ALGAE
RULEBOOK

INTRODUCTION

Algae, often considered the unsung heroes of the natural world, are a diverse group of photosynthetic organisms found in aquatic environments worldwide. Ranging from microscopic single-celled organisms to complex multicellular seaweeds, algae play a vital role in ecosystems, contributing to oxygen production, carbon sequestration, and nutrient cycling. However, their significance extends far beyond ecological balance, as algae have emerged as a valuable resource for a wide array of industrial departments.

The versatility of algae lies in their biochemical composition, which varies across different species and environmental conditions. Rich in proteins, lipids, carbohydrates, vitamins, and minerals, algae possess immense potential for use in various industries.

Compared to land plants, algae grow up to 10 times faster. They also require less water and can be harvested year-round. Furthermore, algae contribute to environmental sustainability through bioremediation and wastewater treatment. Certain algae species have the ability to absorb pollutants such as heavy metals and excess nutrients from water bodies, offering a natural solution for mitigating water pollution and restoring ecosystem health.

Overall, the industrial potential of algae continues to expand, driven by advancements in biotechnology, cultivation techniques, and environmental awareness. As we harness the power of algae, we not only unlock new economic opportunities but also move towards a more sustainable and environmentally conscious future.

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ALGAE, INC. DEPARTMENTS

BIOFUEL

Certain types of algae can build up high levels of lipids, which can be extracted and converted into biofuel, providing a sustainable alternative to fossil fuels. The idea of using algae as fuel dates back to 1942. The first experiments with chlorella began after World War II.

However, in March 2023, researchers said commercialization of biofuels would require several billion dollars in funding, plus a long-term commitment to overcoming what appear to be fundamental biological limitations of wild organisms. Most researchers think large-scale biofuel production is still "a decade, and probably two decades away."

BIOPLASTICS

Algae are increasingly being explored as a promising source of raw materials for the production of bioplastics, offering a sustainable alternative to traditional petroleum-based plastics. In 2021, a research group at the University of Tübingen (Germany) succeeded for the first time in producing compostable bioplastics with the help of cyanobacteria. Bioplastics derived from algae, also known as algal bioplastics or algal-based polymers, present several advantages including biodegradability, renewability, and reduced carbon footprint.

Bioplastic made from algae breaks down in less than 10 years - a plastic bottle takes 450 years. More than 8 million tons of plastic leak into the ocean every year - biodegradable bioplastics are part of the solution.

The global production capacity of bioplastics made from algae, corn starch, vegetable fats, and the like is growing rapidly. According to projections, the global production capacity of bioplastics could reach 7.4 million tons by 2028.

COSMETICS

The use of algae in cosmetics has a long history dating back to ancient times. In many cultures, especially in areas with access to the sea, algae were valued for their natural beauty and skincare benefits.

Algae are still used in the cosmetics and pharmaceutical industries for their unique bioactive compounds. Extracts derived from algae exhibit antioxidant, anti-inflammatory, and moisturizing properties, making them valuable ingredients in skincare formulations and pharmaceutical drugs.

FOOD

Algae serve as a source of high-quality nutrients for human and animal consumption.

The best-known and commercially most important food alga is the red alga Nori (Porphyra), used in sushi.

But also Spirulina and Chlorella, two commonly cultivated microalgae, are prized for their nutritional density, containing essential amino acids, vitamins, and antioxidants. These algae are incorporated into dietary supplements, functional foods, and animal feeds, catering to the growing demand for natural and nutrient-rich products.

The World Bank estimated that 0.3% of the ocean surface would be enough to produce as much biomass as is produced by land-based agriculture worldwide. Growing algae can therefore contribute to food security and fighting hunger worldwide.

AIM OF THE GAME

Players all manage a department of the same company: **Algae Inc.** The company specializes in producing algae-based products (food, biofuel, cosmetics and bioplastics) and exports them to cities across Europe.

Each player tries to manage their department as efficiently as possible. They will recruit the best personnel: **engineers** to optimize their production line, **scientists** to research new technologies and **operators** to expand their business. But it is an ongoing challenge to balance long-term investment, team growth and immediate productivity and sales.

The most efficient department receives the title "Department of the Month" from upper management and **wins the game.**

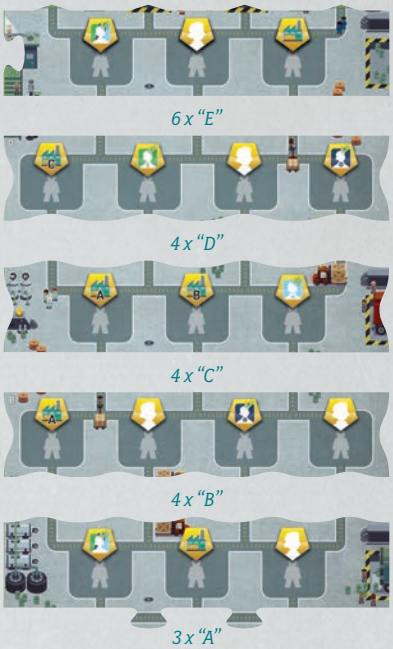
GAME MATERIALS

1 Map Board

1 Action Board Frame

6 VP board strips

6 Weekend bonus board strips



6 x "E"
4 x "D"
4 x "C"
4 x "B"
3 x "A"

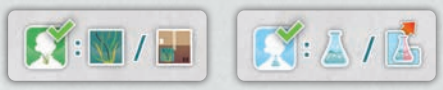
21 Actions Strips

3x 3x 3x 3x 3x

15 Milestone tiles

16 Operators 16 Engineers 16 Scientists

48 Staff tiles



4 Operator upgrades 4 Scientist upgrades

8 Upgrade Tiles

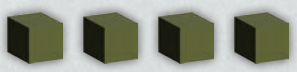
3 Round Bonus Tiles

Front Back

16 Regular City Demand Tokens

Front Back

8 Capital City Demand Tokens



4 Capacity Markers

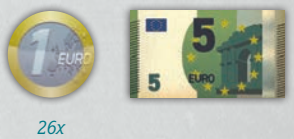
2 Byproduct Tanks

8x 8x 8x 8x

32 City Bonus Tokens

1 Round Marker

1 Start Player Token



26x

Euro Coins & Bills

15 freelance engineers

15 market value tokens

15 Wild Action Tokens

25 Choice Action Tokens

GAME MATERIALS

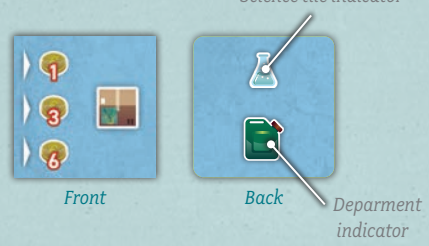
For Each Of The 4 Departments

(Biofuel, Bioplastics, Cosmetics, Food)

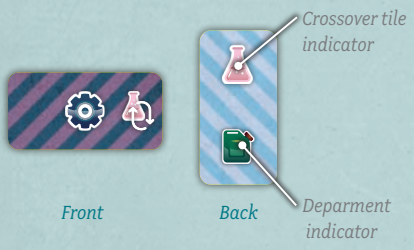
1 double-layered Department Board

1 double-layered Side Board

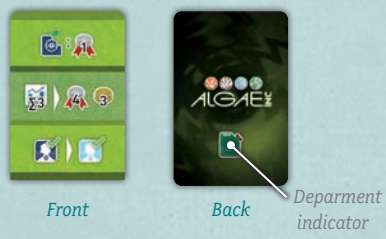
11 Engineering Tiles



±12 Science tiles*



4 Crossover Tiles



9 Contract Cards

10 Export Tiles

Note that you will find the Department indicator on the BACKSIDE of each Department component! Make sure to keep every deparment component separate from the others to avoid long setups.

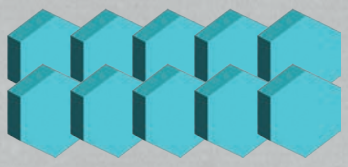
In Each Of The 4 Player Colors

(Yellow, White, Blue, Purple)

1 Action Meeple

1 VP Disc

10 Export Discs

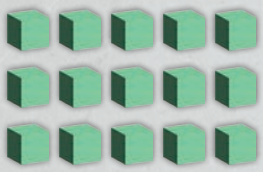


10 Milestone Markers

1 Science Marker

1 Energy Marker

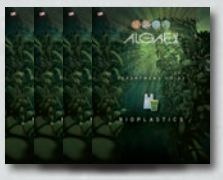
**not every deparment has the same amount of scientiles. these vary between 11 and 13.*



55 Algae Cubes

4 Science Inlays

1 Rulebook



4 Department Guides

PLAYER SETUP

1. Each player takes:
   - All tokens and markers of their player color (**1 Worker, 10 Export disks, 10 Milestone markers, 1 Science marker, 1 Energy marker, 1 VP disc**)
   - One Department board of their choice: **Cosmetics**, **Biofuel**, **Bioplastics** or **Food**.

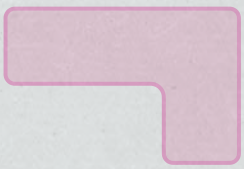
     > **Note:** In a 2-player, you **cannot** combine 2 Department boards that produce the same type of Byproduct. Use only the Cosmetics OR Biofuel Department board, combined with the Bioplastics OR Food Department board.
   - 1 **Operator Upgrade Tile** and **1 Scientist Upgrade tile**
   - All the components that match their Department board (**1 Side board, All Science and Engineering tiles, 4 Crossover tiles, 8 Contract cards, 10 Export-tiles**). All these items have the matching icons on their **back.**

     > **Note:** Side boards are explained in the *Core Concepts* of the game on page xx.
2. Choose a starting player and give them the **Start player token.**
3. Place your **Department board** in front of you with your **Side board** to the right of it.
4. Each Department board comes with an associated set of **Science**, **Engineering** and **Crossover tile**s.
   - **Science tiles** are placed face-up on the depicted spots **on your Department board**. Look for these light blue frames on your Department board

Science Tile Locations

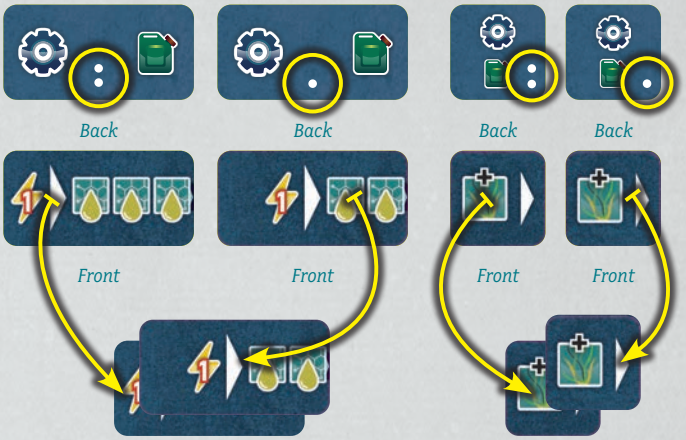
   - **Engineering tiles and Crossover tiles** are placed face-up on the appropriate spots **on your Side board**.

Engineering Tile Location (dark blue)



Crossover Tile Location (pink)

Two types of Engineering Tiles consist of two tiles that are placed on top of each other. Their locations are marked with and . Place the tiles marked with on their back first, followed by the tiles marked with on their back.

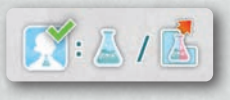


Important: See the *Reference Sheets* for a more detailed explanation and images of the setup of each

PLAYER SETUP

5 Place your Operator and Scientist Upgrade Tiles next to your Operators and Scientists Teams respectively, with their starting side face up.

Starting side



Starting side

6 Take 2 Algae cubes from the general supply and place them in the only available Algae storage on your Department board.

7 Place your science marker on the "0" of your science track

8 Place your 10 Double Action-tiles on the depicted fields on your Side board. Place an Export disk and a Milestone marker on the indicated space of each Double Action-tile.

9 Shuffle your 8 Contracts Cards and draw 3. Return the remaining cards to the box.

10 Then slide the 3 cards, in an order of your choice, underneath your Side board in the approriate location. The middle card should be placed first. Then you place the other cards on top of the middle card, making sure to overlap only the top and bottom part, as depicted in the example below. This should result in one chosen permanent ability, one contract export option, and one end scoring option *(see page xx)*.

Note: After you have played Algae Inc. a few times and are familiar with the setup, you can choose to randomly distribute the one of the 4 double-sided Side board inserts among the players for even more variety in the game.

If you do, choose which side of your Side board insert you want to use this game and place it inside the central recess of your Side board.

MAP BOARD SETUP

1. Place the **Map Board** in the middle of the table.
2. Randomly distribute the 8 **Capital City Demand Tokens** on the 8 capital cities on the map.

   > **Note:** When playing with new players, it is recommended to place the Capital City Demand token with value 2 in Berlin, with the additional rule that the very first export action of the game must be to Berlin.

3. Randomly distribute the 16 **Regular City Demand Tokens** on the other cities on the map.
4. Shuffle the 36 **City Bonus Tokens** and randomly distribute 24 of them on each city on the map.
5. Make **face-up token pools** equal to the number of players **plus one.** In each token pool, place:
   - one randomly chosen Staff tile
   - two randomly chosen City Bonus tokens (of the remaining 12).

   Then, in reverse player order (starting with the player sat to the right of the start player and going around the table counterclockwise), each player chooses one of the token pools. The chosen Staff tile is placed on their Department board and each player immediately receives the depicted bonus (a choice action token).
6. Create a general supply of the remaining **Staff tiles.**

MAP BOARD SETUP

7. Randomly take 2 **Milestone tiles** per colour and place them on the appropriate spaces on the central game board with a random side face-up. Return the 5 remaining milestone tiles to the game box.

8. Create a general supply with all the **Freelance Engineers, Market Value tokens, Wild Action tokens, Choice Action tokens, and Euro coins & bills.**

9. In a 2-player game, Place the 2 **Byproduct tanks** on the game board in the indicated locations, **covering up the pre-printed tanks.** In a 3-player game, Use only 1 Byproduct tank, i.e. the one that displays the department whose Department board is NOT used during this game. In a 4-player game, you do not use the byproduct tank tiles and leave them in the box.

10. Fill the bottom 2 rows of all **Byproduct grids** with **Algae cubes**.

11. Place a **capacity marker** on value 4 on every Algae tank and fill them with 4 algae cubes each.

12. Place the remaining **Algae cubes** in the general supply pool.

13. Each player places their **Energy marker** on the middle space of the **energy track.**

14. Each player places their **VP marker** on space "0" of the **VP track.**

Example of a 3-player setup

ACTION BOARD SETUP

RESOURCES

The resources that appear in Algae Inc are: euros, market value, freelance engineers, and science points. There are also Question mark tokens and Wild Action tokens in the game. But when we talk about resources, they are explicitly NOT Question mark or Wild Action tokens.

Science Points

Science points are the only resource marked by a track and are therefore limited to 10. If you get more science points than you can mark, at any time during the game, these science points are wasted.

When you receive a bonus token depicting a science point, you must immediately mark it on your science point track. If this is not possible, your bonus is lost.

Bonus tokens

Many single-sided bonus tokens come into play as the game progresses. For the rest of the game, they can be used in the same way as the double-sided bonus tokens. All resources except science points are assumed to be unlimited.

Exchanging resources

Whenever you have to pay something (and only then!), you may freely exchange all types of resources (€-coins, science points, market value, freelance engineers) and question mark tokens at a ratio of 2 to 1.

Similarly, you may freely exchange 3 resources and/or question mark tokens for 1 Wild Action token if you need a Wild Action token to perform an action of your choice. (see further)

For example, you can spend €1 and 1 science point (by moving your science track marker) to get 1 question mark token that you immediately pay to change your action (see further).

CONTRACTS

See the Reference Sheets for a detailed explanation of each option on the Contracts.

Each contract card is divided into 3 options:

1. An end scoring
2. A contract export
3. A permanent ability

By layering the cards on top of each other during setup, you should see one chosen option of each type.

Contract export

Once in the game, you can do an Export to your Contract card. You do this as part of a normal Export. The normal export rules apply as if you were exporting to a city on the general map, but without transportation costs.

If you do, you place your Export disk on your Contract card instead of the general map of Europe.

You get the immediate benefit shown on the card. However, the Export disk you placed on your Contract does NOT count toward the achievement of any of the Milestones.

SIDE BOARDS

The basics for upgrading your Department board and using your Side board are explained here.

Read "Gameplay" for a detailed description of the Team Activations you must perform to upgrade your Department board and use your Side board.

Much of the game revolves around optimizing your production by moving Engineering tiles from your Side board to your Department board (by activating your Engineers) and Science tiles from your Department board to your Side board (by activating Scientists).

> Tip: The game will probably be too short to upgrade your entire Department board. Try to upgrade only one or two paths on your conveyor belt to get the most out of it.

[Example Setup of a Side board]

The layout of your Side board consists of 3 parts:

1. On the left side of your Side board are Export disks and Milestone Markers on top of your Double Action tiles. By exporting your products, you can move Export disks and Milestone Markers to the map on the central board. This provides additional income during the Monday Morning Phase. However, if you use Double Action tiles for additional actions, they are removed from the game and you will no longer receive the additional income depicted on them.

2. On the central part of the Side board, at the start of the game, all Engineer tiles are located.

At the top of your Side board, you keep track of your Science points.

3. On the right side of the Side board you can see the

common exchange rate between resources, a recess to keep your Contract cards and a summary of the end game scoring.

Science tiles are on your Department board at the beginning of the game. If you remove them by activating your Scientists, they reveal upgrades. Removed Science tiles are placed face-down on your Side board.

If you cover one or more bonuses with a Science tile, you immediately take them and you may immediately use them, even in the same action.

Available bonuses:

- Take 1 or 2 Energy. Move your Energy marker accordingly.
- Take 1 Choice Action token from the general supply.
- Take 1 Wild Action token from the general supply.
- Take 1 or 2 Byproducts from the general supply. Place them in a Byproduct tank of your choice and gain the depicted coins. You may not burn the received Byproducts into energy.
- Immediately gain 1 VP per removed Milestone marker on Double Action tiles that are still on your Side board.
- Immediately gain your Operator income. (1 Algae cube per Operator; +2 additional Algae if you upgraded your Operator income)
- Immediately gain your Engineer income. (Move 1 Algae cube per Engineer; +2 additional movements if you upgraded your Engineer income)
- Immediately gain your Scientist income. (1 Science point per Scientist; +2 additional Science points if you upgraded your Scientist income)

At the end of the game you will score 1 VP for each Science tile in the largest set of adjacent Science tiles you built on your Side board, including flipped Crossover tiles.

Engineering tiles begin the game on your Side board. When they are built by activating your Engineers, they are removed from your Side board, freeing up space for future Science tiles. They are then placed on your Department board, where they improve your production process.

In addition to the Engineer tiles that go to your Department board, there are also Crossover tiles that you can remove from your Side board by activating your Engineers. When you do this, flip the Crossover tile from its Engineer side to its Science side and place it next to your Side board. You can place it back on your Side board as a Science tile by activating your Scientist team on a later turn.

Taking Crossover tiles costs the same as taking Engineering tiles, while placing flipped Crossover tiles costs the same as placing Science tiles.

Taking Crossover tiles can be useful to free up space for your Science tiles, take bonuses that are sometimes harder to achieve by placing your Science tiles, or increase your endgame VP by building a longer chain of Science tiles.

Department boardS

See the Reference Sheets for a detailed explanation of each Department board.

Read "Gameplay" for a detailed description of the Team Activations you must perform to upgrade your Department board.

Layout

Your Department board depicts the production line of specific algae products. That production line is divided into the following zones:

1. The Algae storage is divided into the 4 different types of algae. Here you place the Algae coming from the Algae tanks on the general board. You can only place Algae in storage that is available.
2. Machine A. In the beginning of each production you will compulsorily lose some of your Algae. These lost Algae (usually) become Byproducts. You can store Byproducts in the appropriate tank for Byproducts in exchange for money. Or you can convert them into Energy.
3. In Machine B, you can sometimes add Byproducts from other production lines to your production. This is a lucrative way to boost your production.
4. Also in Machine C you can sometimes add by-products before your Algae cubes are converted into saleable finished products.
5. Cubes that have reached the end of Machine C are in the Dispatch area, ready for Export.

Algae Storage Upgrades

Each Department board has 3 Algae Storage upgrade tiles. When your remove an Algae Storage tile, this opens up a new Storage for this type of Algae. Whenever you may take Algae from the Algae tanks, you may only choose the species that you have Storage for.

Immediately after removing a Storage upgrade tile, you must increase the Algae tank's capacity of the corresponding species on the game board with one step.

You can also check the capacity of each Algae tank every time they are refilled in the Weekend Phase.

Moving Algae cubes

Your Department board has black-and-yellow and black-and-green conveyor belts. During the game, you can move Algae cubes along the conveyer belts on your Department board.

Whenever you perform a Machine activation, ALL conveyer belts (black-and-yellow and black-and-green) may activate in the Machine's zone.

However, under all other circumstances, especially during the income phase between rounds, Algae can only be moved over the black-and-yellow conveyer belts, without activating the black-and-green conveyer belts.

The black-and-green conveneyor belts are activated only by an activation of the Machine of the zone they are in. Sometimes they cause you to lose Algae cubes or Energy, usually mandatory. Or they cause you to gain Byproduct cubes (which immediately become Algae cubes) or Energy, always optional.

Byproducts

Algae production involves the loss and recycling of Byproduct. There are 2 types of Byproduct: biomass and bio-oil. If your Department board converts Algae cubes into Biomass during production, you will be able to recycle Bio-oil in other steps of your production line, and vice versa.

Byproducts can be very useful in 2 ways:

- When you activate Machine A in your production line, you often lose Algae cubes that convert into Byproduct. This may be a convenient way to gain energy (by burning Byproduct) and/or money (by selling Byproduct).
- Each Department board has ways to add Byproduct to its production line. This varies by Department board, but can be very useful to add more cubes and produce more finished products.

GAMEPLAY

Algae Inc. is played over the course of 4 weeks, represented by rounds of play. Each round has the following 3 phases, as indicated on the bottom part of your Department Board:

1. **Monday Morning:** Players receives an income.
2. **Work Week:** In player order, players take one turn per Work day, 5 turns per week.
3. **Weekend:** Depending on their energy level, players receive a weekend bonus. A few cleanup steps are performed.

1. MONDAY MORNING

During the Monday Morning phase, each player receives income and performs the steps depicted on their Department board. This happens in every round, including the first.

Two Department boards have one additional step during this phase (see Reference Sheets):

1. On the Food Department board, produced food that has not been exported will degenerate.

2. On the Biofuel Department board, there is an optional refining step.

Every player receives income:

• €2 plus €1 per removed export disk on your Side board.

• 1 VP per removed milestone cube on your Side board.

The euros and VPs you receive are printed on the Double Action tiles on your Side board. Used Double Action tiles are removed from your Side board and no longer generate income.

• 1 new Algae cube per Operator on your Department board.

Algae cubes are stored by Algae species in the Storage spaces on your Department board. At the beginning of the game, you only have Storage spaces for one Algae species at your disposal.

You may take Algae cubes of different species, as long as you have the proper Storage space available. If you don't have enough Storage space, you can't take any more Algae.

You can free up more storage space for different types of Algae by removing the appropriate Science tiles.

Taking Algae cubes must be done in the current player order. If an algae tank is empty, you can buy Algae cubes from the general supply for €1 each.

Note that the remaining steps in this phase can be performed by all players simultaneously.

• 1 Algae cube movement per Engineer on your Department board.

Algae cubes can only be moved over the black-yellow arrows in this phase, without activating any of the black-green arrows.

Tip: Moving cubes in this phase can be very powerful. It speeds up your production line and sometimes avoids production costs. On the other hand, you may miss Byproducts that enter your production line at certain steps. Choose carefully which cubes you want to move.

• 1 Science point per Scientist on your Department board.

Your total number of Science points is limited to 10. Any points you earn above 10 are lost. You cannot exchange them for anything else during this phase.

Income upgrade

Each Department board has 3 Team upgrade Science tiles that can be removed with a Scientists Team activation (see page xx) to upgrade your income during the Monday Morning phase.

Operators Income Upgrade

Removing this tile will increase your Operators' income with 2 Algae cubes. This will only be the case in each Monday morning phase, and when you gain the Operator Income bonus from your Side board.

Activating your Operators does NOT give you more Algae cubes if you have upgraded your Operators' income.

Engineers Income Upgrade

Removing this tile will increase your Engineers' income with 2 Algae cube movements. This will only be the case in each Monday morning phase, and when you gain the Engineer Income bonus from your Side board.

Scientists Income Upgrade

Removing this tile will increase your Scientists' income with 2 Science Points. This will only be the case in each Monday morning phase, and when you gain the Scientists Income bonus from your

Side board.

Activating your Scientists does NOT give you more Science points if you have upgraded your Scientists' income.

2. WORK WEEK

Each turn, starting with the starting player and moving clockwise, each player performs 1 or more actions. There are 5 turns in each Work week.

During their turn, each player performs the following 2 steps:

a) Move Worker

b) Perform Action(s)

a) Move Worker

When it's your turn, you must move your worker to the next Action strip.

If this is your first turn in the current round, you may choose an Action spot on the bottom Action strip. In subsequent turns, you must move your worker to an Action spot on the next Action strip connected to the current Action spot it is on. Multiple workers can occupy the same Action Spot.

In this example, the red worker must move to one of 2 possible action spots.

b) Perform Action(s)

After moving your worker, you may:

- Perform the action depicted on the spot your worker landed on.It's possible to change the depicted action by spending a Choice Action token or Wild Action token (see below).
- Or, take one Choice Action token, €1, or 1 Algae cube, or move one Algae cube on your Production line.

This is also considered an action, which means that you can still spend a Double Action tile afterwards to take an additional action or even perform this action after spending a Double Action tile.

Then you may spend one unlocked Double Action tile to perform one additional action.

Double Action-token

By spending an unlocked Double Action tile, you may redo the action depicted where your worker is standing.

Note that this additional action can also be modified with a Choice Action token or a Wild Action token if desired (see further).

Double Action-tiles are unlocked if both the export disk and the milestone cube are removed from it (see further). You may use them immediately, but limited to one Double Action-tile per turn.

Used Double Action tiles are returned to the game box.

There are 3 types of Actions, whether or not subdivided into four possible sub-actions:

A. Activate one Team:

1. Activate any Team
2. Activate Operators
3. Activate Engineers
4. Activate Scientists

B. Activate one Machine

1. Activate any Machine
2. Activate Machine A
3. Activate Machine B
4. Activate Machine C

C. Recruit any Staff member

Choice Action token

By spending a Choice Action token, you can change the Team or Machine that you activate.

Examples:

- If your worker is on a spot to Activate your Operator Team, you may spend a Choice Action token to activate your Engineers or Scientists instead.

- If your worker is on a spot to Activate Machine B, you may spend a Choice Action token to activate your Machine A or C instead.

However, a Choice Action token does not change the action type itself. For example, you cannot turn a Production action into a Team Activation or vice versa. For that, you need a Wild Action token.

Wild Action token

By spending a Wild Action token, you can change the Action that you may perform into any other Action or Sub-action.

For example, if your worker is on a spot to Activate a Machine, you may spend a Wild Action token to activate one of your Teams or recruit Staff instead.

Example 1:

Veronica moves her worker to a spot where the Production of Machine B is shown. She prefers to activate Machine A instead and spends a Choice Action token to do so. Now that she has a

few Algae cubes in Machine B, she decides to spend an unlocked Double Action tile to repeat the Production action. The action spot shows Machine B, so she can move her Algae cubes from Machine B to Machine C without spending another Choice Action token.

Example 2:
Carl moves his worker to a spot depicting the activation of his Scientists team. He prefers to activate his Engineers instead and spends a Choice Action token to do so. He then wants to export some finished products and spends a Double Action tile to repeat his action and another Choice Action token to change it and activate his operators.

Example 3:
Fiona moves her worker to a spot that depicts a recruit action. However, she wants to export products and spends a Wild Action token to do so. With her export action, she unlocks a Double Action tile. She decides to spend it immediately for an additional action. She recruits a new operator. Since this is the action depicted where her worker stands, she does not have to spend a ?- or Wild Action token to change it.

Activate one Team

When you activate a team, you activate the entire team for the same task. Although Operators and Scientists can perform 2 different tasks, you can only do 1 task per action.

Activate any Team

If you choose a Team activation action on the first or last Action strip, you can activate a Team of your choice.

Activate Operators

By Activating your Operators, you can either:

- Take new Algae cubes

Note that you may NOT take 2 additional Algae cubes if you upgraded your Operators' income. This only applies during the Monday morning income phase.

You may take Algae cubes up to the number of Operators that you have and store them on the appropriate Storage spaces on your Department board.

You may take Algae cubes of different species, as long as you have the proper Storage space available. If you don't have enough Storage space, you can't take any more Algae.

If an Algae tank is empty, you can buy Algae cubes from general supply for €1 each.

- Or Export

You can export final products (Algae cubes at the end of your Production line) to one or more Cities on the map that you didn't export to yet.

Transport cost

Since all players work for the same company, Algae Inc, it is possible that other players have already found customers for you in certain cities. You can always export to these cities at no extra cost.

However, when exporting to cities that have not yet been exported to, there are standard transport costs that depend on the distance of that city from the nearest export disk on the map (of any player):

€1 to adjacent cities

€3 to cities at a 2-step distance

€6 to cities at a 3-step distance

Unless otherwise stated on a contract card, it is not possible to export to cities further than 3 steps away from a export disk.

Transport costs are paid to the general supply.

If this is the very first export action in the game, by any player, you may choose which city to export to without paying transport costs.

If you used the beginner variant setup and placed a Capital City token of value 2 in Berlin, the first export action has to be to Berlin.

Transport cost upgrade

By activating your Scientists (see further), you can remove the Transport cost Science tile from your Department board and place it on your Side board. This reduces your future Transport Cost to 0/1/3 Euro for 1/2/3 distance.

Demand

To be allowed to export to a City, you must meet that City's minimum demand value depicted on its Demand token.

The market value of each of your Algae cubes is depicted on your Department board. As a basic rule, you may combine Algae cubes of any Market value to meet a city's demand. Any excess Market value is lost.

You may use one or more Market Value tokens to increase the Market Value of an Algae cube, even if the Market Value of that cube is 0.

Remember that at this point you can also exchange 2 other resources or Choice Action tokens for Market Value.

Notes:

- When playing with the Cosmetics board, you may not combine Algae cubes of different product types to export to one City.
- When playing with the Bioplastics board, you are encouraged to combine algae cubes of the two different product types, as this can significantly increase their market value.

The Department boards are explained in detail in the Reference Sheets.

Algae cubes used for an export action are placed in the general supply.

Export disks and Milestones

When exporting to a city, you take the topmost Export disk from your Side board and place it on the City. If this is the first Export disk in this city, also take the city's bonus token.

It is allowed to use acquired bonus tokens immediately for the next Export in the same action, for example Coins to pay for transportation or Market Value to increase the Market Value of your product.

If you export to a city that already has one or more Export disks from other players, simply stack your Export disk on top of it.

After each export to a city, check whether you have achieved one or more Milestones. If so, you may immediately take the top Milestone cube(s) from your Department board and place it next to the achieved Milestone(s) on the central game board. Immediately score the depicted Victory Points, if any.

See Appendix 1 for a detailed description of all Milestones.

After completing an export to one City, you may export to other Cities if possible. The number of Cities you may export to is limited to the number of Operators that you have.

When you remove Export disks and Milestone cubes from your Department board, this may unlock one or more Double Action tiles. You may immediately use a Double Action tile during the same turn if you have not already used one.

Export Bonus

All players that manage to Export at least once in Week 1, 2 or 3, will receive a Team upgrade in each of those Weeks. When you have completely finished your Operator activation including at least one successful Export, check which bonus that is currently next to the Week marker and take it.

The 3 different bonuses are Team upgrades that you can only obtain this way and that were randomly linked to the first 3 Weeks during setup.

Operator Team upgrade

If you receive the Operator Team upgrade, flip your Operator Upgrade Tile next to your Team roster.

This indicates that from now on, whenever you Activate your Operators, you will be able to take new Algae cubes AND Export as one action and in that order.

This upgrade does NOT apply to the Operator activation that you just completed.

Engineer Team upgrade

If you receive the Engineer Team upgrade, flip all 3 Engineer tiles that upgrade your Machines' capacity, even if they are still on your Side board.

Scientist Team upgrade

If you receive the Scientist Team upgrade, flip your Scientist Upgrade Tile next to your Team roster.

This indicates that from now on, whenever you Activate your Scientists, you will be able to gain Science points AND place Science tiles as one action and in that order.

Example:
Carl chooses to activate his three operators, allowing him to take three algae cubes, or to do up to three exports. He chooses the latter.
First, he wants to perform his contract export. To do so, he needs exactly three market value, which he complies to by using 2 cubes with a combined market value of 3. He places his top export disk on his Side board next to the fulfilled contract, and immediately gets 4 victory points and 3 euros for it.
The 3 euros is especially welcome, since he can now reach a city on the map at a distance of 2 from Fiona's nearest city token by paying 3 euros. The demand value of that city is only 1, which Carl meets by using a cube with 0 market value, combined with one market value token.
Since this is the third city with demand value 1 that he exports to, he immediately claims the applicable milestone and gets 2 victory points for reaching that milestone first. He also claims the milestone that requires an export at exactly 2 distance. Since he is also the first player to do so, he gets one additional victory point.

For his third export, Carl uses the one cube he has left, with a market value of 3. He uses it to export to a city with demand value 3 where Veronica already has a export disk, so he doesn't have to pay transportation costs. With the latter export, he doesn't reach another milestone.
By placing 3 export disks and reaching 2 milestones, Carl has unlocked two Double Action tiles. He considers using one Double Action tile to repeat the activation of his operators. However, he ran out of cubes to export and decides not to use his Double Action tile to take 3 algae. Keeping his Double Action tile earns him 1 euro and 1 victory point in the next income phase.

More than 10 Exports

As a bacis rule, each player can only export once to each city on the map.

However, in the exceptional case that a player manages to export to 10 different cities, the export action is still available to them.

In that case, the player can only export to the cities they have already exported to, taking into account the city's minimum demand value. This will score the player immediate victory points equal to half of the city's demand, rounded up if necessary.

Activate Engineers

Also read the Core Concept that explains the Side board.

When you activate Engineers, you can take Engineer tiles from your Side board and place them on your Department board to improve your production.

Alternatively, you can take a Crossover tile and flip it from its Engineer side to its Science side. Removed Crossover tiles are kept in your personal reserve for later use as a Science tile.

For each Engineer you have, you count 1 engineering point. Each freelance engineer token you spend earns you an additional engineering point. Spend tokens go to the general supply.

The cost of each Engineer tile (or Crossover tile) can vary between 0 and 3 engineering points and is depicted on your Side board, on the left side of the tile grid.

You can take Engineer tiles and/or Crossover tiles up to the number of Engineers you have, provided you have the required number of engineering points.

Most Engineer tiles have one dedicated field on your Department board that matches the shape of the tile. If there is more than one field with the same shape, you may choose which field to place your tile on first.

Engineer tiles placed on top of each other during setup are often, but not always, placed on top of each other (but the other way around) on your Department board. See the appendix for a detailed explanation of each Department board.

Engineer tiles improve your production line, but removing them from your Side board also frees up space to place Science tiles.
Example:
Carl activates his three Engineers and also has a freelance engineer token, giving him a total of four engineer points to spend to upgrade his Department board. He chooses to take two machine upgrade tiles, both of which cost 2 engineer points as depicted on his Side board. Carl pays his freelance engineer token. Since he has three engineers, he can take up to three tiles, but he has no engineer points left. But Carl sees that there is a Crossover tile in the bottom zone of his Side board that he can take for free. He takes it from his Side board, turns it over and keeps it next to his Side board, so he might put it back on his Side board later when he activates his scientists.

Activate Scientists

By Activating your Scientists, you can either:

• Gain Science points

For each Scientist you have, add 1 Science point to your Science track. You cannot have more than 10 Science points. Any excess Science points are lost.

Note that you may NOT take 2 additional Science points if you upgraded your Scientists' income. This only applies during the Monday morning income phase.

• Or place Science tiles

Also read the Core Concept that explains the Side board.

Removing Science tiles from your Department board will mainly improve the quality of your production. You can generate more income, process different types of Algae and increase the Market value of your products.

When performing this action, you remove a Science tile of your choice from your Department board and you place it anywhere on your Side board.

To easily distinguish your Science tiles from your Engineer tiles on your Side board, it is recommended that you place them face-down on your Side board, with the empty light blue side visible.

Alternatively, you can place a Crossover tile (that you previously removed from your Side board and flipped from its Engineer side to its Science side) on the Side board.

The cost of placing a Science tile (or flipped Crossover tile) varies between 2 and 5 and is depicted on your Side board, on the left side of the tile grid. If you place a Science tile in two different cost zones, the most expensive cost applies. Immediately before placing the tile, pay its cost by reducing the Science point cost on your Science track.

You can place Science tiles and/or Crossover tiles up to the number of Scientists you have, provided there is free space on your Side board and you can pay the applicable costs.

Immediately after placing a Science tile or Crossover tile, you may take bonuses that you cover with the tile.

If you have removed a Science tile from one of your Algae storages, immediately move the Capacity marker of the general Algae tank of that species up 1 step.

Example:
Fiona activates her two Scientists, allowing her to move up to two Science tiles from her Department board to her Side board. But she has only four Science points. She takes the Science tile that upgrades her Scientist income and places it on her Side board, immediately paying four Science points, the cost applicable in the zone where she wants to place the tile. This tile covers the Scientist income bonus. Having just upgraded her Scientist income, she immediately receives four Science Points: two per Scientist and two extra because of the upgrade.
Next, she takes the Science tile that upgrades her Transportation cost and wants to put it in the top area of her Side board. She has only four Science points available, but decides to exchange one coin and one Wild Action token for one Science Point, so she can spend the total applicable cost of five Science Points. She covers the bonus of the Wild Action token and takes it.

Activate one Machine

Activating a Machine allows you to move Algae cubes along that Machine's conveyor belts, up to that Machine's maximum capacity, as shown under the Machine icon. The maximum capacity applies only to the black-and-yellow arrows.

A Machine can only be activated if there is at least one Algae cube on the left side of the Machine before activation.

Your Department board has black-and-yellow and black-and-green conveyor belts. When you perform a Machine activation, ALL conveyer belts in the Machine's zone may activate.

Black-and-green conveyer belts

The black-and-green conveneyor belts are activated only by an activation of the Machine of the zone they are in. They are never activated in other conditions, such as the movement of Algae cubes in the Monday morning phase.

As a general rule, the black-and-green conveyer belts can only be activated once per Machine activation. If you can use them more than once, this is indicated by an ∞ symbol.

There are 3 different types of black-and-green conveyer belts:

1. Black-and-green belts connected to black-and-yellow conveyer belts. These belts can only be activated if at least one Algae cube moves along the connected black-and-yellow conveyer belt.
2. Black-and-green belts connected to one Algae storage unit on the left side of a Machine. These belts can be activated whenever the Machine in their zone is activated, for example to add one or more Byproducts. It is possible to add Byproducts to empty Algae storage units in a Machine, if the Machine is activated and elsewhere in the same Machine Algae cubes are moved from left to right.
3. Black-and-green belts that connect two Algae storage units in a Machine. These belts allow you to move Algae cubes, often at a certain cost, and regardless of the Machine's maximum capacity (which only applies to the black-and-yellow belts).

> Exception: On the Food Department board, there are black-and-green conveyer belts in Machine Ca that also activate when Machine A or B or used.

Activate any Machine

If you choose a Machine activation action on the first or last Action strip, you can activate a Machine of your choice.

Activate Machine A

When you activate Machine A, you will often lose one or more Algae cubes that convert into Byproduct, according to the table on your Department board. Upgrading this table will give you a more flexible choice in how many cubes you want to convert into Byproduct or not.
Example: Using this table, if you move 2 or 3 Algae cubes in machine A (from your Algae storage to machine B), you will lose 1 Algae cube that becomes a Byproduct. If you move 4 or more Algae cubes in Machine A, you will even lose 2 cubes that convert into Byproduct. However, moving only 1 Algae cube would not generate any Byproduct.

When Algae cubes convert into Byproduct, you can choose to either:

- Burn Byproduct to produce Energy. Increase your Energy level one step per Byproduct that you burn and place the cube(s) in the general supply.
- Store Byproduct in the appropriate Byproduct tank. Gain coins for each Byproduct that you store as depicted on the storage spaces in the tank.

Energy

During the game, players can gain or lose energy . This is tracked on the Energy track on the central game board.

Their Energy level determines if players are eligible to gain 0, 1 or 2 bonuses during the weekend or at the end of the game.

If a player needs to spend Energy but has none, they can pay €2 per Energy instead. Their Energy level marker remains on the second spot of the red zone.

If a player gains energy but already has maximum energy, they gain 1VP per excess Energy instead. Their Energy level marker remains on the second spot of the green zone.

Byproduct tanks

Byproduct tanks are always filled from bottom to top.

If a Byproduct tank is full, it overflows to the other tank, meaning that you simply start filling the other tank and take the depicted coins. If both tanks are full, you can only burn the Byproducts to convert into Energy.

If a Byproduct tank is empty and you want to add Byproduct to your production, you can buy Byproduct from the general supply instead for €1 per Byproduct.

Activate Machine B

Activating Machine B will let you move Algae cubes from Machine B to Machine C, up to Machine B's capacity.

Activate Machine C

Activating Machine C will let you move Algae cubes from Machine C to the selling department, up to Machine C's capacity. Your Algae cubes have now become end products that you can Export.

Adding Byproducts

Activating Machines B or C often allows you to add Byproduct to your production line. This can happen in 2 different ways:

1. Byproduct added to a field on the left side of the Machine you activate (not to a black-and-yellow conveyer belt). These Byproducts immediately become Algae cubes and count towards the maximum movement capacity on the black-and-yellow conveyer belt of your Machine if you move them afterwards.

These Byproducts can never be added to an empty Machine, but can be added to an empty field of an activated Machine.

You need at least one Algae cube on one of the fields on the left side of your Machine to activate the Machine first. Then the black-and-green conveyer belts are triggered and Byproduct may be added to a field, even if that field is empty.

2. Byproduct added to an already moving black-and-yellow conveyer belt (or to a field on the right side of the activated Machine).

These Byproducts also become Algae cubes but are added along the way and do not count towards the maximum movement capacity of your Machine.

These Byproducts can never be added to an empty conveyer belt. You need at least one moving Algae cube to add Byproduct to the black-yellow belt that the cube is moving on.

If you move Algae cubes on other conveyer belts in the same Machine, this will not trigger the black-and-green conveyer belts connected to empty black-and-yellow conveyer belts.

Machine Capacity upgrades

With an activation of your Engineers, you can place Machine Capacity upgrade tiles on each of your Machines, on the top of your Department board.

front

back *Machine Capacity Upgrades (Machines A, B and C)*

The initial capacity of your Machines A, B and C is 2, which means that each time you activate a Machine, you can move a maximum of 2 cubes along the black-and-yellow conveyor belts.

You can upgrade the capacity of your Machines with the appropriate Engineer tiles to a capacity of 4 on the Cosmetics Department board and a capacity of 3 on the other Department boards.

You can upgrade the capacity of your machines even further (up to 5 for Cosmetics and 4 for the other Department boards) by obtaining the Engineer Team upgrade (see 'Export bonus' on page xx), which allows you to flip the Machine Capacity upgrade tiles

even if they are still on your Side board.

The 3 Machine upgrade tiles have the same size and shape and can therefore be placed in any machine and in the order of your choice with an Engineers activation.

Conveyer Belt Upgrade (Machines A and B)

Each time you activate a Machine that contains the Conveyer Belt Upgrade (A or B), you gain 2 Algae cube movements in the next Machine.

You first need to complete your Machine activation before this tile activates in the next Machine.

You can either choose to move 2 Algae cubes 1 step or 1 Algae cube 2 steps (if possible in the same Machine).

Gaining 2 Algae cube movements in the next Machine is NOT an activation of that Machine, meaning that the black-green arrows do NOT activate.
Example:
Carl moves his worker to a Machine C action space, but spends a Choice Action token to change it to a Machine B activation. On his Biofuel Department board, he has one cube in the lower field on the left side of his Machine B. This allows him to not only activate Machine B, but because of his engineer tile upgrade in Machine B, he can also add 2 bio-oil byproduct cubes to the upper field on the left side of machine B for the cost of 1 energy. He now has 2 cubes in the upper field and 1 cube in the lower field of Machine B. Since he has also upgraded the capacity of his machine, he can move all 3 cubes to the right side of machine B. In addition, he decides to pay 2 energy to move the 2 cubes at the top to a field lower.
Then Carl decides to use a Double Action tile to repeat the action his worker is on. He can now do a Machine C activation without spending another Double Action tile. However, he has not yet upgraded the capacity of his machine C, so he can only move 2 cubes to the right side of his machine C, to the field with 1 market value. Although he still has 1 energy left, he decides not to spend it on moving one of his cubes even further, because he knows that after his next income phase he can do a refinement of both cubes, which will also cost him 1 energy to increase the market value of both of his cubes with 2.

• Recruit any Staff Member

Each player has 3 Staff teams consisting of Operators, Engineers and Scientists. You start the game with one permanent Staff member in each team, printed on the team roster. And during the setup you received another Staff member.

Having more Staff members will increase your income in the Monday morning phase and significantly improve your team activation actions.

To recruit a new Staff member, take one Staff tile of your choice from the general supply and add it to your Team roster in the appropriate row on the leftmost available space. Pay the applicable cost shown above the column where you placed the new tile.

Then take the Bonus token and/or immediately score the VP depicted where you placed the new tile.

Example:

Veronica already has 3 engineers, including the one printed on her board, but chooses to pay 3 euro and recruit a fourth engineer because this will reward her with a Wild Action token and 3 victory points.

3. WEEKEND

Once all players' workers are on the last Action strip and the players have completed their last action of the Work week, the Weekend begins.

If you completed 4 Work weeks, this is the End of the month. Skip the Weekend phase and immediately go to End Scoring.

After each of the first 3 working weeks, complete the steps below, in this order:

1. Weekend bonus

Check your Energy level, which can be positive, neutral or negative.

The last Action spot where your Worker landed on, is connected to 2 Bonuses.

- If your Energy level is positive, take both of them.
- If your Energy level is neutral, take only one.
- If your Energy level is negative, you are not entitled to a bonus.

In the above example the player with the red worker may choose to take 2 science points or 1 market value token if their energy level is neutral at the moment. With a positive energy level, the player could take both of the bonusses.

2. Update the Action strips

- Return all Workers to their starting position.
- Move the Week marker to the next round spot and turn the Action strip next to the Week marker's new position to its B side.
- Turn the Export bonus tile of the previous Week face down.
- If you are about to start the 4th and final Work week, also turn the Weekend bonus tiles to their B side.

3. Refill and balance Tanks

- Refill Algae tanks with cubes from the general supply up to their current capacity. Their capacity should be 4 plus 1 for each removed Algae storage tile on all Department boards.
- Balance the Byproduct tanks:

- Remove one cube from a tank that is completely filled or add a cube from the general supply if a tank is completely empty.

- Then check whether the Byproduct tanks are filled equally. If there is a difference of 2 or more filled rows, move Byproducts from the most full tank to the other tank until there is a difference of maximum 1 filled row.

4. First Player Token

Pass on the First Player Token to the next player in clockwise order. Then start a new Monday morning phase.

END OF THE GAME

At the end of the 4th Working week, the month ends and the final scoring takes place:

1. Check your Energy level, which can be positive, neutral or negative. The last Action spot where your Worker landed on, is connected to 2 End-of-month bonus tiles and a VP-token. The End-of-month bonus tiles refer to the coloured Milestone tiles on the general gameboard.

There are 4 different End-of-the-month bonuses and 5 Milestone colours. You can never score an End-of-the-month bonus for the lightest Milestone colour.

- If your Energy level is positive, you score both End-of-month bonus tiles. Multiply the depicted VPs by the number of Milestones that you achieved of the depicted colour.
- If your Energy level is neutral, choose one connected End-of-month bonus tile and score the depicted VP for each Milestone that you achieved of the depicted colour.
- If your Energy level is negative, you don't score any End-of-month bonus.

Example:
Carl's energy marker is on the red zone at the end of the game. He gets no end-of-the-month bonus.
Fiona's energy marker is in the neutral yellow zone, so she gets to choose one end-of-the-month bonus. She has 1 milestone disc of the bottom dark green color, but in this game this would only give her 1 additional victory point. She chooses the middle milestone color, of which she has achieved both milestones. This gives her 4 extra points per milestone, or a total of 8 victory points.
Veronica's energy marker is in the positive green zone, so she gets both end-of-the-month bonuses her worker ended up next to. She gets 1 victory point for the one milestone she reached from the darkest green color and 6 victory points total for the 2 milestones she reached from the second lightest color.

2. Score 1 VP per removed Milestone cube on your Department board.

3. Score 1 VP for each Science tile in the largest set of adjacent Science tiles you built on your Side board, including flipped Crossover tiles.

[example image]

4. Score your End scoring Contract.

5. Score 1 VP for each 4 left-over items: Algae cubes on your Department board, Bonus tokens, Resource tokens, and Science points.

The player with the highest score wins the game.

In the event of a tie, the player whose Milestone cube is on the bottommost row wins. If several tied players have a Milestone cube on the same bottommost row, the player who reached this Milestone first wins.

SOLO MODE

Additional Setup

1. Take 18 export discs and 10 milestone tokens of unused colours. These are the neutral discs and tokens.

2. Use 1 neutral disc as a VP marker for your conventional competitor.

3. Randomly* choose a capital city where your conventional competitor (cc) will start and place 1 neutral disc there. Do not place a bonus token on this city during setup. The cc gains VP equal to the city value. This is also counts as the first export of the game (ie: you can use this city to calculate transport costs for future exports).

4. Place neutral discs on the action track as follows:

o 2 discs on B (1 disc on both middle actions)

o 3 discs on C (1 on each action)

o 8 discs on D (2 on each action)

o 3 discs on the end strip (1 on each action)

5. Fill the byproduct storage you will not produce until it's full. The storage of the byproduct you will be able to produce starts empty.

Additional Game Rules

During I. Monday Morning:

- The cc gains 1 VP per achieved milestone.

During II. Work Week

- If your worker moves to an action which contains any neutral discs, remove 1 disc from that action from the game.

During III. Weekend

- When updating the action strips**, place all discs remaining on the flipped action strip on the map, following this order:

1. The city with the lowest value, adjacent to another neutral disc.

2. In case of a tie, the cc chooses a city with a bonus token.

3. If there is still a tie, you choose.

4. The cc will then score VP equal to the city value.

If you have to place more than 1 disc during this step, finish placing 1 disc before moving on to the other (this can cause a new city to become the lowest value).

If there was a bonus token on the city, remove it from the game and the cc gains 2 VP.

After all discs have been placed, the cc will check if they scored any milestones. The placement of all discs this round counts as 1 export turn for scoring milestones. When a milestone is scored, the cc will gain VP as normal.

- At the end of the game, the cc will score 1 VP for his achieved milestones as normal.

**At the end of round 4, no action strip is flipped, but the cc will export any remaining neutral discs on the end strip anyway.