be created with the correct credentials.

5.1.18 Add a New Account

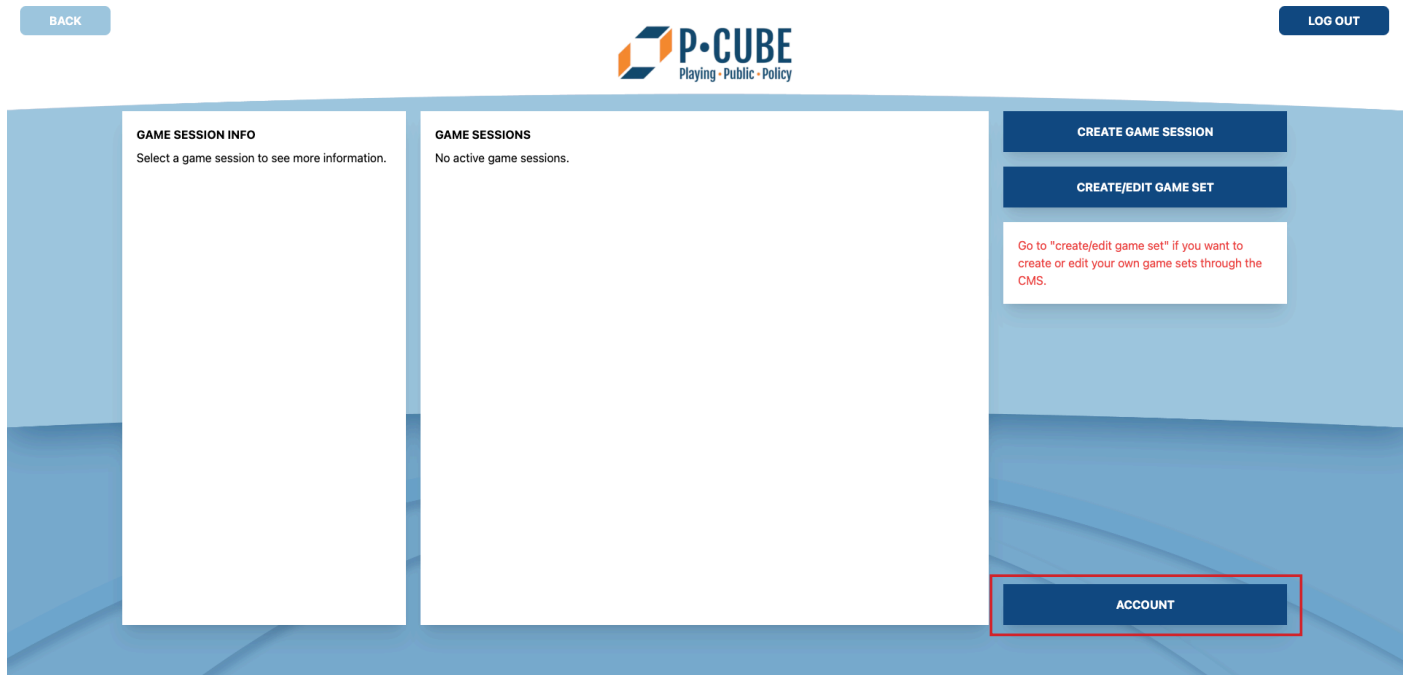
This feature is different based on your account's privileges. A facilitator account can only add new accounts, but not modify or delete them and add new institutions. An admin account can add, modify and delete accounts, as well as institutions linked to those accounts.

For the facilitator:

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password.



Step 1. In the Game Session Overview screen click the **Account** button to go to the Account Management screen.



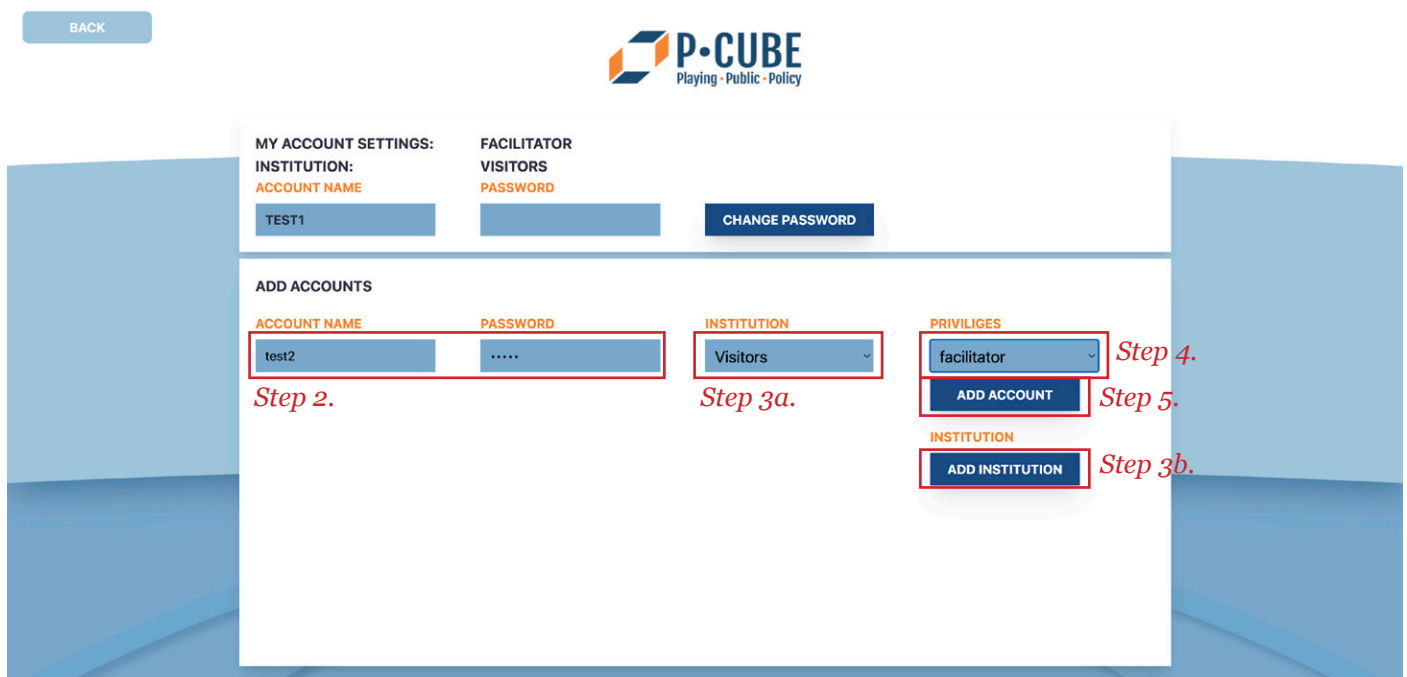
Step 2. Choose an account name and password by typing in the **Account Name** and **Password** text fields in the *Add Accounts* section. *Note: fill in the text fields of the Add Accounts section, NOT the My Account Settings section. You will then change your own information. [IMPORTANT!]* Don't forget to make a note of this information to share it with the user of the new account.

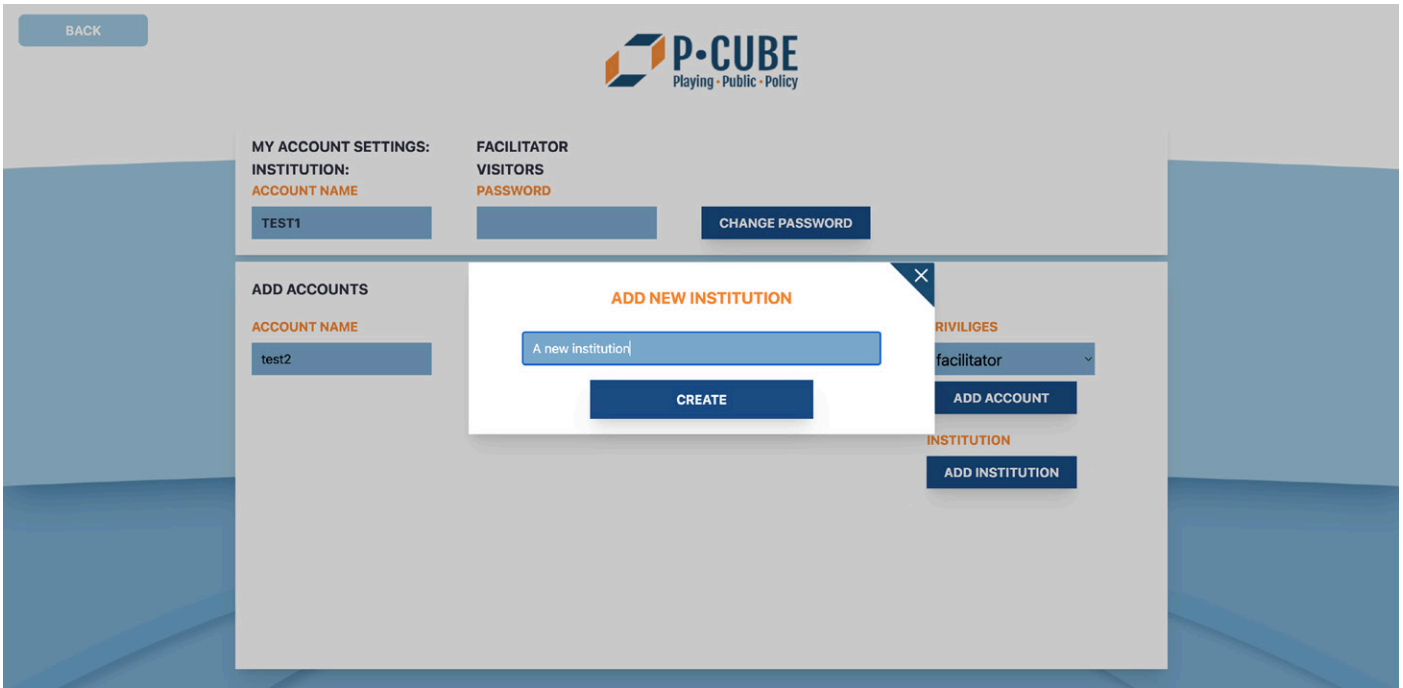
Step 3a. Choose an existing institution from the **drop-down list**.

Step 3b. If you need to add a new institution, click the **Add Institution** button and type in the institution name in the text field. Click **Create** to add a new institution. Select the newly created institution from the **drop-down list**.

Step 4. Choose the privileges for the account from the **drop-down list**. *Note: an institution can only have one account with admin privileges.*

Step 5. Click the **Add Account** button to create a new account.





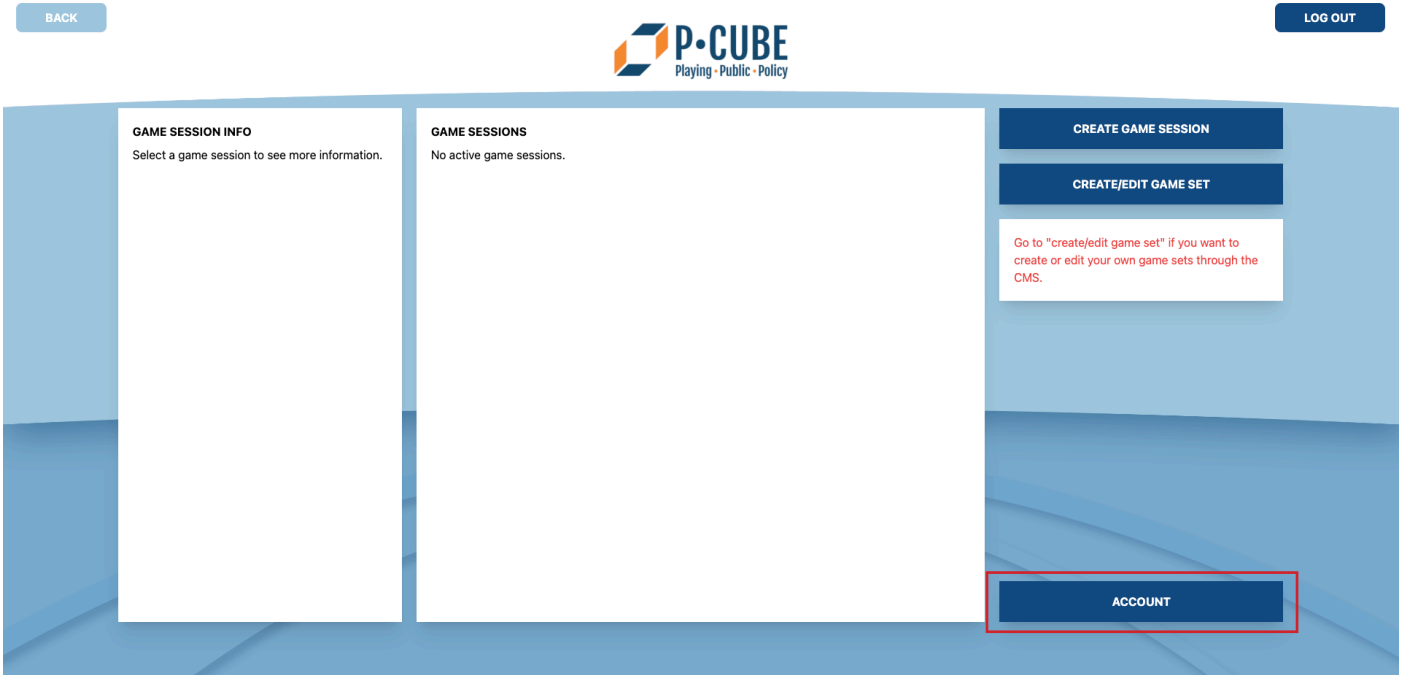
Step 6. You can now share the account name and password for the new account with the intended user. If you forgot the account's information you need an admin to share the account name. A password cannot be seen, so a new password should be created by the admin if you forget.

For the admin:

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password.



Step 1. In the Game Session Overview screen click the **Account** button to go to the Account Management screen.



Step 2. Click the **Add Account** button to add a new account.



Note: The account names in the above screenshot are blacked out to save the privacy of our users.

Step 3. Choose an account name and password by typing in the **Account Name** and **Password** text fields in the *Add Accounts* section. *Note: fill in the text fields of the Add Accounts section, NOT the My Account Settings section. You will then change your own information. [IMPORTANT!]* Don't forget to make a note of this information to share it with the user of the new account.

Step 4a. Choose an existing institution from the **drop-down list**.

Step 4b. If you need to add a new institution, click the **Add Institution** button and type in the institution name in the text field. Click **Create** to add a new institution. Select the newly created institution from the **drop-down list**.

Step 5. Choose the privileges for the account from the **drop-down list**. *Note: an institution can only have one account with admin privileges.*

Step 6. Click the **Add Account** button to create a new account. The account will be added to the database. You can view the account in the database in the Account Management screen.

MY ACCOUNT SETTINGS: ADMIN
INSTITUTION: GAMELAB
ACCOUNT NAME: [REDACTED] PASSWORD: [REDACTED] CHANGE PASSWORD

ADD ACCOUNTS

ACCOUNT NAME: test3 PASSWORD: INSTITUTION: Visitors PRIVILEGES: facilitator

Step 3. Step 4a. Step 5. Step 6. Step 4b.

ADD ACCOUNT ADD INSTITUTION

MY ACCOUNT SETTINGS: FACILITATOR
INSTITUTION: TEST1 VISITORS
ACCOUNT NAME: TEST1 PASSWORD: [REDACTED] CHANGE PASSWORD

ADD ACCOUNTS

ACCOUNT NAME: test2

ADD NEW INSTITUTION

A new institution

CREATE

PRIVILEGES: facilitator ADD ACCOUNT

INSTITUTION: ADD INSTITUTION

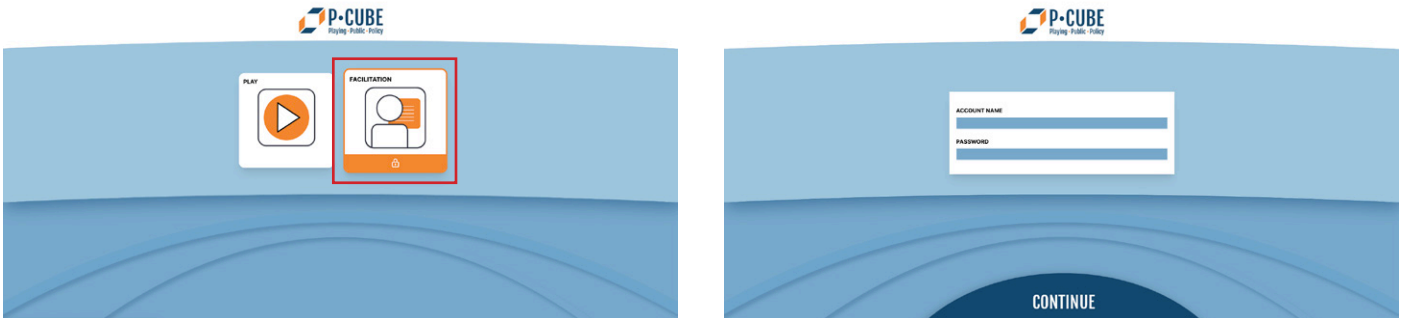
Step 7. You can now share the account name and password for the new account with the intended user. If you forgot the account's information you can look in the database for the account name. A password cannot be seen, so a new password should be created by the admin if you forget.

5.1.19 Delete an Account

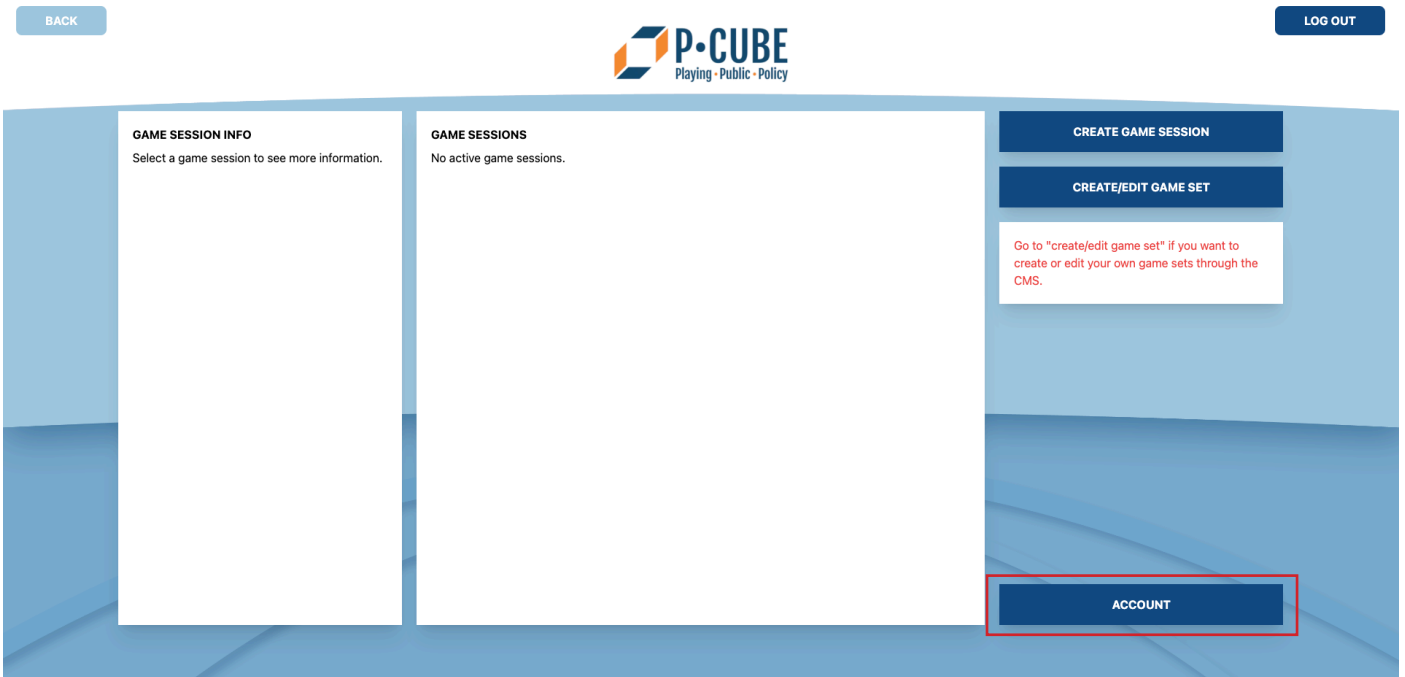
Only an admin account can delete accounts.

For the admin:

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password.



Step 1. In the Game Session Overview screen click the **Account** button to go to the Account Management screen.



Step 2. Select the account you want to delete.

Step 3. Click the **Delete** button: a warning message pops up to ask you if you are sure to delete the selected account. *Note: this action cannot be reversed!*

BACK

P-CUBE
Playing · Public · Policy

MY ACCOUNT SETTINGS:
INSTITUTION:
ACCOUNT NAME
ADMIN
GAMELAB
PASSWORD
CHANGE PASSWORD

ACCOUNT OVERVIEW

ACCOUNT NAME	INSTITUTION	PRIVILEGES	CHANGE PASSWORD	CHANGE INSTITUTION	DELETE	ADD ACCOUNT	ADD INSTITUTION
[REDACTED]	Science for Democracy	facilitator					
[REDACTED]	Science for Democracy	facilitator					
[REDACTED]	Science for Democracy	facilitator					
[REDACTED]	Université du Luxembourg	facilitator					
[REDACTED]	Université du Luxembourg	facilitator					
[REDACTED]	Science for Democracy	facilitator					
[REDACTED]	Politecnico di Milano	facilitator					
test1	Visitors	facilitator					

Step 2.

Step 3.

Step 4. When you are certain click the **Delete** button, otherwise click the **Close Window** button (cross symbol).

BACK

P-CUBE
Playing · Public · Policy

MY ACCOUNT SETTINGS:
INSTITUTION:
ACCOUNT NAME
ADMIN
GAMELAB
PASSWORD
CHANGE PASSWORD

ACCOUNT OVERVIEW

DELETE USER: TEST1?

DELETE

ACCOUNT NAME	INSTITUTION	PRIVILEGES	CHANGE PASSWORD	CHANGE INSTITUTION	DELETE	ADD ACCOUNT	ADD INSTITUTION
[REDACTED]	Science for Democracy	facilitator					
[REDACTED]	Université du Luxembourg	facilitator					
[REDACTED]	Université du Luxembourg	facilitator					
[REDACTED]	Science for Democracy	facilitator					
[REDACTED]	Politecnico di Milano	facilitator					
test1	Visitors	facilitator					

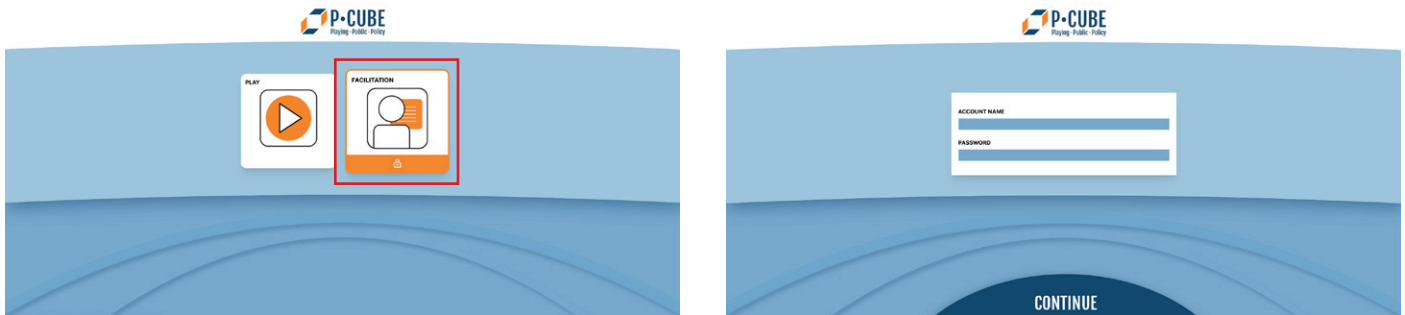
Step 5. The account has been deleted: you cannot see it in the database anymore.

5.1.20 Delete an Institution

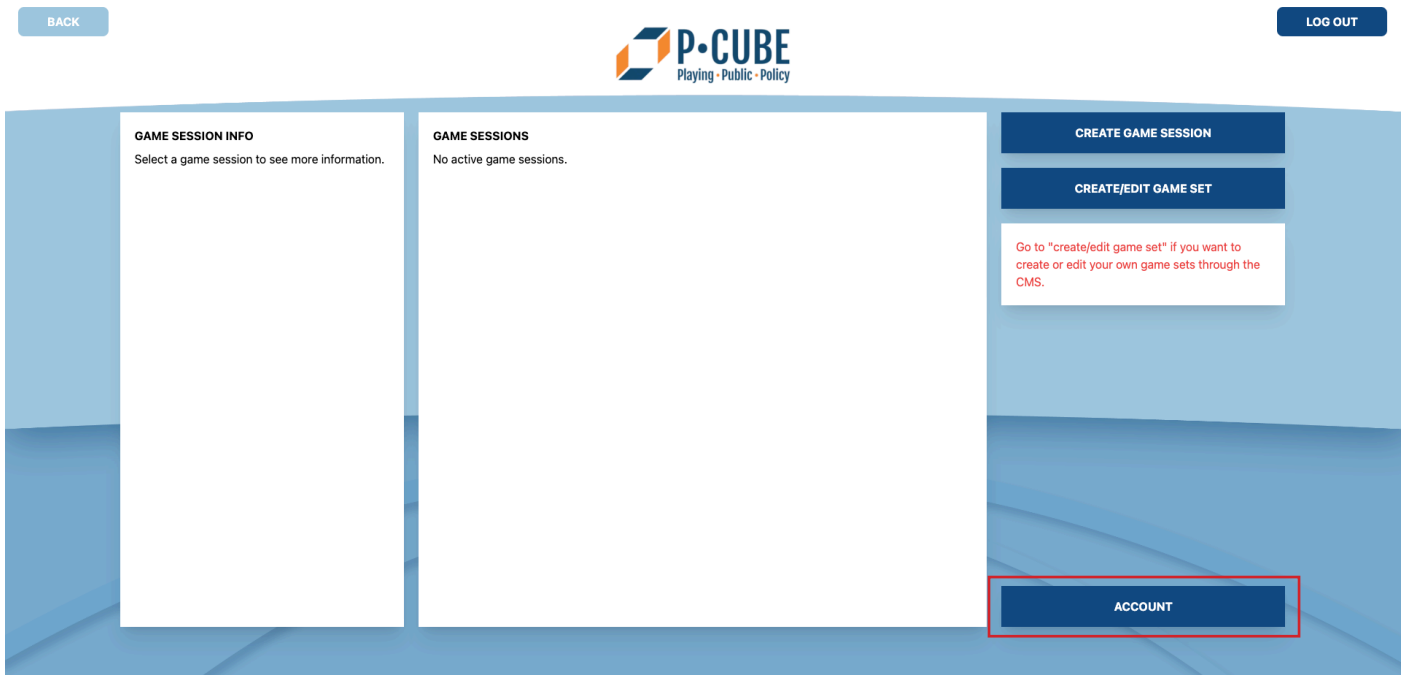
Only an admin account can delete institutions.

For the admin:

Step 0. Click the **Facilitator Login** button in the main screen, then fill in your account name and password.



Step 1. In the Game Session Overview screen click the **Account** button to go to the Account Management screen.



Step 2. Click the **Institution** title in the database: a **drop-down list** appears.

Step 3. Click the **Trash Can** button next to the institution you want to delete: a warning message pops up to ask you if you are sure to delete the selected account. *Note: this action cannot be reversed!*

MY ACCOUNT SETTINGS: ADMIN
INSTITUTION: GAmELAB
ACCOUNT NAME: [REDACTED] PASSWORD: [REDACTED] CHANGE PASSWORD

ACCOUNT OVERVIEW *Step 2.*

ACCOUNT NAME	INSTITUTION	PRIVILEGES	CHANGE PASSWORD
[REDACTED]	Université Du Luxembourg	facilitator	CHANGE INSTITUTION
[REDACTED]	Universitat Autònoma De Barcelona	facilitator	DELETE
[REDACTED]	Science For Democracy	facilitator	ADD ACCOUNT
[REDACTED]	Gamelab	facilitator	ADD INSTITUTION
[REDACTED]	Visitors	facilitator	
[REDACTED]	Alda	facilitator	
[REDACTED]	Citizien	facilitator	
[REDACTED]	Test	facilitator	
[REDACTED]	Politecnico di Milano	facilitator	

Step 3

Step 4. When you are certain click the **Delete** button, otherwise click the **Close Window** button (cross symbol). *Note: all associated accounts with the institutions will be deleted as well!*

MY ACCOUNT SETTINGS: ADMIN
INSTITUTION: GAmELAB
ACCOUNT NAME: [REDACTED] PASSWORD: [REDACTED] CHANGE PASSWORD

ACCOUNT OVERVIEW

DELETE INSTITUTION: TEST?

Are you sure you want to delete this institution?
Associated accounts will be deleted as well.

DELETE

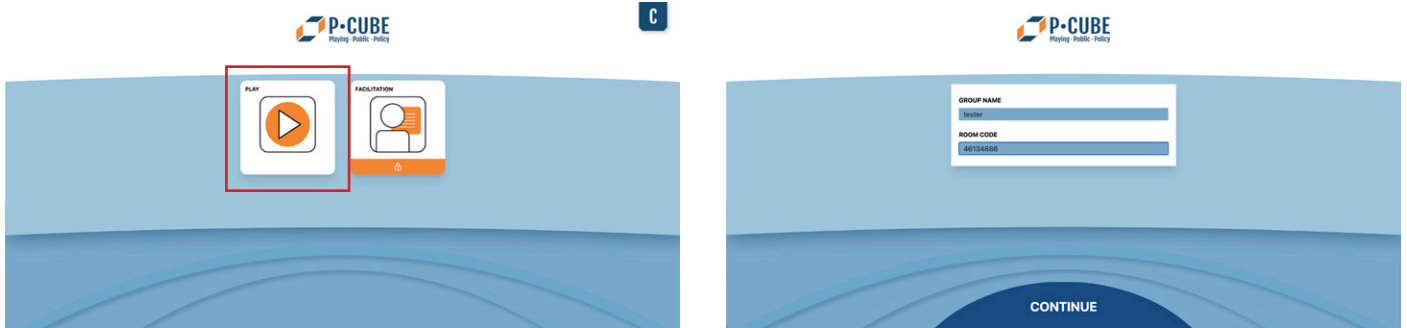
ACCOUNT NAME	INSTITUTION	PRIVILEGES	CHANGE PASSWORD
[REDACTED]	Science For Democracy	facilitator	CHANGE INSTITUTION
[REDACTED]	Gamelab	facilitator	DELETE
[REDACTED]	Visitors	facilitator	ADD ACCOUNT
[REDACTED]	Alda	facilitator	ADD INSTITUTION
[REDACTED]	Citizien	facilitator	
[REDACTED]	Test	facilitator	
[REDACTED]	Politecnico di Milano	facilitator	

Step 5. The institution has been deleted: you cannot see it in the database anymore.

5.2 Player

5.2.1 Joining a game session

Step 0. Click the **Play** button in the main screen, then fill in your group name and room code and press **Continue**. Note: you can get the room code from the host of the game session. This could be the facilitator or teacher.



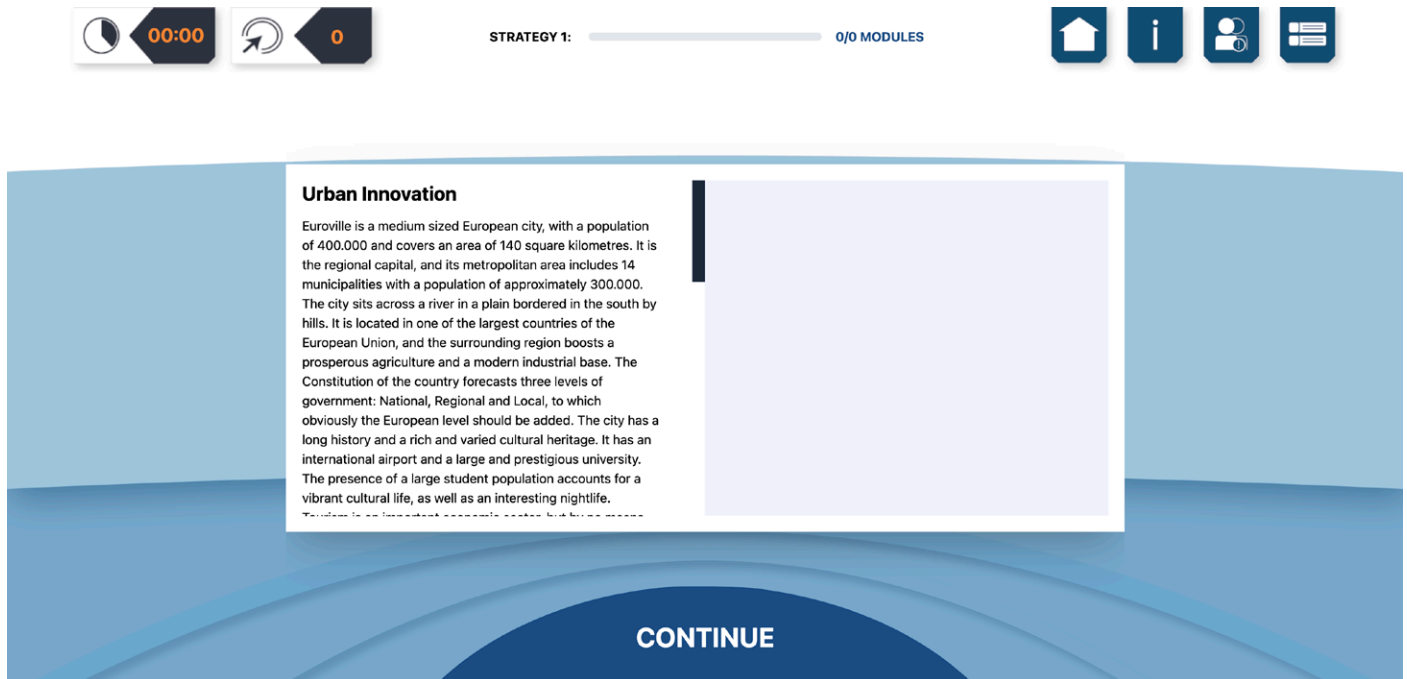
Step 1. Wait for the host of the game to start the game session.



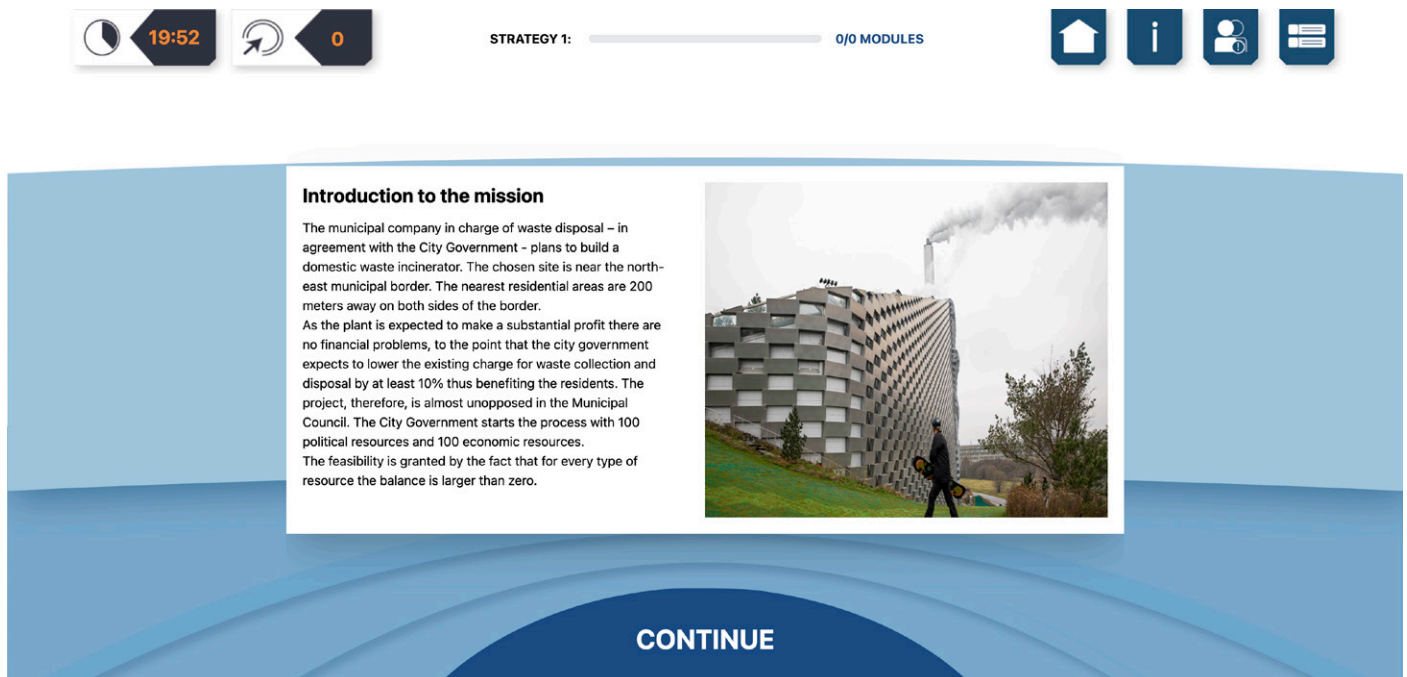
5.2.2 Playing a game session

Step 0. First follow the steps from 5.2.1 *Joining a game session* to join a game session and start playing.

Step 1. After joining a game session you will see the introduction to the game scenario. Scroll down the text to see the whole introduction. Press **Continue** when ready to go to the next screen.



Step 2. After reading the scenario introduction you will see the introduction to the first mission of this game session. The **Mission Timer** also starts to count down (see 5.2.12 *See my mission timer*). Press **Continue** when ready to go to the next screen.



Step 3. If activated, you will now see the introduction to the first strategy of the current mission. Press **Continue** when ready to go to the next screen, otherwise skip this step and go to Step 4.

The screenshot shows a simulation interface with a top navigation bar. On the left, there is a clock icon showing 19:47 and a refresh icon with the number 0. In the center, it says 'STRATEGY 1:' followed by a progress bar and '0/2 MODULES'. On the right, there are four icons: a home icon, an information icon, a user icon, and a list icon. The main content area has a white box with the title 'Choose the actors' and the following text: 'To decide on the project the municipal company needs that all resources are larger than zero. As actors' interests in the project are different, their participation in the process and amount of resources mobilised against or in favour of the project varies extensively. Pick the relevant actors paying attention to the resources needed to develop the project.' To the right of this text is a large, empty light blue rectangular area. At the bottom center, there is a large blue button labeled 'CONTINUE'.

Step 4. You will now play through the different modules of the current strategy. To see specific instructions for each module go to their respective sections (*5.2.4 Play through the actor-distribution module, 5.2.5 Play through the multiple-choice module, 5.2.6 Play through the strategy branch module, 5.2.7 Play through the information module*).

Step 5. After finishing all the modules of one strategy, you will go to the next strategy in the mission when pressing **Continue**.

The screenshot shows the same simulation interface as in Step 3. The top navigation bar now shows a clock icon with 11:55 and a refresh icon with the number 2. The center text says 'STRATEGY 4:' followed by a progress bar that is almost full and '2/2 MODULES'. The right-side icons remain the same. The main content area has a white box with the following text: 'You have finished strategy: "Choose The Actors"' and 'You will now start strategy: Offer compensation'. At the bottom center, there is a large blue button labeled 'CONTINUE'.

Step 6. When you have finished the available strategies of the mission, you will have completed the current mission. After pressing **Continue** at the end of the last strategy you will see a screen with the Learning Points of the current mission (see 5.2.13 See the learning points).

Learning Points

This case showcases one of the most frequent strategies that a policy innovator can employ in order to modify the preferences of the actors, namely the managing of the content of the decision. In this example, it is done by enlarging the content of the decision including additional projects that are offering compensation to the actors negatively affected by the decision. It is a strategy widely used in the potential and actual NIMBY type conflicts, but it appears also in other cases. It is important to note that:

1. the additional projects must be interesting for the actors negatively affected by the decision;
2. in choosing them one should pay attention at their cost as resources are limited;
3. it is more important to satisfy the actors whose consensus is relevant for the political actors in the innovative coalition (this is why to satisfy the suburban governments is less crucial) than to satisfy all actors irrespective of their relevance.

CONTINUE

Step 7. After pressing **Continue** again you will see a screen that says you have completed the current mission and will now start the next mission if available.

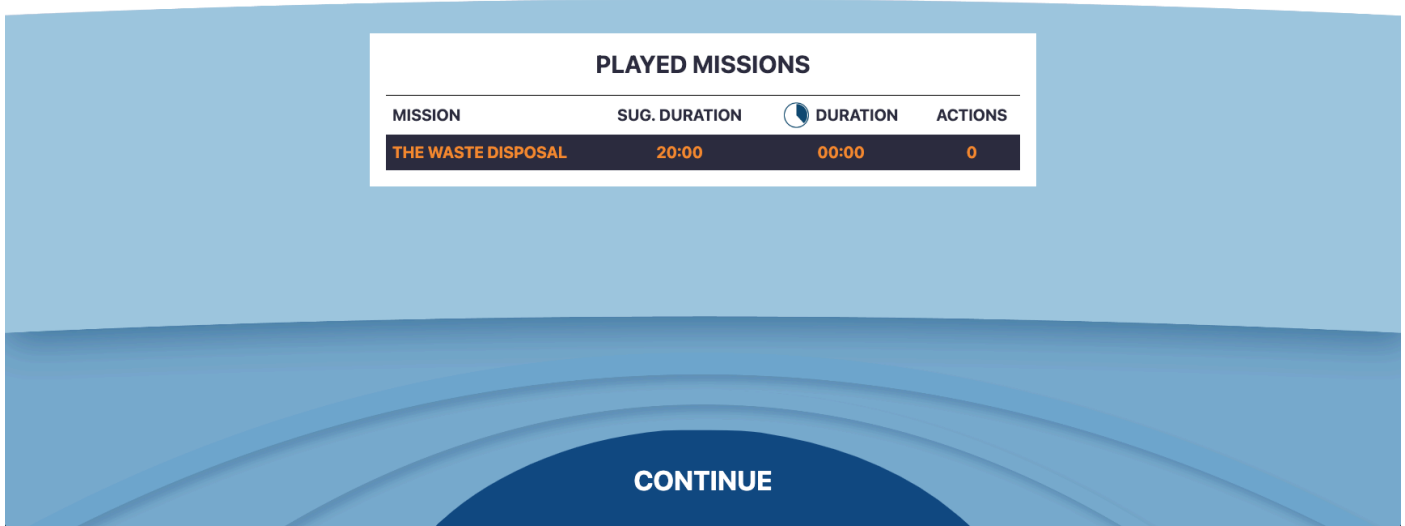
You have finished mission: "The Waste Disposal"

CONTINUE

Step 8. When you have finished all the missions in a game session you will see the End screen of the game session that includes the performance of the player (*see 5.2.14 See the performance board screen*). Press **Continue** when you are finished with the current game session.

Note: it can take some time to load the data from the system. Please be patient.

END OF GAME SESSION



Step 9. You are now back in the Main screen.



5.2.3 See mission information

Step 0. First follow steps 0-3 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. You will now play through the different modules of the current strategy.

STRATEGY 1: 0/2 MODULES

THE WASTE DISPOSAL: ACTOR DISTRIBUTION
Is this actor supporting, opposing or inactive to this mission?

SUPPORTING	INACTIVE	OPPOSING
0 / 2	0 / 5	0 / 3

CHAMBER OF COMMERCE
Chamber of Commerce is a public or private organisation representing the business community as a whole. It mobilises POLITICAL and ECONOMIC RESOURCES.

SUPPORTING
INACTIVE
OPPOSING

Step 2. When playing a mission press the **Mission Information** button (the 3rd button from the right in the top navigation bar with the “i” symbol) to pop-up a window with the mission introduction text.

Step 3. Click the **Close Window** button (cross symbol) to go back to the game.

STRATEGY 1: 0/2 MODULES

THE WASTE DISPOSAL: ACTOR DISTRIBUTION
Is this actor supporting, opposing or inactive to this mission?

THE WASTE DISPOSAL

The municipal company in charge of waste disposal – in agreement with the City Government – plans to build a domestic waste incinerator. The chosen site is near the north-east municipal border. The nearest residential areas are 200 meters away on both sides of the border.

As the plant is expected to make a substantial profit there are no financial problems, to the point that the city government expects to lower the existing charge for waste collection and disposal by at least 10% thus benefiting the residents. The project, therefore, is almost unopposed in the Municipal Council. The City Government starts the process with 100 political resources and 100 economic resources.

The feasibility is granted by the fact that for every type of resource the balance is larger than zero.

Chamber of Commerce is a public or private organisation representing the business community as a whole. It mobilises POLITICAL and ECONOMIC RESOURCES.

SUPPORTING
INACTIVE
OPPOSING

Step 2.

Step 3.

5.2.4 Play through the actor-distribution module

Step 0. First follow steps 0-3 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. When starting the action-distribution module you will see 3 groups in the middle of your screen: supporting, inactive and opposing. At the bottom of the screen you see a short description of an actor with on the right side 3 buttons: **Supporting**, **Inactive** and **Opposing**. Pressing one of these buttons places the depicted actor in the respective group in the middle of the screen. Choose for each presented actor their correct group by clicking one of the group buttons. The button is greyed out when the button is inactive. The button becomes inactive if the actor cannot be placed in the respective group because the group is full. Each group has a maximum number places available, this can be seen at the top of the group if the creator has made it visible in the CMS (see 5.1.8 *Actor-distribution Module step 1*). After dividing all the actors, press **Continue** to go to the next screen.

STRATEGY 1: 0/2 MODULES

THE WASTE DISPOSAL: ACTOR DISTRIBUTION
Is this actor supporting, opposing or inactive to this mission?

SUPPORTING 2 / 2	INACTIVE 5 / 5	OPPOSING 2 / 3
REGIONAL GOVERNMENT CITY GOVERNMENT	CHAMBER OF COMMERCE NATIONAL GOVERNMENT CULTURAL HERITAGE ADMINISTRATION TRADE ASSOCIATION TOURISM EUROPEAN COMMISSION	ENVIRONMENTAL GROUPS SUBURBAN GOVERNMENTS

CITIZENS' GROUPS
They are grass-roots organisations, made of residents, supporting or fighting projects related to the quality of life of neighbourhood. They mobilise POLITICAL and KNOWLEDGE RESOURCES.

SUPPORTING
INACTIVE
OPPOSING

Step 2. Another way to divide the actors is by **drag-and-drop** the actor from one group to another. This is only possible if the actor is already placed in a group.

STRATEGY 1: 0/2 MODULES

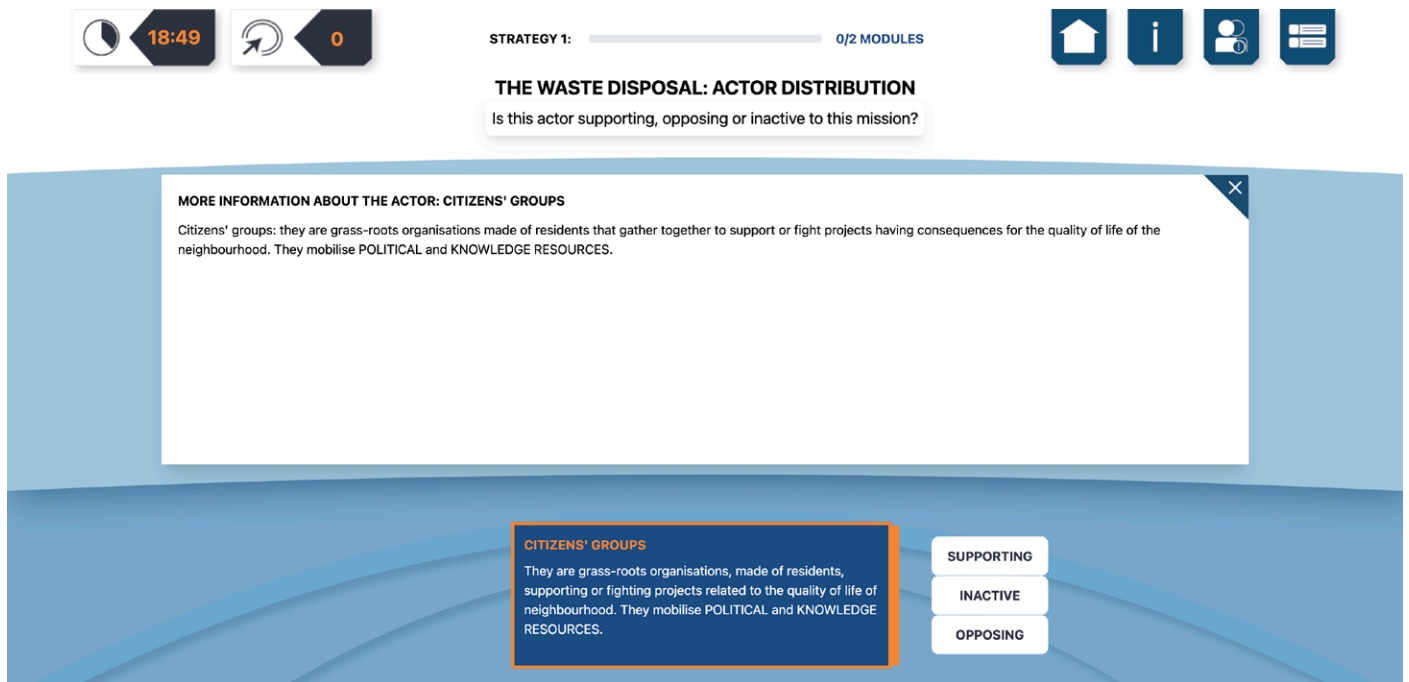
THE WASTE DISPOSAL: ACTOR DISTRIBUTION
Is this actor supporting, opposing or inactive to this mission?

SUPPORTING 2 / 2	INACTIVE 5 / 5	OPPOSING 2 / 3
REGIONAL GOVERNMENT CITY GOVERNMENT TRADE ASSOCIATION TOURISM	CHAMBER OF COMMERCE NATIONAL GOVERNMENT CULTURAL HERITAGE ADMINISTRATION EUROPEAN COMMISSION	ENVIRONMENTAL GROUPS SUBURBAN GOVERNMENTS

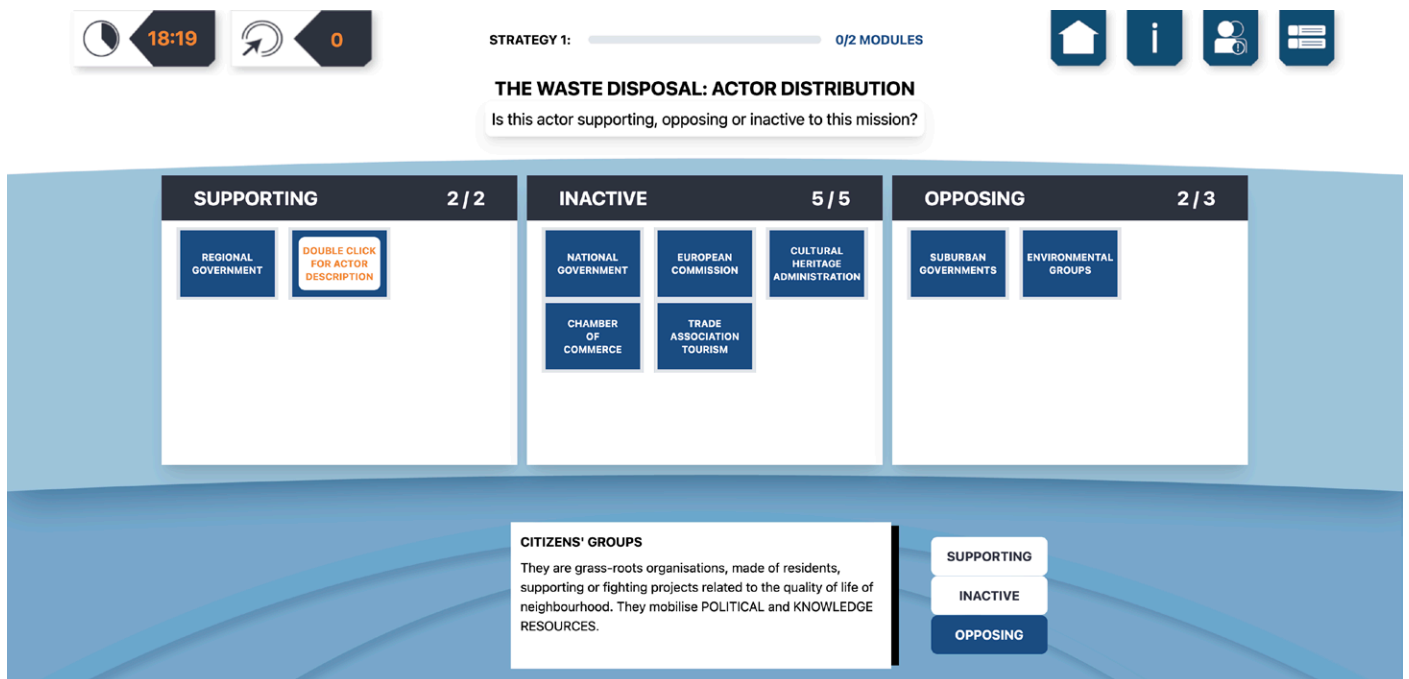
CITIZENS' GROUPS
They are grass-roots organisations, made of residents, supporting or fighting projects related to the quality of life of neighbourhood. They mobilise POLITICAL and KNOWLEDGE RESOURCES.

SUPPORTING
INACTIVE
OPPOSING

Step 3. By clicking on the **Short Description** of the shown actor a window with a more elaborated description of the actor pops-up. Press the **Close Window** button (cross symbol) to close this large description.



Step 4. You can **double-click** on an actor that is already placed in the group to see their short description again in case you forgot their description and want to place them in another group.



Step 5. You can **double-click** the actor again to close the short description window.

STRATEGY 1: 0/2 MODULES

THE WASTE DISPOSAL: ACTOR DISTRIBUTION

Is this actor supporting, opposing or inactive to this mission?

SUPPORTING 2 / 2	INACTIVE 5 / 5	OPPOSING 2 / 3
<ul style="list-style-type: none"> REGIONAL GOVERNMENT CITY GOVERNMENT 	<ul style="list-style-type: none"> NATIONAL GOVERNMENT EUROPEAN COMMISSION CULTURAL HERITAGE ADMINISTRATION CHAMBER OF COMMERCE TRADE ASSOCIATION TOURISM 	<ul style="list-style-type: none"> SUBURBAN GOVERNMENTS ENVIRONMENTAL GROUPS

CITY GOVERNMENT
 City government: it is the main governmental institution of the town. Its political orientation is centre/left. It mobilises POLITICAL, LEGAL and ECONOMIC RESOURCES.

SUPPORTING
 INACTIVE
 OPPOSING

Step 6. Another way to see an actor's description is by pressing the **Actor List** button (see 5.2.10 See the actor list).

STRATEGY 1: 0/2 MODULES

<p>CITIZENS' GROUPS</p> <p>They are grass-roots organisations, made of residents, supporting or fighting projects related to the quality of life of neighbourhood. They mobilise POLITICAL and KNOWLEDGE RESOURCES.</p>	<p>REGIONAL GOVERNMENT</p> <p>Regional government: it supports in all possible ways infrastructural, environmental, and developmental projects having regional impacts. It mobilises POLITICAL, ECONOMIC and LEGAL RESOURCES.</p>
<p>CHAMBER OF COMMERCE</p> <p>Chamber of Commerce is a public or private organisation representing the business community as a whole. It mobilises POLITICAL and ECONOMIC RESOURCES.</p>	<p>CITY GOVERNMENT</p> <p>City government: it is the main governmental institution of the town. Its political orientation is centre/left. It mobilises POLITICAL, LEGAL and ECONOMIC RESOURCES.</p>

RESOURCES. OPPOSING

Step 7. After dividing all the actors and pressing **Continue** you will see a screen with all the supporting and opposing actors including their numerical resources (economical, political, legal and knowledge). The resources can be positive, negative or 0. When **hovering** over the name of the actor you can see their reaction on the proposed policy (see Mission Information). On this screen you can still return to the previous screen to rearrange the actors. Press **Continue** to see the correct answers and complete the module. This costs **one action point** (see 5.2.12 See my performance (action points)).

16:48 0

STRATEGY 1: 0/2 MODULES

THE WASTE DISPOSAL: ACTOR DISTRIBUTION
Is this actor supporting, opposing or inactive to this mission?

SUPPORTING 2/2				OPPOSING 3/3					
REGIONAL GOVERN...		CITY GOVERNMENT		SUBURBAN GOVER...		ENVIRONMENTAL G...		CITIZENS' GROUPS	
Economic	10	Political	0	Economic	0	Political	0	Economic	0
Political	10	Legal	0	Economic	-50	Political	0	Economic	0
Legal	0	Knowledge	0	Political	0	Legal	0	Political	0
Knowledge	0	Economic	100	Legal	0	Knowledge	0	Legal	0
Economic	100	Political	0	Economic	-50	Political	0	Economic	-30
Political	0	Legal	0	Political	0	Legal	0	Political	0
Legal	0	Knowledge	0	Knowledge	0	Knowledge	0	Knowledge	0
Knowledge	0	Economic	100	Economic	-50	Economic	0	Economic	-30
Economic	100	Political	0	Political	0	Political	0	Political	0
Political	0	Legal	0	Legal	0	Legal	0	Legal	0
Legal	0	Knowledge	0	Knowledge	0	Knowledge	0	Knowledge	0
Knowledge	0	Economic	100	Economic	-50	Economic	0	Economic	-30

BACK CONTINUE +1

Step 8. When all the actors are correctly divided you can continue to the next module (in some cases you can also continue when not all answers are correct). Correctly placed actors are depicted green, incorrectly placed actors are depicted red. Press **Continue** to start the next module.

17:02 1

STRATEGY 1: 1/2 MODULES

THE WASTE DISPOSAL: ACTOR DISTRIBUTION
Is this actor supporting, opposing or inactive to this mission?

SUPPORTING 2/2				OPPOSING 3/3					
CITY GOVERNMENT		REGIONAL GOVER...		SUBURBAN GOVE...		ENVIRONMENTAL ...		CITIZENS' GROUPS	
Economic	100	Political	0	Economic	0	Political	0	Economic	0
Political	100	Legal	0	Economic	-50	Political	0	Economic	0
Legal	0	Knowledge	0	Political	0	Legal	0	Political	0
Knowledge	0	Economic	10	Legal	0	Knowledge	0	Legal	0
Economic	10	Political	0	Economic	-50	Political	0	Economic	-30
Political	0	Legal	0	Political	0	Legal	0	Political	0
Legal	0	Knowledge	0	Knowledge	0	Knowledge	0	Knowledge	0
Knowledge	0	Economic	10	Economic	-50	Economic	0	Economic	-30
Economic	10	Political	0	Political	0	Political	0	Political	0
Political	0	Legal	0	Legal	0	Legal	0	Legal	0
Legal	0	Knowledge	0	Knowledge	0	Knowledge	0	Knowledge	0
Knowledge	0	Economic	10	Economic	-50	Economic	0	Economic	-30

CONTINUE

While the final balance of economic resources is positive (+110 E), the final balance of political resources is negative: i.e. - 20P. This is due to the

5.2.5 Play through the multiple-choice module

Step 0. First follow steps 0-3 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. When starting the multiple-choice module you will see the multiple-choice question in the center of the screen beneath the Module title and its possible answers below it. **Select** one or more answers to respond to the multiple-choice question. Press **Continue** to see if you are correct and if so, complete the module. This costs **one action point** (see 5.2.12 *See my performance (action points)*).

11:31 2 STRATEGY 2: 4/6 MODULES

Which projects does the Municipal company select as compensation? It can select max. 2 projects.

1	District heating (+20P for Citizens committees); it costs 15E
2	Subway extension (+20P for Citizens committees; +30P +10E for Suburban governments); it costs 300E
3	Playground (+8P for Citizens committees); it costs 5E
4	Waste recycling enhancement (+20P for Environmental Groups); it costs 15E

CONTINUE +1

Step 2. If you are correct, you can continue to the next module (in some cases you can also continue when not all answers are correct). When you are correct, a message states so. If not the message says you are incorrect and you have to repeat the module (when the creator of the mission set the module on “retry when incorrect” (see 5.1.9 *Multiple-choice module*)).

11:02 3 STRATEGY 2: 4/6 MODULES

Incorrect!

CONTINUE

Step 3. When you retry the multiple-choice module you will see which answers you have chosen before and which ones are correct and incorrect. Correct answers are highlighted green and incorrect answers are highlighted red.

Step 4. Press **Continue** when you have selected your answers to complete the module. This costs **one action point** (see 5.2.12 See my performance (action points)).



STRATEGY 2: 4/6 MODULES



Which projects does the Municipal company select as compensation? It can select max. 2 projects.

- | | |
|---|--|
| 1 | District heating (+20P for Citizens committees); it costs 15E |
| 2 | Subway extension (+20P for Citizens committees; +30P +10E for Suburban governments); it costs 300E |
| 3 | Playground (+ 8P for Citizens committees); it costs 5E |
| 4 | Waste recycling enhancement (+20P for Environmental Groups); it costs 15E |

CONTINUE



5.2.6 Play through the strategy branch module

Step 0. First follow steps 0-3 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. When starting the strategy branch module you will see the strategy branch question in the center of the screen beneath the Module title and its possible options below it. **Select** one option to respond to the strategy branch question. Press **Continue** to go to the selected strategy and complete the module. This costs **one action point** (see 5.2.12 See my performance (action points)).



STRATEGY 1: 2/2 MODULES



What does the Municipal company do now?

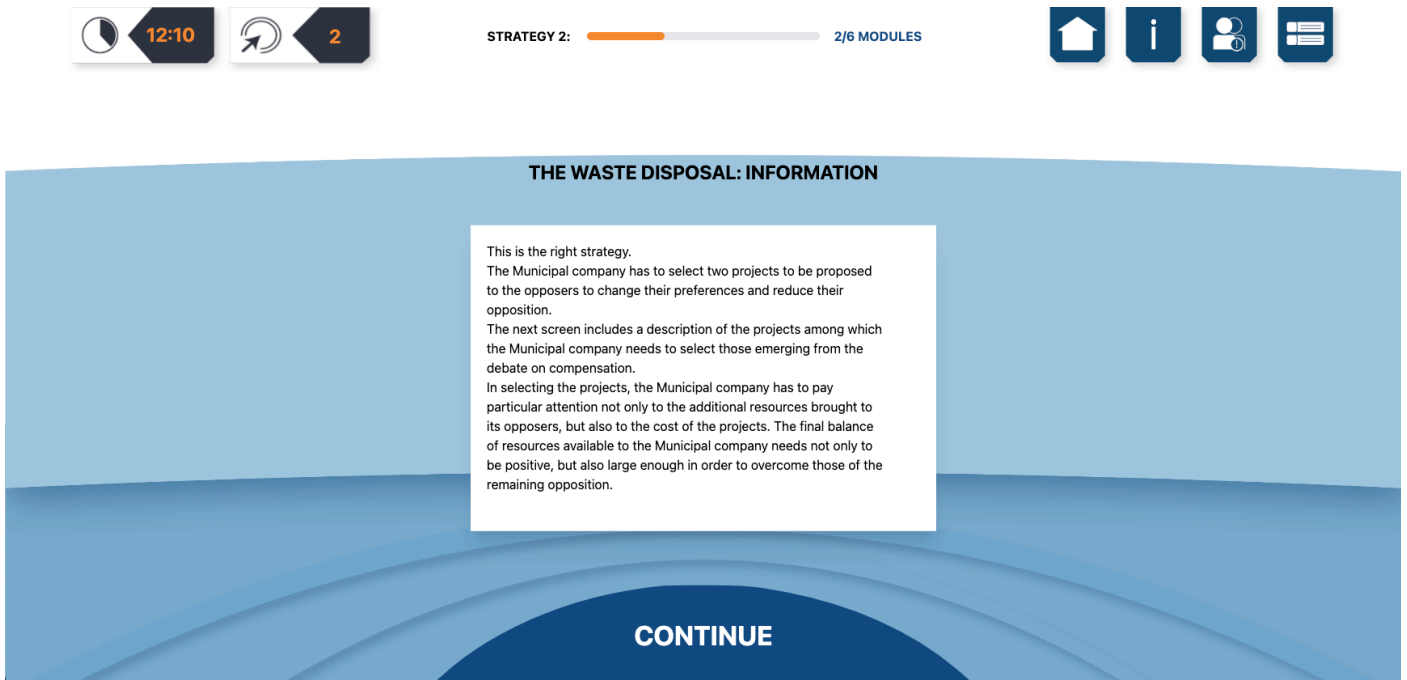
- | | |
|---|--------------------|
| 1 | Abandon project |
| 2 | Wait |
| 3 | Offer compensation |

CONTINUE



5.2.7 Play through the information module

Step 0. First follow steps 0-3 from 5.2.2 *Playing a game session* to join and play a game session.
Step 1. When starting the information module you will a piece of text in the center of the screen. This module is used by the creator to give you some extra information needed to complete the mission. Press **Continue** to complete the module. This module costs no action point.



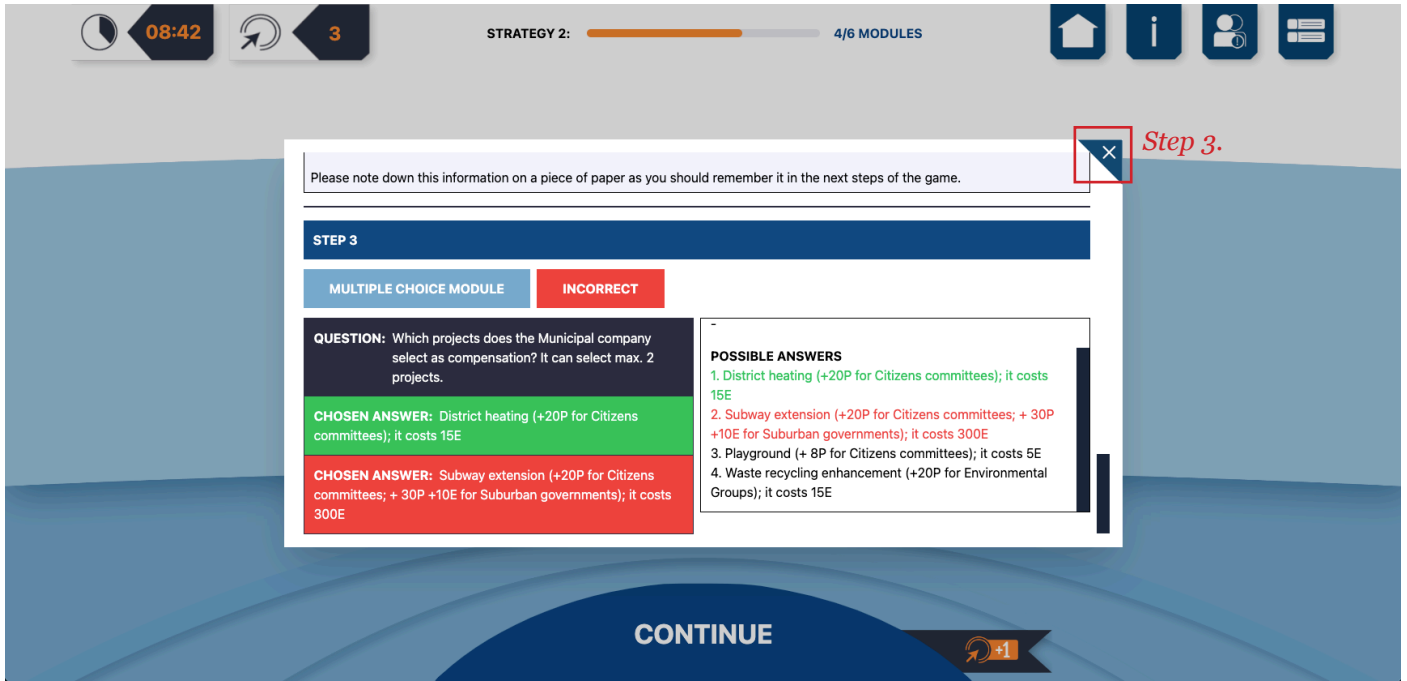
5.2.8 See my history

Step 0. First follow steps 0-2 from 5.2.2 *Playing a game session* to join and play a game session.
Step 1. When playing a mission press the **History** button (the 1st button from the right in the top navigation bar with the “2 bars”) to pop-up a window with the History of all the modules you have played until now.



Step 2. Each module you have played is visualised as the following: *see the screen below.*

Step 3. Click the **Close Window** button (cross symbol) to go back to the game.

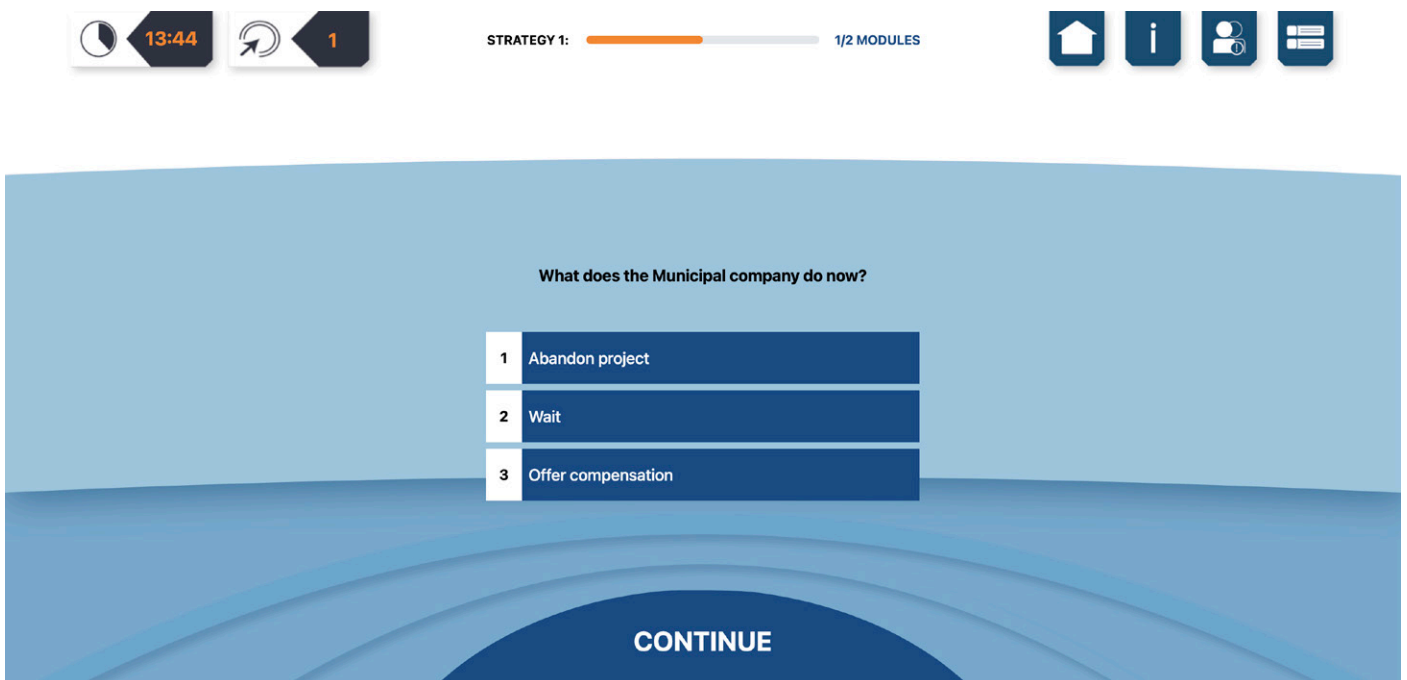


5.2.9 See my game progress

Step 0. First follow steps 0-2 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. When playing a mission you will see a **Progress Bar** at the top of the screen above the Mission title. Due to the possible dynamic nature of a mission, the progress is shown per strategy. The name of the current strategy you are playing is shown left of the progress bar. The numbers to the right of the progress bar shows on which step you are of the current strategy of the total numbers of the steps of the current strategy (*current step / total number of steps*).

Step 2. Each following step the number increases by 1. When going to a new strategy the progress bar is reset.

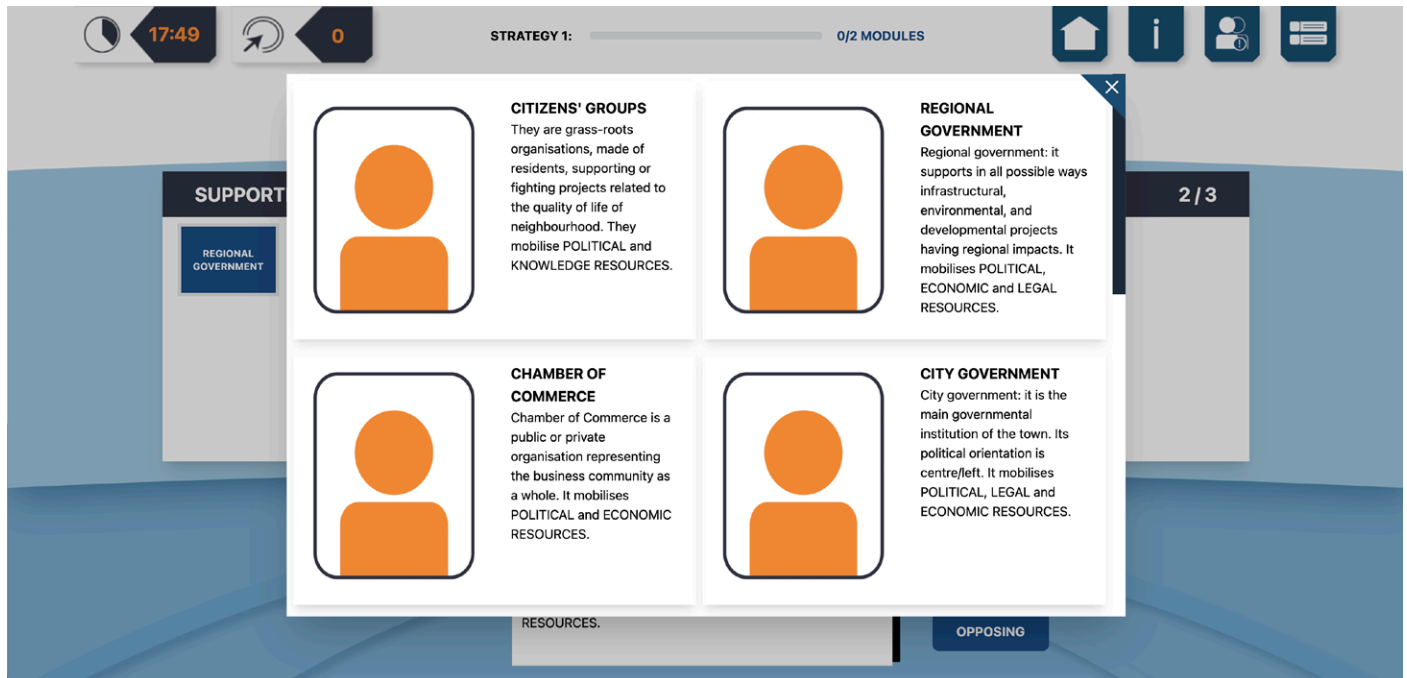


5.2.10 See the actor list

Step 0. First follow steps 0-2 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. When playing a mission press the **Actor List** button (the 2nd button from the right in the top navigation bar with the “figure and exclamation mark”) to pop-up a window with a list of all the actor descriptions in the current mission. Scroll down to see all the actors.

Step 2. Click the **Close Window** button (cross symbol) to go back to the game.



5.2.11 See the mission timer

(see next page for the screen accompanying step 1-2)

Step 0. First follow steps 0-1 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. After reading the scenario introduction you will see the introduction to the first mission of this game session. The **Mission Timer** also starts to count down (see 5.2.12 *See my mission timer*). You can see the **Mission Timer** in the top-left corner of the screen.

Step 2. The **Mission Timer** will keep counting down until you have completed the mission. The time the **Mission Timer** shows is the suggested duration of the mission determined by the creator of the mission. When it reaches zero, nothing will happen. It just shows you that you take a longer time to complete the mission than the creator intended.

19:10 0

STRATEGY 1: 0/2 MODULES

THE WASTE DISPOSAL: ACTOR DISTRIBUTION
Is this actor supporting, opposing or inactive to this mission?

SUPPORTING	INACTIVE	OPPOSING
0 / 2	0 / 5	0 / 3

CHAMBER OF COMMERCE
Chamber of Commerce is a public or private organisation representing the business community as a whole. It mobilises POLITICAL and ECONOMIC RESOURCES.

SUPPORTING
INACTIVE
OPPOSING

5.2.12 See my performance (action points)

Step 0. First follow steps 0-2 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. When playing a mission every time you complete a module you will get **one action point** (see the “+1 flag” to the right of the **Continue** button). You will also add **one action point** when you complete a module incorrectly - even if you have to repeat it. Information modules do not count for the action points.

Step 2. You can see the **Action Counter** (total number of action points) in the top-left corner of the screen to the right of the **Mission Timer**.

10:32 3

STRATEGY 2: 4/6 MODULES

Which projects does the Municipal company select as compensation? It can select max. 2 projects.

1	District heating (+20P for Citizens committees); it costs 15E
2	Subway extension (+20P for Citizens committees; +30P +10E for Suburban governments); it costs 300E
3	Playground (+ 8P for Citizens committees); it costs 5E
4	Waste recycling enhancement (+20P for Environmental Groups); it costs 15E

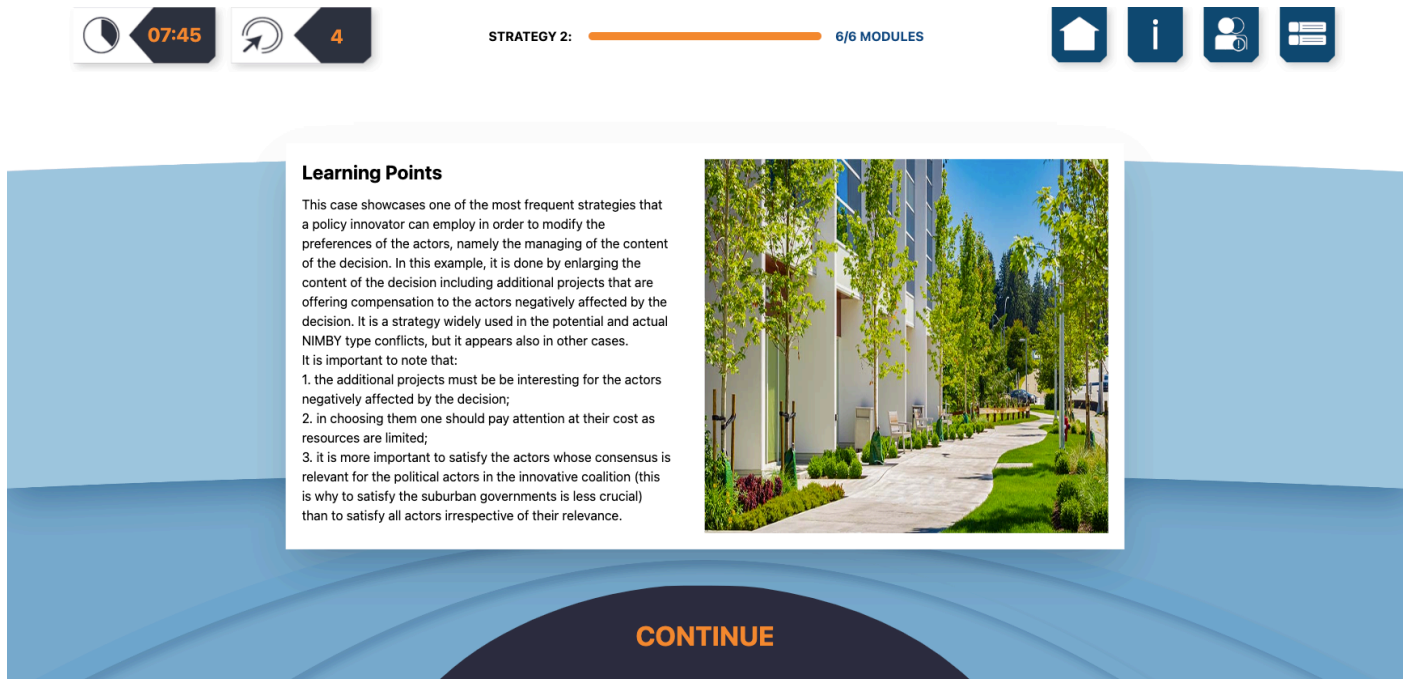
CONTINUE +1

5.2.13 See the learning points

Step 0. First follow steps 0-5 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. At the end of a mission the screen with the Learning Points is shown. In this section the creator of the mission presents all the Learning Points they intended for you to learn with this mission. You could see it as a kind of reflection of the modules you just played through.

Step 2. Press **Continue** to go to the next mission or if you have finished all the missions in the current game session to go to the Leaderboard.



Learning Points

This case showcases one of the most frequent strategies that a policy innovator can employ in order to modify the preferences of the actors, namely the managing of the content of the decision. In this example, it is done by enlarging the content of the decision including additional projects that are offering compensation to the actors negatively affected by the decision. It is a strategy widely used in the potential and actual NIMBY type conflicts, but it appears also in other cases. It is important to note that:

1. the additional projects must be interesting for the actors negatively affected by the decision;
2. in choosing them one should pay attention at their cost as resources are limited;
3. it is more important to satisfy the actors whose consensus is relevant for the political actors in the innovative coalition (this is why to satisfy the suburban governments is less crucial) than to satisfy all actors irrespective of their relevance.

CONTINUE

5.2.14 See the performance board screen

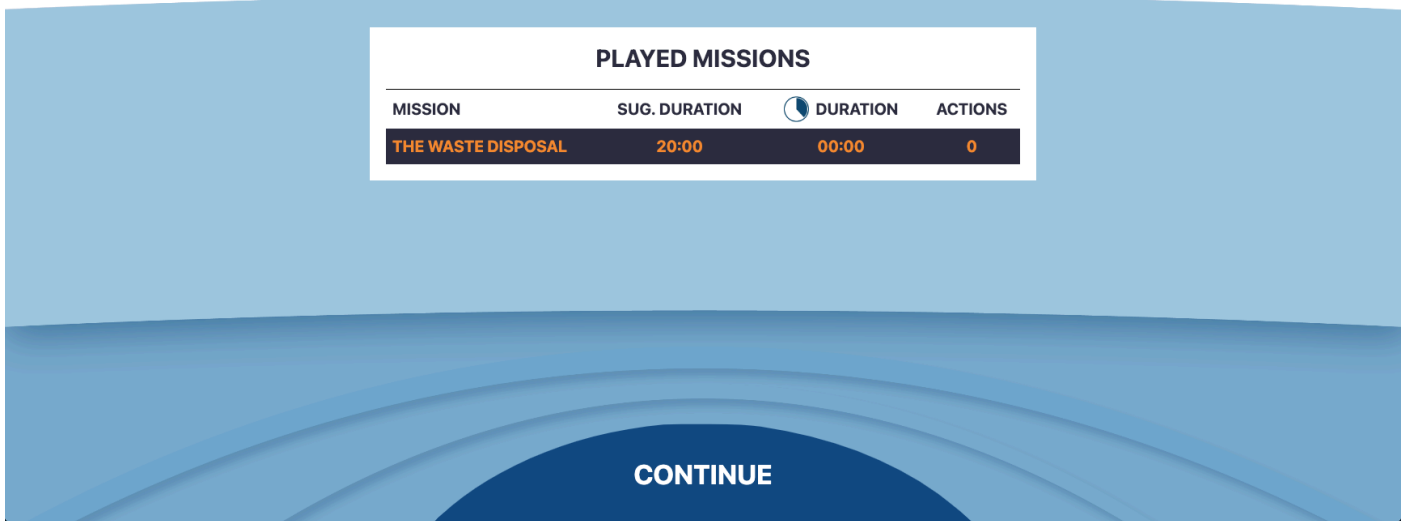
(see next page for the screen accompanying step 1-2)

Step 0. First follow steps 0-6 from 5.2.2 *Playing a game session* to join and play a game session.

Step 1. When you have finished all the missions in a game session you will see the End screen of the game session that includes the performance of the player. The performance board is visualised as the following: *see the screen below. Note: it can take some time to load the data from the system. Please be patient.*

Step 2. Press **Continue** when you are finished with the current game session to return to the Main screen.

END OF GAME SESSION



5.2.15 Return to the main menu

Step 0. First follow steps 0-1 from 5.2.2 *Playing a game session* to join and play a game session.
Step 1. When playing a game press the **Main Menu** button (the 4th button from the right in the top navigation bar with the “house” symbol) to return back to the main menu. A warning message pops-up the ask if you are sure, as when you go back to the main menu you can not return to the game.



Learning Points

This case showcases one of the most frequent strategies that a policy innovator can employ in order to modify the preferences of the actors, namely the managing of the content of the decision. In this example, it is done by enlarging the content of the decision including additional projects that are offering compensation to the actors negatively affected by the decision. It is a strategy widely used in the potential and actual NIMBY type conflicts, but it appears also in other cases.

It is important to note that:

1. the additional projects must be interesting for the actors negatively affected by the decision;
2. in choosing them one should pay attention at their cost as resources are limited;
3. it is more important to satisfy the actors whose consensus is relevant for the political actors in the innovative coalition (this is why to satisfy the suburban governments is less crucial) than to satisfy all actors irrespective of their relevance.



CONTINUE

Step 2. If you do not want to go to the main menu click the **Close Window** button (cross symbol) or the **Cancel** button to go back to the game. Otherwise click the **Confirm** button to return to the main menu.

