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Arkwright

Water Frame

CGG

Contents

1.0 INTRODUCTION

Water Frame is the full version of *Arkwright*. The player who has the most valuable portfolio of their shares wins.

Only shares in your possession at the end of the game will count towards winning the game. It is important for players to purchase shares from the bank. However, if a player´s portfolio of shares has a very high value, it will be difficult to buy the shares from the bank in time.

This is the complete *Water Frame* rulebook.
Any changes to *Spinning Jenny* are in **brown**.

2.0 GAME COMPONENTS

Each copy of *Arkwright* contains
- 1 large game board
- 1 special markers mat
  (double sided – one side is used for the *Spinning Jenny* version, the other for the *Water Frame* version of the game)
- 4 factory mats (1 per player)
- 4 harbor mats (1 per player)
- 120 bills (40 £1, 20 £2, 20 £5, 20 £10, 12 £10, 8 £50)
- 1 start player token
- 2 timetable indicators
- 4 neutral importer markers
- 80 worker tokens
- 50 machine tokens
- 40 goods tokens
- 2 competition award markers
- 4 share value indicators (1 per player)
- 8 bonus markers (2 per player)
- 16 price indicators (4 per player)
- 16 distribution markers (4 per player)
- 16 quality markers (4 per player)
- 16 appeal indicators (4 per player)
- 64 factory markers (16 per player)
- 56 share markers
  (10 X 1 share and 4 X 5 shares per player)
- 28 action markers (per player: factory, quality, workers, distribution, stock exchange, machinery, reorganization)
- 16 contract markers (4 per product)
- 17 event markers
- 36 economy markers (9 per product)
- 16 light grey advanced action markers* (4 x stock exchange, 3 x quality, 3 x distribution, 3 x machinery, 3 x production)
- 12 dark grey advanced action markers* (3 x quality, 3 x distribution, 3 x machinery, 3 x production)
- 51 development tiles*
- 10 ships* (4 with a load capacity of 2, 2 with capacity 4, 2 with capacity 6, 1 with capacity 8, and 1 with capacity 10)
- 2 rule books (*Spinning Jenny* and *Water Frame*)
- 1 player's book
- 8 player aids (German and English)

* Development tiles, advanced markers, and ships will be referred to as special markers.

3.0 WINNING THE GAME

In a game of *Arkwright*, the players attempt to own the most valuable portfolio at the end of the game.

In *Water Frame,* the players prepare their company in the 1760-round and then play for five rounds (decades). Each game round consists of four cycles and one event phase. Each cycle corresponds to one type of goods: food, clothes, cutlery, or lamps. In each cycle, players are active once. At the end of each cycle, all factories of the active goods produce.
Produced goods are sold or stored in England. Moreover, goods may be sold in the English colonies. This is very lucrative, and, because of the risk, the players may experience a decrease in share value.
Selling to the colonies is only possible by contracts through the East India Company, which are available at the stock exchange.
In this version of *Arkwright*, development tiles are used, and they enhance the options available to the players.

We recommend that you set up the game components on a table while you are reading the rules. This will considerably facilitate learning them.

An extensive description of the components can be found in the player's book. To help clearly communicate the rules, male pronouns will be used. Please note that we are still including our female players.

4.0 SETTING UP THE GAME

Water Frame consists of one prepration game round (1760) and five additional game rounds (decades 1770 - 1810).
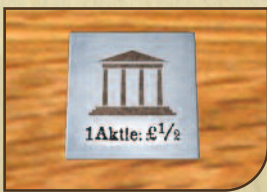
The following components are **not** needed in *Water Frame* and are returned to the game box:
🏛 advanced action marker *stock exchange*.

4.1 PREPARATION ROUND 1760

Water Frame begins in 1760 with a preparation round that is different from the following five game turns.

Important: The preparation round is still quite involved.

The following sections describe the preparation round. Included are optional Predetermined Set Up configurations to facilitate players new to *Arkwright*.

After the players have gained some experience playing with the fixed set up, they can go through the preparation round on their own and decide for themselves what tactics they want to pursue.

⚙ I. Game Board and Common Supply

Place the game board on the table and put the timetable indicator on the 1760 space of the game board's timetable.

Place the *End of Game* event marker face down on the event space of the 1810 round.

2-player-game: Remove the following event markers and place them back into the game box: *Navigation Acts, Economic Crisis, Hamburg Credit Crisis, Opium War.*
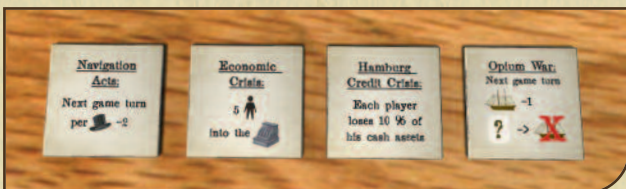
Set the event marker *Bureaucracy* aside and shuffle the other event markers face down. Next, place one marker face down on the event space of 1800. Two additional event markers are shuffled together with *Bureaucracy*; then these three markers are placed face down on the event spaces 1770 to 1790. The other markers are placed back into the game box.

A: End of the Game
B: Random Event
C: 2 Random Events plus Bureaucracy
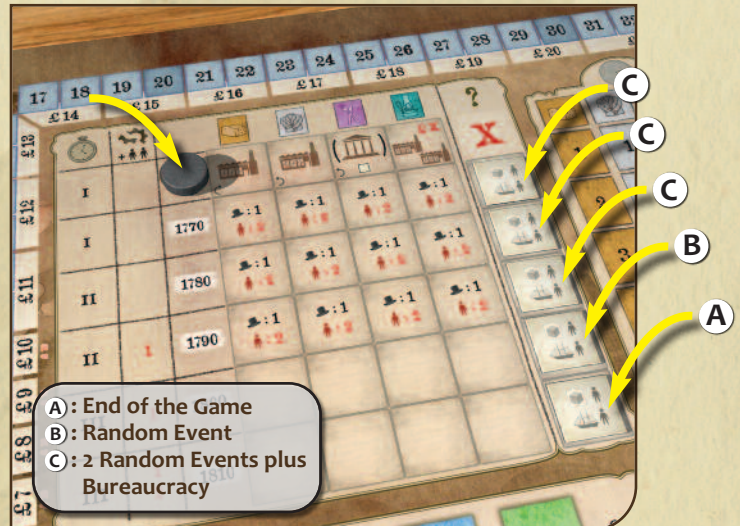
One player prepares the economy markers.

2-player-game: Remove the economy markers with the effect '3 workers back into the job market' and put them back into the game box.

The player shuffles the economy markers, separated by goods type, and places one marker each, face down, on the appropriate spaces of the 1770 – to 1810 decades of the timetable. The other markers are removed and put back into the game box.

Economy markers are placed face down on these spaces

The four neutral importer markers are placed on each of the uppermost 'zero' spaces of the *market share table* (on the symbols of each kind of goods).

One neutral importer marker per good
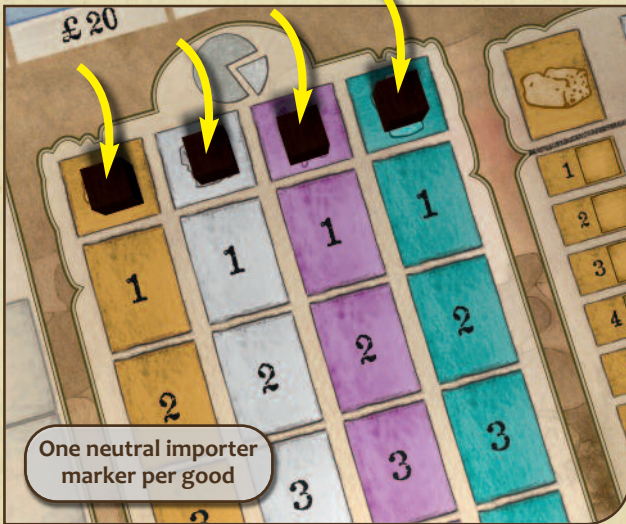
Place one worker on each space of the *job market* – even on spaces without a number. Using the following table, remove the depicted number of workers from the *job market* and place them on the *fired workers* space or return them to the box. The workers are removed in each row from left to right beginning with the top row.

	On the *fired workers* space	Return to the box (removed from the game)
four players	4	---
three players	8	---
two players	4	8

In a 3 player game, 8 workers are placed on the *fired workers* space
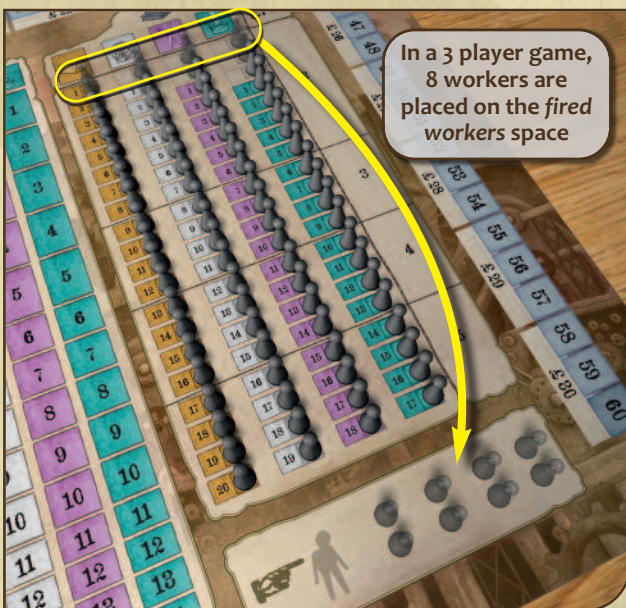
Organize the bills according to their value to form the bank. Goods and machines are separated and put aside as the common supply. There is just a single kind of goods token. According to its location on the mat, the token represents food, clothes, cutlery, or lamps.

NOTE: The number of wokers is limited to the quantity supplied with the game! Money, machines, and goods tokens are not limited. In the unlikely situation that there are not enough of these components, the players are to make due with replacement components.

Predetermined Set Up
Regardless of the number of players, the economy markers with the effect "3 workers back into the job market" are removed and put back into the game box.

Place the following event markers face down on the timetable:
1770: Lobby*
1780: War on the Continent*
1790: Bureaucracy
1800: World Exhibition*
1810: End of the Game
* Starting with the second game, these event markers may be shuffled and placed randomly.

II. Player Components

Each player receives the playing pieces in his color, a factory mat, and set of factories (level I – IV). Place these factories, sorted according to level and type of goods, next to the factory mat. Place a price indicator next to the *price scales*. The action markers are placed near the factory mat next to the *distribution* and *quality*

Marion's playing pieces (red)

markers (with the sides +1/+2/+3/+4 face up).

Additionally, each player receives a harbor mat and four contract markers (one per good) that are placed next to the *Ongoing Contracts* track.

Large Warehouse

Marion´s Harbor Mat and Contract Markers

Pier for 1 Ship

Space for Workers as Ship Crews

Ongoing Contracts Track
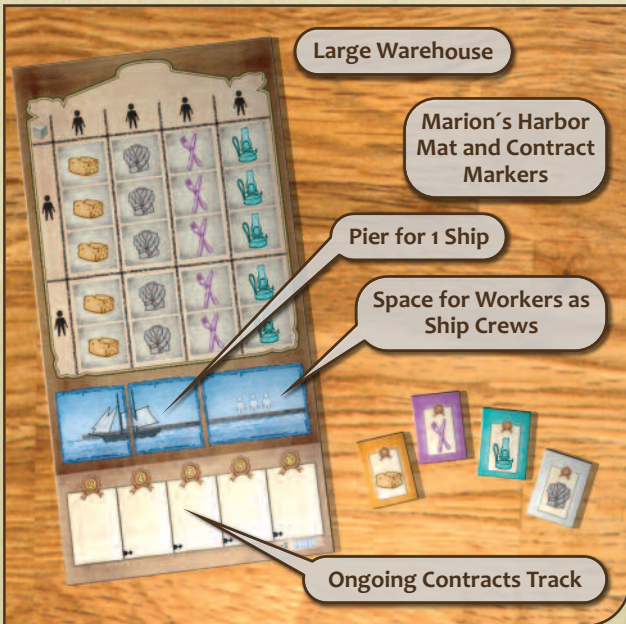
2-player game: The two players flip the harbor mat to the backside and may only use the 2 and 4 spaces of the *contract track*.

2 players use the backside of the mat

Each player puts three 5 *shares* markers in front of him; thus each player owns 15 shares. The remaining shares are returned to the bank and are in the bank's possession.

Each player places his four appeal indicators on the 'o' space of the *market share table* on the game board (on the symbols of each kind of goods).
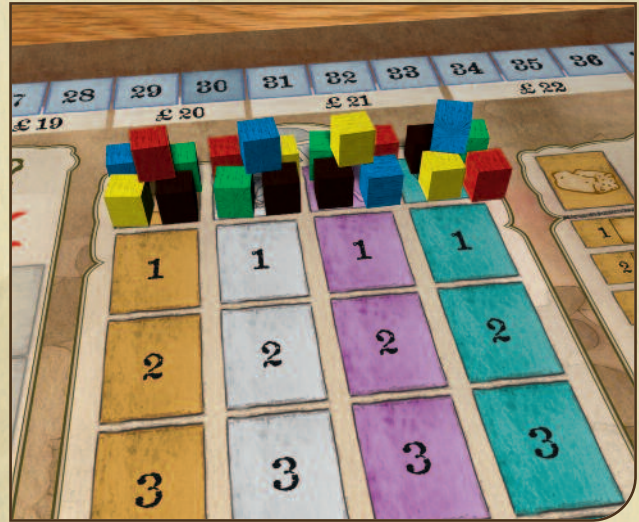
Each player places his share value indicator on the blue space marked '10' on the share value track. **Each share has a value of £10 at the start of the game.**

The indicator is always moved along the blue spaces while the actual value of the shares can be seen on the spaces below the blue track. For shares to increase in value, the share value indicator will often have to move several spaces. **NOTE:** *When we talk about moving the share value indicator back and forth, we refer to individual spaces on the blue track.*

Randomly determine the start player. This player receives the start player marker.

III. The Special Markers Mat and Development Tiles

The *special markers* mat is placed on the *Water Frame* side with the second time indicator on the space marked I (1760/1770).

Place the ships according to their capacity on the appropriate spaces. The four ships with capacity 2 are stacked on the two spaces.

3-player game: Return to the box one set of light and dark grey action markers (one marker for *machinery*, *quality*, *distribution*, and *production* in each shade of grey).

Removed in a 3-player game

2-player game: Return to the box two sets of light and dark grey action markers. Only the ships with capacity 2 are used; the other ships are removed from the game and returned to the box.

Shuffle the light grey action markers *machinery*, *quality*, *distribution*, and *production*, and place one marker face up, according to the number of players, on the light grey spaces of the *special markers* mat (rows I and II). Next, do the same thing with the dark grey action markers and place them face up on the dark grey spaces of rows III and IV. Surplus action markers are removed from the game and returned to the box.

Place the *charisma* and one *inventor* development tile face up next to the *special markers* mat. Shuffle and randomly draw the rest of the development tiles, according to the number of players, and place them face up next to the *special markers* mat. There are a total of 7 development tiles available per player in each game.

	Number of additional development tiles
4 players	26 tiles
3 players	19 tiles
2 players	12 tiles

Note: For your first few games, we recommend that the four *patron* tiles are used, and therefore only 22, 15, or 8 tiles are drawn randomly.

Identical development tiles should be stacked. If the player draws as many identical tiles as there are players, he removes the last drawn tile from the game and draws a replacement. All surplus tiles are removed from the game and returned to the box.

Predetermined Set Up
Prepare the *special markers* mat according to the following table.

Advanced action markers

Level	2 players	3 players	4 players
I	£2/£5/£10 □ ; max. 7	👍 £5/£8/£12	👍 £5/£8/£12
II	£2/£5/£10 □ ; 👍 £5/£8/£12	max. 7	Prod 1-2 ; £2/£5/£10 □
III	£2/£3/£6 □ ; max. 10	👍 £3/£6/£10	Prod 1-4 ; £2/£3/£6 □
IV	max. 10 ; 👍 £3/£6/£10	Prod 1-4	max. 10

Development tiles

One player puts out the following development tiles.

2 players				3 players (in addition)		4 players (in addition)	
Charisma – Bonus point even when tied – Determine start player ✹	**Administrator** · Despite "Bureaucracy" space £2 · no additional fee when space is used more than once	**Extra Shifts** ✹ During production +1 ▨ in addition	**Workshop** – At ⚙ administrative costs free +£3 – Service = £1	**Inventor** Next level allowed 4 times at additional costs £5/£10/£15/£20	**Developer** ✹ When ▭ → –£5 per 🏭	**Workshop** – At ⚙ administrative costs free +£3 – Service = £1	**Adminstrator** · Despite "Bureaucracy" space £2 · no additional fee when space is used more than once
Inventor Next level allowed 4 times at additional costs £5/£10/£15/£20	**Developer** ✹ When ▭ → –£5 per 🏭	**Broker** – (▭) at Event – ✹ : instead of ▢ 1–2 shares for half price	**Agent in the Colonies** ▯ +1/–1	**Accountant** Pay up to £2 more/less administration costs	**Small Warehouse** 5 ▨ stored free of charge	**Agent in the Colonies** ▯ +1/–1	**Patent** At 📣 – Administration costs free +£2 – ✹ +2 levels
School – At ⚙→👤 relocated – During production the last line may be shut down	**Foreman** At 1 🏭 wage –£2 for a max of 4 👤	**Patron** 1 ✗ sold in addition	**Patron** 1 👆 sold in addition	**Engeneering works** Each ⬛ bought by other player +£1	**Patron** 1 🐚 sold in addition	**Engineer** At ⬛ – levels 5 & 6 allowed – administration costs freely determined	**Patron** 1 📦 sold in addition

Example: *Predetermined set up for 3 players*

IV. Choosing and Building the First 2 Factories

The players now build their first factories. Move the timetable indicator on the timetable from the 1760 space to the *first foundation* space.

The first player chooses any factory and puts the corresponding level 1 marker on the respective space of their factory mat. Building costs are given in £ (pounds sterling) on the factory marker. The player, however, does not have to pay for them until the final stage of the preparation phase. Building costs also determine the base quality of the goods produced in that factory.

Example: It costs £9 to build a clothes factory of level I and £11 to build a lamp factory of level I.
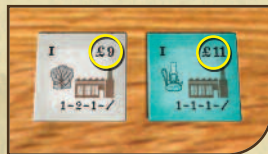
The player takes enough workers from the *job market* to immediately fill the first *two* production rows of the factory entirely. The player always takes workers beginning in the top row of workers and going from left to right within a row.

Workers are always taken from the *job market*, never from the *fired workers* space.

The required number of workers for a production row is indicated by symbols beneath the row.

When a factory is opened, the player must determine the selling price of his goods produced in that factory. The price is indicated by placing the price indicator on the *price scale* of the factory mat. The minimum price for each product is £5.

Example: Marion has filled the first two production rows of her food factory with two workers each. She decides to offer food at a price of £6.

The *market share* table on the game board identifies the appeal of each player's goods. The appeal determines the chances to sell goods. At the start of the game, appeal is determined by *subtracting* the price from the base quality of the goods. The higher the quality of the produced goods, the more appealing they are – the higher the price, the less appealing the goods become.

The player places his appeal indicator for the respective goods on the corresponding space of the *market share* table on the game board.

The price always has to be determined in a manner that the appeal of goods is at least '0.' The appeal should, however, be higher because it limits the amount of goods that can be sold.

Example: Marion's food has an appeal of 2 at the start of the game. Marion can sell a maximum of 2 food.

The other players choose a factory in clockwise order. They fill the first two production rows with workers from the job market and determine the price and the appeal of their goods.

Once all players have chosen a factory, the timetable indicator is moved one space to the right (to the *second foundation* space).

In reverse player order, the players build a second factory. Again, the players fill the first two production rows with workers from the *job market* and determine the price and appeal of their respective goods.
Attention: Players can run only one factory of each type of goods! In the *second foundation* round, players have to choose a factory of a different kind of goods. However, it is possible for several players to produce the same kind of goods or for some goods not to be produced at all.

⚙ V. Start-Up Capital, Shares, and Special Markers

The players now receive their start-up capital. The timetable indicator is moved from the *second foundation* space to the *stock exchange* space on the timetable.

In reverse player order, each player decides how many shares they want to sell to form their start-up capital. Each player has 15 shares. Any number of them may be sold to the bank. Players receive £10 per share sold, corresponding to the current share value. Each player has to sell at least as many shares to pay for their starting factories with the received money. Sold shares are returned to the bank.

Predetermined Set Up

Each player places the respective factory marker of level I on their factory mat. Players place workers from the *job market* in the first two production rows and determine the price and thus the appeal of the produced goods.

Start Set Up for 4 players — Set Up – factories

The depiction below is in player order, starting with player **blue**.

Factories

Player Color	blue	red	green	yellow
Factories (workers/price/appeal)	Clothes (4/£6/3) Cutlery (5/£6/4)	Food (4/£7/1) Cutlery (5/£7/3)	Clothes (4/£5/4) Lamps (6/£8/3)	Food (4/£5/3) Lamps (6/£9/2)

Start Set Up for 3 players

Factories

Player Color	blue	red	green
Factories (workers/price/appeal)	Food (4/£7/1) Clothes (4/£8/1)	Food (4/£6/2) Cutlery (5/£8/2)	Food (4/£5/3) Lamps (6/£9/2)

Start Set Up for 2 players

Factories

Player Color	blue	red
Factories (workers/price/appeal)	Food (4/£5/3) Cutlery (5/£8/2)	Food (4/£7/1) Clothes (4/£8/1)

After a player has sold shares, he may immediately take a *special marker*. He may take a light grey action marker or a ship from row I (1760/1770) of the *special markers* mat or one of the development tiles next to the *special markers* mat.

In *Water Frame,* a player does not receive additional start-up capital – only the money from the sold shares. To withstand emergency share sales in the first game round, we recommend selling at least 4 shares.

VI. Paying for Factories

Finally, the players have to pay for building their newly founded factories. Move the timetable indicator from the *stock exchange* space to the *paying for factories* space on the timetable.

Every player pays the building costs to the bank using their start-up capital.

Example: Marion has built a food factory (£8) and a lamp factory (£11). Now she has to pay building costs of £19.

After this, the timetable indicator is moved to the 1770 decade space in the second row of the timetable.

The game of *Arkwright* begins!

Predetermined set up

The players receive the indicated *special marker* and the given amount as start-up capital.

Start Set Up for 4 players	Start Set Up – starting capital, shares, and special markers			
Advanced action marker/start capital				
Player Color	**Blue**	**Red**	**Green**	**Yellow**
Shares in possession/start capital	9/£60	10/£50	9/£60	10/£50
Special marker	Patent	Office	Engineer	Foreman

Start Set Up for 3 players			
Advanced action marker/start capital			
Player Color	**Blue**	**Red**	**Green**
Shares in possession/start capital	10/£50	9/£60	9/£60
Special marker	Office	Engineer	Patent

Start Set Up for 2 players		
Advanced action marker/start capital		
Player Color	**Blue**	**Red**
Shares in possession/start capital	8/£70	7/£80
Special marker	Patent	Office

Start Set Up for 4 players

Player Color	Blue	Red	Green	Yellow
Building costs	£19	£18	£20	£19
Remaining start capital	£41	£32	£40	£31

Start Set Up for 3 players

Player Color	Blue	Red	Green
Building costs	£17	£18	£19
Remaining start capital	£33	£42	£41

Start Set Up for 2 players

Player Color	Blue	Red
Building costs	£18	£17
Remaining start capital	£52	£63

5.0 SEQUENCE OF PLAY

A game round (decade) consists of four cycles and the event phase.

A cycle is divided in three phases:

1. **Economy phase:** importers and the job market are adjusted
2. **Action phase:** each player conducts their action
3. **Production phase:** goods are produced and sold; shares may rise

Only *one* type of goods is 'active' in each cycle; i.e. the neutral importer of the 'active' goods is relevant in the economy phase and only factories of this type of goods produce during the production phase. Within a decade, the order of 'active' goods is always the same: **food – clothes – cutlery – lamps.**

The top row of the timetable shows the players which type of goods is active in any given cycle.

NOTE: During the action phase, players may include all factories and goods in their actions. Actions may also be applied to factories that are not active in this cycle.

These rules briefly explain the development tiles. Please refer to the player's book for full descriptions of each development tile.

Food is the active goods

The start player moves the timetable indicator one space further at the start of each cycle.

Example: At the beginning of the first game round, Marion moves the timetable indicator from the 1770s space to the space of the first cycle. In the first cycle, food is the active good.

I. Economy Phase

In this phase, workers return to the job market and a neutral importer progresses on the market share table of the active good.

The start player reveals the economy marker that is located on the space of the timetable indicator. He advances the neutral importer marker on *market share* table in the column of the active goods as many spaces as depicted on the *economy marker*.

In addition, he transfers as many workers from the *fired workers* space to the *job market* as depicted on the marker. Workers are placed from right to left, starting in the lowest row without a woker. If there are not enough workers in the *fired workers* area, the start player moves all workers to the *job market* with the remainder being forfeit.

Example: Marion advances the importer marker for the active goods 1 space and returns 3 workers to the job market.
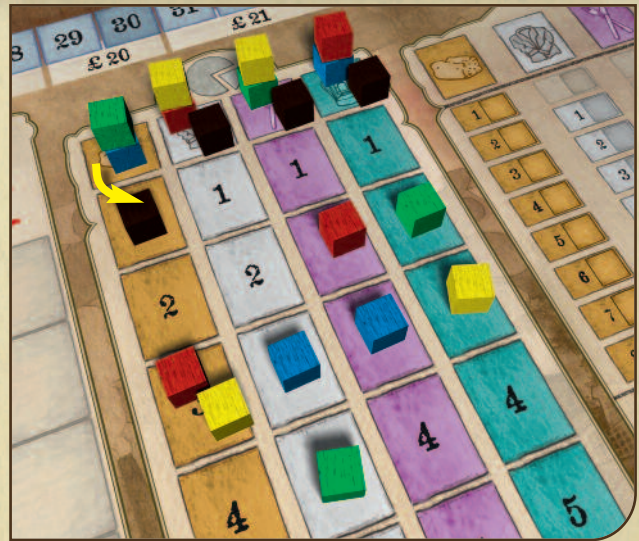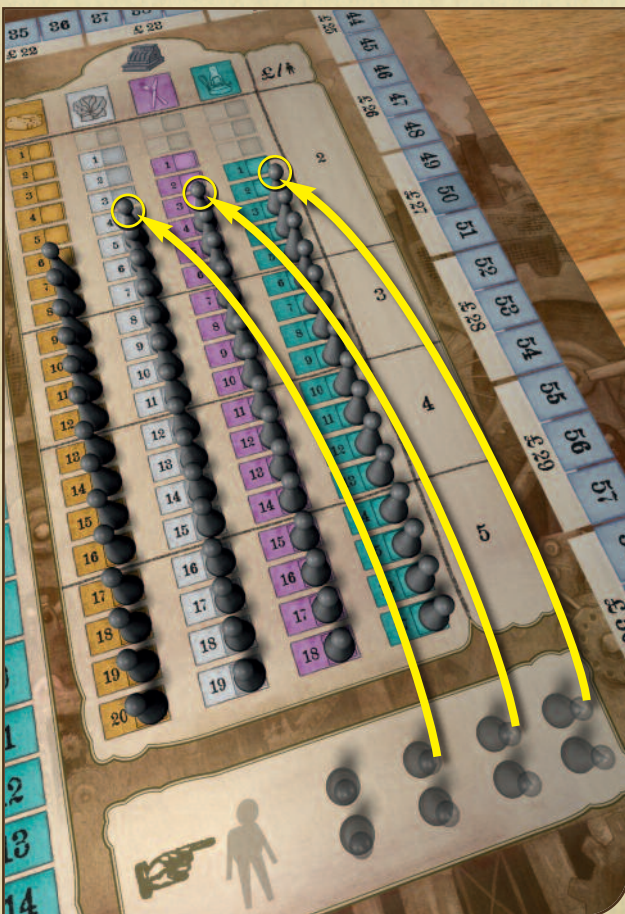
II. Action Phase

Beginning with the start player and proceeding in clockwise order, every player conducts their action(s). To do so, the player picks an action marker from his supply and places it on his column of the *administration* chart. The corresponding action is conducted and the player may take the corresponding additional action.

II.1 Choosing an Action Marker and Placing It on the Administration Chart

A player needs the right action marker to conduct a certain action. In addition to action markers of his own color, he may use grey action markers that he has previously acquired – these are the advanced action markers.

The current player chooses and places an action marker on an empty space of his own column of the *administration* chart. Placing an action marker requires a player to pay administrative costs depending on the chosen space. These costs, given at both ends of the *administration* chart, are paid to the bank.

It is not possible to pass! Every player must choose an action and place the corresponding marker on the *administration* chart. Players can forgo executing the action and/or the additional action. Regardless, the player has to pay the administrative costs! If he does not have enough money, he must conduct an emergency sale of shares (see 7.0).

A few action markers require the player to pay a certain amount of administrative costs to execute the respective actions. Placing these action markers on a space with lower administrative costs means that he cannot conduct the respective action.

To conduct the action for £6, Marion places the tile on the corresponding space
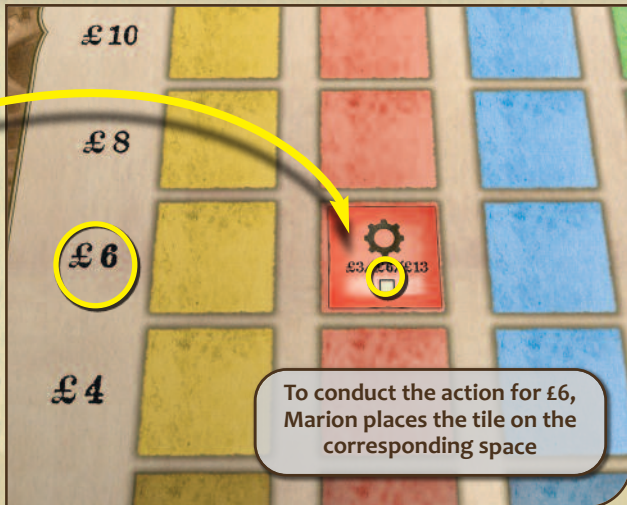
Example: The quality action marker requires administrative costs of at least £6. However, Marion places it on the £4 space. She pays only £4 but has to pass on the action.

Marion deliberately places the action marker on this space, pays £4, and forgoes the action
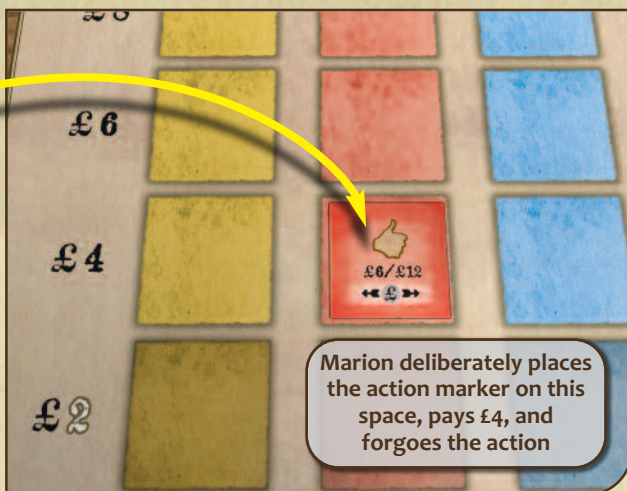
Action markers placed on the *administrative* chart remain in place until the end of the game round (decade). Players may only place action markers on the remaining empty (i.e. unoccupied) spaces of their own column.

If a player wants to use an action marker that was previously placed on the *administration* chart in the same game round, he may *not* reposition it. To use a previously placed action marker, the player pays a fee of £2 to the bank in addition to the administrative costs of the space.

Example: Marion pays £6 + £2 = £8 to the bank when she wants to use her colored machinery marker for a second time in the same decade.

Marion uses the tile again and pays: £6 + £2 = £8
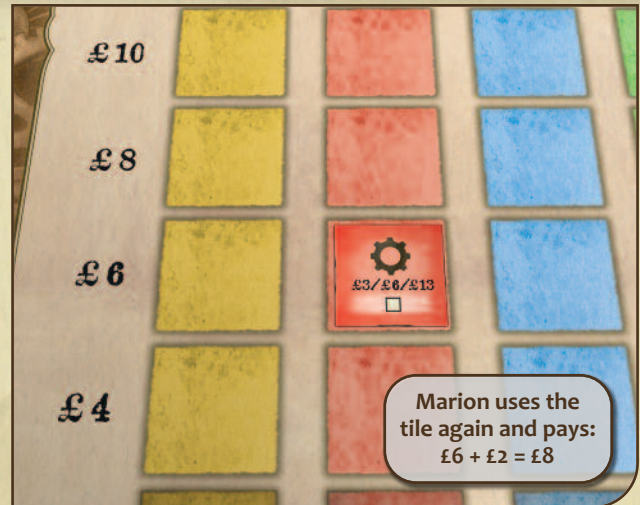
Certain actions (*factory*, *production*, and *stock exchange*) may require further payments in addition to the administrative costs.

The administrative costs, the fees for additional uses, and additional costs as part of the action can be paid together. *However, we recommend that you pay these amounts separately one after the other during the first few games as this will allow you to keep better track of the various costs.*

The *accountant* and *administrator* development tiles and *bureaucracy* event tile influences the rules during the action phase.

An *accountant* allows the player to increase or decrease the administrative costs by up to £2. A player does not have to pay the additional fee for using a previously placed action marker with the *administrator*. If the *bureaucracy* event is active, the players may not use the £2 space on the administration table unless they have the *administrator* tile.

II.2 Detailed Description of the Various Actions

After placing the action markers and paying the costs, a player may execute the respective action. He may also pass on conducting the action, but he still has to pay the administrative costs (and perhaps the additional fee).

The actual amount paid in administrative costs determines the effectiveness of a few actions (*machinery*, *distribution*, *quality*). It is not possible to pay more in addition to the administrative costs to increase the effectiveness of these actions.

Example: Marion places her distribution marker in the £2 row of the administration chart; she may not pay £4 to conduct distribution activities worth £4.
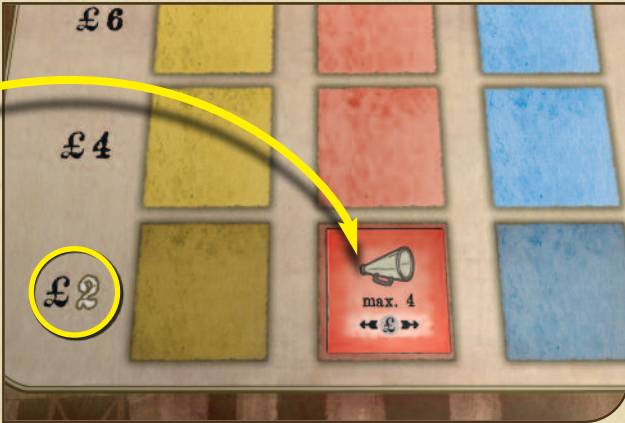
However, a player may place a marker in a higher space and pay the higher administrative costs. The effectiveness is, however, limited by the maximum amount indicated on the marker.

Example: Marion places the quality marker on the £10 row and pays £10 to the bank although it would have made sense to only pay £6 to conduct an action. The remainder is forfeit.

II.2.1 Factory

Choosing this action, the player may build, modernize, and/or close factories. He may do so as often as he wants and in any order. However, the player must pay for costs resulting from these activities, in addition to the administrative costs.

Building a new factory: A player may choose factory markers of the current and earlier development levels.

Current development level
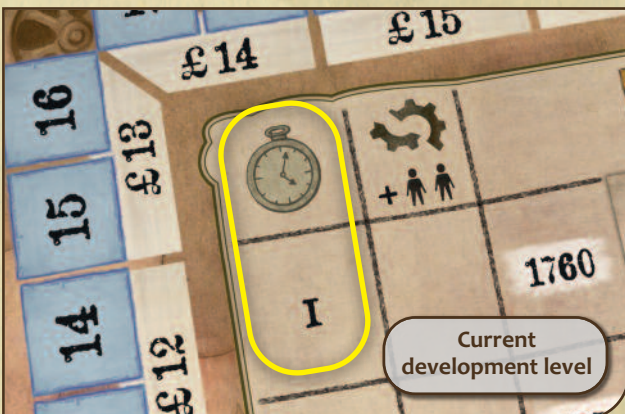
The current development level is indicated in the first column of the timetable.

It is not possible to have more than one factory for the same kind of goods. Therefore, players may only build a new factory for goods that currently do not have a factory. A player places a factory marker on the respective space of the factory mat. He pays the costs for building this factory as indicated on the marker in the upper right corner.

Subsequently, he takes as many workers from the *job market* as are required to completely fill the **first** production row. Production rows 2-4 remain empty and have to be activated by conducting the *workers* action. **Attention:** Only at the start of the game (during the 1760 preparation round) the players hire workers to fill two production rows of their new factories.

The player immediately sets the price for his goods by placing the price indicator on the *price scale* on his factory mat. The minimum price for each product is £5. The player may not change the price of his goods at any point in the game – this is only possible when he conducts the respective additional action!

The player indicates the appeal of his goods on the *market share* table. The appeal determines the chances to sell these goods.

Appeal is always the result of quality and distribution minus the price. Only these three factors may be influenced directly. Appeal is always automatically adjusted whenever one of these three factors changes.

General rule: The higher the quality and the better the distribution of the produced goods, the more appealing they become – the higher the price, the less appealing the goods become.

The player places his appeal indicator for this kind of goods on the respective space (i.e. indicating the appeal of the goods) of the *market share* table on the game board.
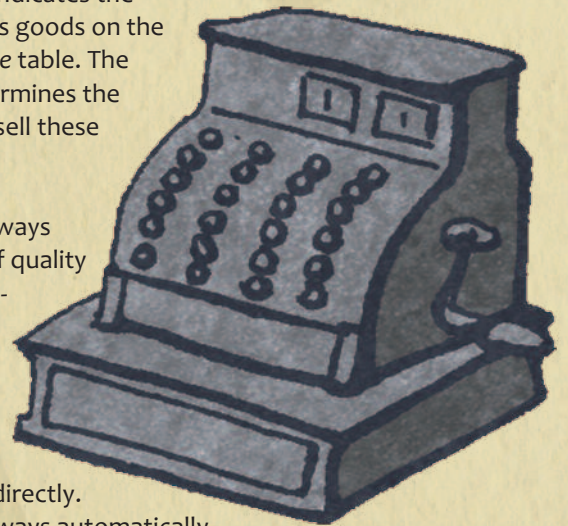
Example: Marion's level I food factory produces food of base quality 8. She sets the price at £5. The food produced in this factory has an appeal of 3 (8 minus 5).

Reminder: the price is always to be set in a manner that the appeal is at least '0.'

Appeal limits the amount of goods a player may sell at the market. If a player places the appeal indicator on space 2, he may sell a maximum of two goods. Should his factory produce more than two goods, he may not sell the additional goods!

In addition, whoever has more appealing goods may sell them *before* everyone else – this can be important in case of excess supply. The player with the most appealing goods also receives a bonus when he increases his share value.

Modernizing an existing factory: A player replaces an existing factory marker on his factory mat with a marker of the same kind of the **next** level. It is only possible

to modernize up to the current level as indicated on the timetable.

The player may modernize a factory by 2 levels in the same turn if he is paying the full price for both levels.

Example: Marion would like to modernize her food factory from level I to level III. Therefore she pays £10+£12 = £22.

The cost to modernize a factory is indicated on the new marker. Modernizing is thus as expensive as building a new factory of this level. In comparison to building a new factory, modernizing has the advantage of allow-ing players to keep all the machinery, workers, distribution, and quality markers of the old factory.

After concluding all modernizations, the player adjusts the appeal indicators on the *market share* table because the quality of the produced goods has improved.

If a factory had been out of date and has now reached the current maximum level, the player places the two mandatory additional workers onto the *fired workers* space (see 6.IV).

Closing down a factory: The player re-moves all markers of the respective factory as well as all workers and machinery. Machinery is returned to the common supply and workers are placed on the *fired workers* space. The factory, quality, and distribution markers, as well as the price indicator are returned to his own supply. Subsequently, the player puts the appeal indicator on the zero space of the respective good.

A player may close a factory that contains mandatory additional workers due to that factory becoming obso-lete (see 6.IV). These workers are also placed on the *fired workers* space – just like the other workers.

A player may not close factories that he built during this action. In addition, he may not build a factory of the same kind and level of which he just closed during this action.

If a player closes a factory, he keeps any goods in his warehouse. He is not allowed to sell them regularly during the production phase because the appeal

indicator on the *market share* table is placed on the 'o' space. He may only sell goods regularly after building a new factory of this kind. Otherwise, he may only sell his goods using a warehouse sale (see II.2.6).

The following development tiles influence the *factory* action: *developer, inventor*.

If a player uses the *developer*, the price for all his factories that he newly builds and/or modernizes in the same action is reduced by £5 each. Therefore, if he builds or modernizes all four factories he would save a total of £20. After using the tile, the player has to return the *developer* to the common supply. He may not use the developer twice in the same turn in the same factory.

Example: When Marion modernizes her food factory by two levels, as described above, she only has to pay a total of £17 with the developer (regular costs of £10+£12 = £22, minus £5 once).

If a player uses the *inventor*, he may modernize a factory to a level that is one level higher than the current level on the timetable. He always has to pay the full costs for the next higher level; i.e., he may not use the *developer* to modernize a factory to a level beyond the current technology. The *inventor* only allows modernizing a factory, not building a new one. Each modernization of a single factory beyond the current level counts as one use of the *inventor*.

Example: In 1780 (factory level II) Marion builds a new lamps factory of level II. Using the developer, she only has to pay £9 instead of £14 for this factory. In the same action, she modernizes the factory with an inventor to level III. For this, Marion has to pay the full price of £17. She may not use the developer for this modernization for two reasons: first, the developer was already active in this factory, second, the developer may not be used for a modernization to this future level.

After using the inventor the player either returns the tile or immediately pays for its next usage.

If a player owns the *school* he may not use it during the *factory* action to transfer fired workers to a different factory. When a factory is closed or the mandatory additional workers are fired from modernizing an obsolete factory, the player still has to place the workers in the *fired workers* space.

Additional action: The *factory* action marker provides the opportunity to adjust prices as an additional action. This additional action is conducted after the main action.

II.2.2 Workers

Choosing this action, a player may hire workers to activate new production rows. Also, a player may fire workers to close existing production rows.

Workers used as ship crews are automatically taken when a ship is chosen by the *special marker* additional action.

Hiring workers: To hire new workers, the player takes as many workers as he wants from the *job market* and places them on the respective production rows of his factories.

There are no further costs for hiring workers in addition to the administrative costs. A player pays the workers in his factories during the production phase of the goods. It is possible to hire workers and replace them with machinery in a subsequent action without the workers ever having been paid (i.e. having worked during a production phase).

New workers must be taken from the *job market* from the uppermost row of workers and within a row from left to right.

A player may distribute workers among as many factories as he wants to. A player may only take workers from the *fired workers* space when there are no more workers in the *job market*. If there are no workers in that space either, he may not hire any further workers at the moment.

It is possible to place individual workers on spaces of a production row even if this production row is not completely filled or the factory cannot produce any goods on this production row (e.g. the production row no. 4 of factories of level I). In most situations, however,

this does not make sense!

A player must place workers immediately; it is not possible to hire workers in advance and take them from the *job market* without assigning them to a specific production row.

In the last game round (1810), the player may put workers in factories whose goods have already been active. This may make sense when the player owns a *production* advanced action marker and would like to use it before the game ends. If he does not use the *production* action with that kind of goods, he will lose shares at the end of the game and will have to move back his share value indicator.
Without this penalty, the player could create an artificial demand without paying wages for the hired workers.

If a player places workers in factories whose goods have already been active, the player puts a worker from the first production row *onto* the factory marker as a way to mark this factory. He only returns this worker to his regular spot in the production row when he has started the *production* action. The player may use the first production row regularly.

With the *workers* action, the player may also transfer workers into the warehouse to open up new warehouse space. To do so, he takes workers from the *job market* and places them next to a row or column at the edges of the warehouse. Their hiring does not cost anything for now; the player pays the warehouse workers only in the event phase.

Example: Marion places a worker above the second column of her warehouse and opens up warehouse space for up to five clothes.

Moreover, with the *workers* action, the player may freely move workers in his warehouse between rows and columns to open up new parts of the warehouse. As a result, he may have to put stored goods back to the common supply.

NOTE: *The player may never transfer workers from or into factories or from ships.*

Firing workers: A player may fire as many workers as he wants from his factories to save money during the production phase. However, the first production row of each factory built has to remain active. The first workers to be fired are always those of the production rows furthest to the right. If there are no workers in a production row, the player will have to return machinery placed in that production row to the supply.

A player places fired workers onto the *fired workers* space. It is not possible to fire workers and then hire workers from the *job market* on the same production rows within the same factory. It is also not possible to fire workers that were hired during the same action.

The additional workers that had to be hired because of the factory's obsolescence may not be fired as part of this action (see 6.IV).

In addition, the player may **not** fire workers from the warehouse or from ships! Workers may only leave the harbor mat at the end of a game round (and are only paid at this time, see 6.II).

Additional action: The *workers* action marker provides the opportunity to take a special marker as an additional action. This additional action is conducted after the main action.

⚙ II.2.3 Machinery
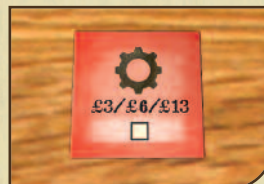
Conducting this action, a player purchases one or more machines. The amount of machines he may take from the common supply is limited by the chosen action marker and the administrative costs paid.

£3/£6/£13

If a player pays the additional fee of £2 because he reuses a *machinery* marker that has already been placed on the *administration* chart, he may not use these additional £2 towards this action. Only the base administrative costs are relevant!

The *machinery* action marker indicates several costs. If a player pays administrative costs greater than or equal to the leftmost value, he will receive one machine. If he pays administrative costs greater than or equal to the middle value, he will receive two machines. **The costs of £13 indicated on each player's colored markers can only be achieved with the *workshop* development tile.**
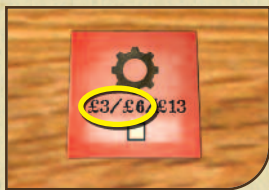
Example: Without the workshop development tile, Marion may purchase, at most, two machines using this action. For two machines, she has to pay at least £6 of administrative costs.

If a player pays higher administrative costs than required for a certain number of machines, the excess amount is forfeit.

Example: Marion has placed her colored action marker machinery in the £4 row and has paid £4 to the bank. She purchases only one machine; £1 is forfeit.

Using the advanced action marker of the first level (light grey) the player may purchase up to 3 machines by paying administrative costs of £10. The marker of the second level (dark grey) offers the opportunity to purchase three machines if a player pays administrative costs of £6.

The player takes the purchased machines from the common supply. He must place them in his factories immediately and must use them to replace existing workers.

The factory mat indicates which activities must be done by workers and which activities can be done by machines or workers. To place a machine on a certain space, the space must have an existing worker – a player may never place machines on unoccupied spaces of the factory. The player may distribute several machines purchased at the same time among one or more of his factories. The player moves the replaced workers to the *fired workers* space. They may not be placed on another space of the player's factories.

Workers only

Either workers or machines
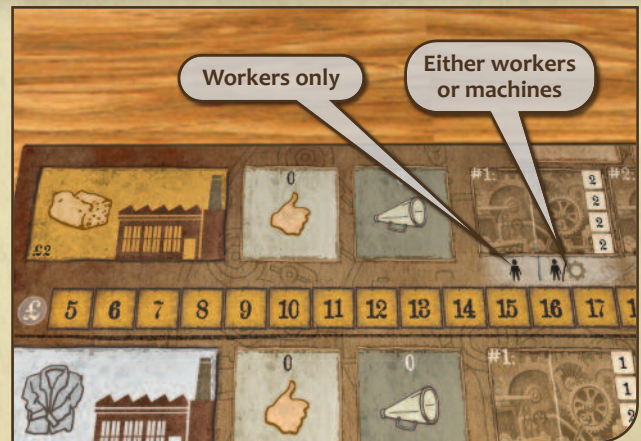
The following development tiles influence the *machinery* action: *workshop, school, engineering works*.
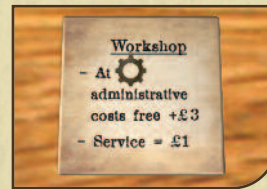
If a player owns the *workshop*, he may increase paid administrative costs by £3 without paying anything in addition.

Example: With the aid of the workshop, Marion may buy 3 machines with her own action marker when she is paying administrative costs of £10.
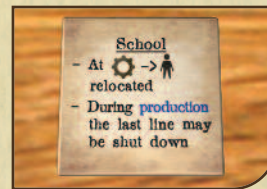
If a player owns the *school*, he may place fired workers on any free space in one of his factories; these workers may not be replaced in the same action by machines.
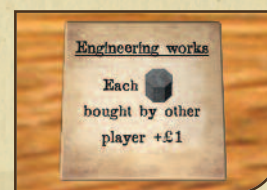
Owners of the *engineering works* receive £1 from the bank for each machine purchased by another player. This does *not* apply to the player who buys the machines.

Additional action: The *machinery* action marker provides the opportunity to take a special marker as an additional action. This additional action is conducted after the main action.

II.2.4 Quality

Conducting this action, a player increases the sales opportunities for his goods permanently. The amount of quality increases a player may conduct is limited by the chosen action marker and the administrative costs paid.

If a player pays the additional fee of £2 because he re-uses a *quality* marker that has already been placed on the *administration* chart, he may not use these additional £2 towards the action. Only the base administrative costs are relevant!

Each player's colored *quality* action marker indicates two costs. If a player pays administrative costs greater than or equal to the value on the left, he advances the quality one level. If he pays administrative costs greater than or equal to the value on the right, he will advance the quality two levels. The grey action markers indicate three costsfor increases in quality of one, two or three, respectively.

The costs of £12 for two increases (on each player's colored markers) or three increases (on the light grey markers) can only be achieved with the *accountant* development tile.

If a player pays higher administrative costs than required for an increase of a certain number of quality levels, the excess amount is forfeit.

If the player pays for several increases in quality, he may distribute them among his factories. Once a level of quality has been reached in a built factory, it is never lost. Quality levels are always retained even if a factory is modernized. However, a player will lose the quality level of a factory that has been closed.

A player indicates an increase of quality by placing a quality marker on the corresponding space of the factory mat. The player turns the marker to the respective value to indicate this increase in quality. The quality of the goods produced in a factory equals the sum of the base quality of the factory (building costs) and the quality marker. Each quality marker has six levels.

Levels five and six are on the back of the quality markers. They can only be achieved with the *engineer* development tile.

Changes in quality increase the appeal of the respective goods. The player immediately increases the appeal indicator in the corresponding columns of the *market share* table.

Example: Marion increases the quality of her food factory by two levels and places the quality marker accordingly on the factory mat. In doing so, she increases the appeal of her food. Her appeal indicator on the market share table is increased.

Marion increases the quality by 2

The following development tile influences the *quality* action: *engineer*.
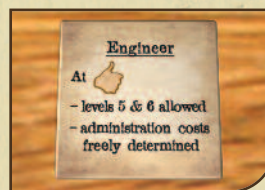
If a player owns the *engineer*, he may increase *quality* in his factories to level 5 or 6. The quality level stays even when the player returns the *engineer*. Moreover, a player with the engineer may freely select, independent of the selected space on the administration table, the amount of administrative costs he is going to pay.

Additional action: The *quality* action marker provides the opportunity to conduct a price adjustment as an additional action. This additional action is conducted after the main action.

II.2.5 Distribution

Choosing this action, a player increases the sales opportunities for his goods temporarily. The amount of distribution increases a player may conduct is limited by the chosen action marker and the administrative costs paid.

If a player pays the additional fee of £2 because he re-uses a *distribution* marker that has already been placed on the *administration* chart, he may not use these additional £2 towards the action. Only the base administrative costs are relevant!

The *distribution* action marker limits the maximum effectiveness of distribution activities. Each player's colored *distribution* marker allows a maximum of £4 worth of distribution activities. If he pays higher administrative costs, the remainder will be forfeit. The light grey and dark grey action markers raise the maximum amount of distribution activities to £7 and £10, respectively.

The player indicates distribution activities by placing a distribution marker on the corresponding space of his factory mat. The player turns the marker to the respective value to indicate this increase in distribution. A player may distribute the paid administrative costs among several distribution activities in his factories.

The costs of each individual increase depends on the new level of the marker. To place a new distribution marker in the factory, a player pays administrative costs of just £1. To increase it from 1 to level 2 he must pay £2. To increase it from 2 to 3, he pays £3 and so on.
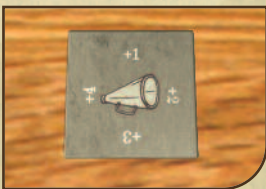
Example: If Marion wants to raise the distribution activities in her food factory from 0 to the maximum amount of 4, she will have to pay £10 as administrative costs (1+2+3+4). To raise the distribution marker in her clothes factory from 1 to 3, she has to pay £5 as administrative costs (2+3).

Distribution activities increase the sales opportunities a player has. They have the same effect as a quality increase but only for a short-term. Using distribution, a player may raise the appeal of goods in each of his factories by a maximum of four levels. For each increase in distribution, the appeal indicator of the respective goods is advanced one space on the *market share* table.

In contrast to quality, however, the effect of distribution activities is reduced by one level after each production phase of the respective factory.

The following development tile influences the *distribution* action: *patent*.

If a player owns the *patent*, he uses it in one of two ways during the distribution action. The first option is to add £2 to the actually paid administration costs, free of charge. The limit of the action marker does not have any effect on the patent.

Example: Marion´s action marker allows a maximum of £7 worth of distribution activities. She places it in the £8 space. Using the patent, Marion may increase the "useable" value from 7 to 9 using the patent.

The second option allows the player to return the *patent* to the common supply and increase his distribution markers in his factories up to two times by one level (or one marker by two levels). He does not have to use these increases in the same factories in which he increased distribution with his action marker.

Additional action: The *distribution* action marker provides the opportunity to conduct a price adjustment as an additional action. This additional action is conducted after the main action.

II.2.6 Stock Exchange

Conducting this action, a player may purchase or sell shares, repay loans, and sell goods from his warehouse. Additionally, he may buy as many *contracts* with the East India Company as desired and/or increase these.

A player may conduct these options in any order during this action. He may also conduct just a single option or pass on all of them. The administrative costs have to be paid in advance.

Purchasing shares: A player may buy as many of his own shares from the bank as he wants to. He may not purchase shares of any other player. The value of an individual share is indicated by the space beneath the player's share value indicator.
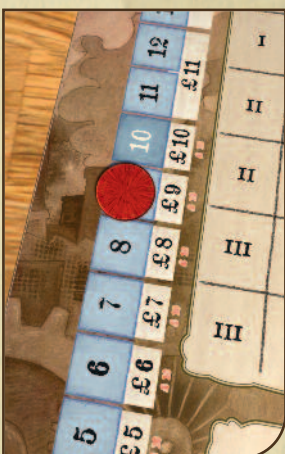
If the player's share value indicator is on one of the first 10 spaces of the share value track, the minimum price for purchasing shares is £10.

Example: Marion's share value indicator is on space 22. She may purchase shares at a price of £16 from the bank.

The share price does not change because a player purchased shares.

Repaying loans: As long as a player has outstanding loans, he may not purchase any shares from the bank! All loans have to be repaid first. The number of loans that can be repaid at the same time is unlimited. For each loan, a player must pay £13 to the bank. If a player has enough cash on hand, he may purchase shares after having repaid his loans. See 7.0 for more information.

Selling shares: A player may sell shares from his portfolio to the bank at the current share value. If the share value indicator is on one of the first 10 spaces of the share value track, the value beneath the space indicates the selling price of the shares.

Example: Marion must sell more shares. The share price indicator is on the space '9.' She receives only £9 per sold share. If she bought any shares while the indicator is on this space, she would have to pay £10 per share.

Selling shares regularly does not influence the share price. An emergency sale of shares that is not part of the *stock exchange* action, however, does influence the share price.

Hint: As part of the *End of Game* event, every player receives the opportunity to purchase shares without having to choose the *stock exchange* action.

Selling goods from the warehouse: A player may sell as many goods from his warehouse as wants to. However, these goods are sold at a fixed price and not the price indicated on the factory's *price scale*. The fixed prices are as follows: **food £2; clothes £3; cutlery £4; lamps £5.** The fixed prices are indicated on the left of the factory mat. Selling from the warehouse is part of the *stock exchange* action.

Acquiring contracts with the East India Company and/or increasing them: To acquire a contract, a player places the contract marker of a particular kind of goods on any space of the *ongoing contracts* track of his harbor mat. The player does not have to pay anything to get a contract but will suffer a drawback if he does not fulfill it.

2-player game: In 2-player games, only spaces #2 and #4 on the *ongoing contracts* track are available. *The players will use the backside of the harbor mat.*

A player may place as many contract markers as desired on each space of the track; however, players have only one contract marker per kind of goods. In addition, he may move any number of contracts that he acquired earlier via the *stock exchange* action to a *higher* numbered space on the *ongoing contracts* track. A player may not increase a contract beyond the 10 space. Moreover, it is not possible to decrease the value of a contract.

Example: Marion acquires a new contract with the East India Company and places the food contract marker on the 6 space. In addition, she increases the already running contract for cutlery from 2 to 4.

Marion finalizes contracts with the East India Company

When a player acquires a contract, he commits himself to deliver these goods later by ship to the East India Company (the common supply). In this way, large profits may be generated. The position of the contract on the *ongoing contracts* track determines the required number of goods to be delivered. A player may not conduct partial deliveries and, therefore, needs enough ships for transport. When a player does not fulfill a contract, the share value of his company will fall!

Additional action: The *stock exchange* action marker provides the opportunity to take a special marker as an additional action. This additional action is conducted after the main action.

⚙ II.2.7 Ships

With this action, a player may sell stored goods to the East India Company. The action is risky, but successful players will earn large profits. The *ship* action is *not* available at the start of the game. A player has to acquire a ship marker via the *take special marker* additional action. With the aid of ships, the player can fulfill a contract by selling goods from his warehouse to the East India Company.

For this action a player needs the following:
1. a ship
2. a warehouse
3. the goods
4. a matching contract

The size of the ship determines the maximum amount of goods tokens a player may sell to the East India Company. He may sell fewer goods than the ship may transport (excess capacity is unused). A player may not use multiple ships in this action – only the ship selected as action marker for this action may be used.

To conduct the *ship* action, the player has to pay administrative costs at least as high as the capacity of the ship marker. Moreover, he has to move his share value indicator **1 space backwards** (representing the risky ship transports unsettling the shareholders).
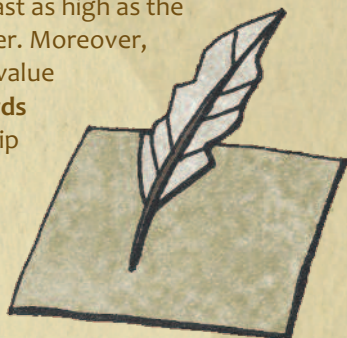
Example: Marion may place the ship with a capacity of 2 on any space of the administration table; the ship with a capacity of 6, however, may only be placed on the 6, 8, or 10 spaces. Additionally, she has to move her share value indicator 1 space backwards.

For this action, the paid administration costs are essential! The player may influence the administration costs with the *accountant* development tile. With an *accountant*, he could place a ship with a capacity of 6 on the 4 space if he paid £6. He may not use the *accountant* to place the ship on the 6 space and pay £4 in administrative costs, even if he only needs a capacity of 4.

Example: The administrative costs for Marion´s ship are at least £6. She has a lamps contract for 4 lamps and a ship capacity of 6. She fulfills the contract and has an unused ship capacity of 2.

Marion fulfills her lamps contract of 4 lamps
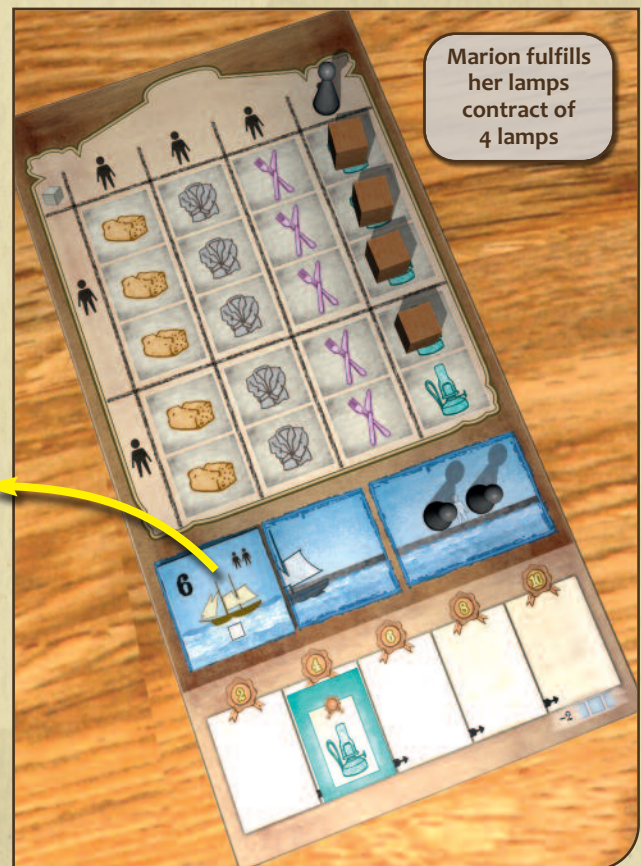
A player must have a matching contract to sell goods to the East India Company. He must fulfill the contract in a single delivery and with the matching type of goods.

Example: Marion may not use 4 lamps to partially fulfill her contract on space 6. Moreover, she may not use a ship with a capacity of 4 to fulfill her contract on space 6. To fulfill her lamps contract of 6 lamps, Marion would need a ship with a capacity of at least 6 and 6 lamps.

To fulfill a contract, the player puts goods tokens of the exact number and type from his warehouse into the common supply and puts the contract marker back in his personal supply.

Example: Marion fulfills her contract of 4 lamps. She has enough ship capacity and enough lamps in her warehouse. The goods tokens are returned to the common supply and the contract marker is placed next to the ongoing contracts track.

For fulfilling a contract, a player receives money equal to the building costs (basic quality) of his factory per goods from the bank. The value of any distribution or quality markers do *not* influence the money received. The profit that the player would have achieved for these goods in England according to the *price scale* on his factory mat also does not matter.

Example: Marion owns a lamps factory of level II and receives £14 per delivered lamp. With four lamps, she receives £56.

If a player has sufficient ship capacity, he may fulfill several contracts with the same *ship* action.

Example: Marion has contracts for 4 lamps and for 2 clothes. With a ship of capacity 6, she may fulfill both contracts at the same time.

NOTE: A player may fulfill contracts in the *production phase* even without a warehouse by shipping goods from the ongoing production directly. In the *production phase* he may use several ships at the same time.

The following development tiles influence the *ship* action: *agent in the colonies, office.*

If a player has an *agent in the colonies*, he may deliver one additional or one fewer goods required by the contract. The available ship capacity has to be large enough to transport an additional goods.

If a player has the *office*, he receives additional profits when fulfilling a contract. The player receives, independent of the number of contracts and the number of delivered goods, an additional £5 for each ship transport.

Example: Marion owns the office. She receives £56+£5 = £61 for fulfilling her lamps contract.

Additional action: The *ship* action marker allows the player to take a special marker as additional action. This additional action is conducted after the main action.

II.2.8 Production
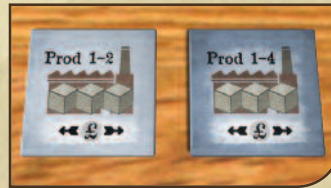
With this action, a player may manufacture goods in any one factory outside of the *production phase*. These goods are stored in his warehouse. The *production* action is *not* available at the start of the game. A player has to acquire a production marker via the *take special marker* additional action.

After paying administrative costs, the player decides in which factory he will produce goods and how many production rows he will use. A player always has to produce in ascending order, starting with the first production row. He may not produce goods only in the second production row.

A player has to put produced goods in his warehouse; the corresponding warehouse spaces have to be occupied by a worker! If a player produces more goods than he can store, surplus goods are forfeited. An immediate sale or a shipment is *not* possible.

If a player decides to produce in the last game round and in a factory that was already active in an earlier cycle, he places the worker that had been placed on that factory marker back to its regular spot in the first production row. Production then begins.

A light grey *production* action marker only allows production in the first two production rows; a dark grey *production* marker allows production in all four production rows.

The player has to pay wages and the operational costs of his machines for the active production rows. The number of produced goods corresponds to the capacity of the selected production rows.

Example: Marion produces food in the first production row of her food factory of level III. She has to pay wages for one worker and £1 operational costs for machines. The two produced goods are moved (as goods tokens) from the common supply to her warehouse.
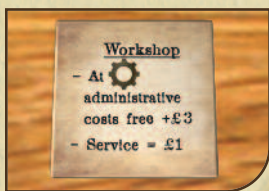
The following development tiles influence the *production* action: extra *shifts*, *foreman*, *workshop*, *small warehouse*.
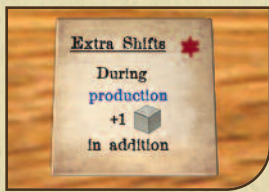
Using the *extra shifts* tile, the player returns the development tile to the common supply and receives one additional produced goods token.

If the player has a *foreman* in his factory, he pays £2 fewer wages for up to 4 workers in that factory.

If the player has a *workshop* in the factory, he pays a total of £1 as operational costs for machines, no matter of the number of machines.

If the player has the *small warehouse*, he may store 5 goods tokens in it without having to operate the large warehouse with workers. Stored goods are placed on the *price scale* of the corresponding goods.

The player may not use spaces with goods as price spaces. In the rare case that the player already has placed the price indicator on one of his last spaces, he may only store as many goods of this kind as there are unoccupied spaces to the right of the price indicator.

The player may store a maximum of five goods of any kind. If he has to place additional goods, he always may return goods from the warehouse to the common supply (without receiving any compensation!) to make room for other goods. He may also transfer goods to the large warehouse if there is room.

Additional action: The *production* action marker allows the player to conduct a *price adjustment* as additional action. This additional action is conducted after the main action.

II.3 Additional Actions
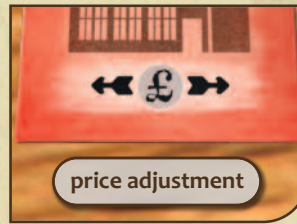
Every action marker provides an opportunity for the players to conduct an additional action. The 'price adjustment' and 'take special marker' symbols indicate this additional action. A player may execute the additional action even if he did not conduct the main action. An additional action is conducted after the main action has been concluded.
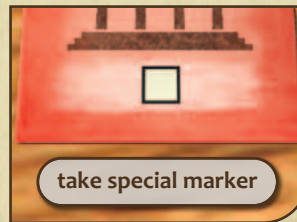
II.3.1 Price Adjustment

After conducting the *factory*, *quality*, or *distribution* actions, a player may adjust the price of the goods produced in all factories that were affected by the main action of the marker.

Price adjustment cannot take place at any time. Prices may **only** be adjusted by a player after he has started the 'price adjustment' additional action and the main action affected the factory.

The *quality* and *distribution* actions offer a player the opportunity to adjust prices in factories that were not affected by the main action. In this case, the player has to spend £1 of the administrative costs per good whose price he wants to adjust.

Example: Marion owns three factories and conducts the distribution action, paying £4 as administrative costs. All of her factories have a distribution marker indicating +1. She spends £2 of the administrative costs in the food factory to increase the marker to +2. She spends £1 each on the other two factories and is now able to adjust the price in all three of her factories.

A player can set the price ranging from a minimum of £5 up to a maximum of £25 on the *price scale* of the factory mat!

With the additional action after the *production* action, the player may only adjust the price in the factory in which he actually produced.

After adjusting the price, a player must also adjust the appeal on the *market share* table. The price may never be adjusted in a way that the appeal of the goods would be less than '0.'

II.3.2 Take Special Marker

After conducting the *worker*, *machinery*, *stock exchange* and *ship* actions, the player may take *one special marker*. **This additional action does not cost anything.** There are three different kinds of special markers: development tiles, advanced action markers, and ships.

The following development tile influences the additional action *take special marker: broker*.

Broker
- (🏛) at **Event**
- ✹ : instead of ☐
  1–2 shares for half price

A player may pass on conducting the *take special marker* additional action and use the *broker*. He must have the *broker* already in possession and now has to return the tile to the common supply. The *broker* allows the player to buy 1 or 2 shares from the bank at *half* price, rounded up.

II.3.2.1 Take Special Marker – Development Tile

A player may take any development tile available in the common supply. The development tiles change the effects of certain actions and other processes of the game. The tiles list their effects in brief. **Full details of all tiles are available in the player´s book.**

Instead of taking a new tile, a player may change the assignment of a tile already in possession; e.g., transfer the *foreman* from one factory to a different one.

A player may never have two *identical* development tiles. If he has the *inventor*, he may not take a second inventor.

NOTE: *Patrons* for different kind of goods are different development tiles.

Place the selected development tile on one of the designated spots at the top edge of the factory mats. A player may not have more than four development tiles. When a player takes a fifth tile, he must immediately return another tile to the common supply. This tile is

available for all players during their additional action. The effects of a returned tile immediately end.
Example: *Marion takes the broker development tile which becomes her fifth tile. She chooses to return her small warehouse tile. She can move all goods in her small warehouse to her large warehouse on her harbor mat, if the appropriate workers are present. Otherwise, Marion would have to return her goods from the small warehouse to the common supply.*

The spaces for four development tiles

II.3.2.2 Take Special Marker – Advanced Action Markers

The player may only select the markers that are in the row of the current or an earlier development level, as indicated by the timetable indicator.

The advanced action markers can be used like the player's colored action makers and are more effective. The *production* action marker even allows the players a new action that is not available amongst their colored markers. A player may never own two identical action markers of the same shade of grey. However, he may own a light grey and a dark grey action marker of the same name.

The following development tile influences this additional action: *inventor*.

Inventor
Next level allowed 4 times at additional costs £5/10/15/20

A player owning the *inventor* may take an advanced action marker of the next higher level. In this case, he has to return the *inventor* or immediately pay for the next usage.
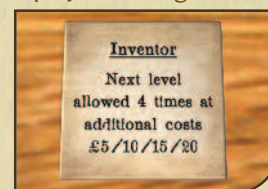
⚙ II.3.2.3 Take Special Marker – Ships

When a player takes a ship he places it at one of his piers on his *harbor mat* and may use it as an additional action marker. Also, a player may use his ships in the *production* phase.

The player may only select ships that are in the row of the current or an earlier development level, as indicated by the timetable indicator.

Each player may own a maximum of two ships, one for each pier on his *harbor mat*. A ship that has been temporarily placed on the *administration table* for the *ship* action still occupies one of the two piers. When a player takes a third ship, he has to return one of his other ships to the *special markers mat* and put the new ship in its place. A player may only replace a ship with a ship of higher capacity.

A player may not replace a ship with another one when he still has an empty pier. When a player replaces a ship on the *administration table* and uses the ship again in the same game round, he has to make sure that the paid administrative costs are at least as high as the new capacity. If the player cannot pay the necessary administrative costs, even when using the *accountant*, he may not use the new ship as an action this round.

When there are one or more worker symbols on the selected ship, the player must place that many workers from the *job market* to his *harbor mat* as ship crews. This is done automatically – the player does not have to conduct a *worker* action. When a player replaces a ship, he only takes as many additional workers as required by his ships.

Example: Marion has a ship of capacity 2 and another ship of capacity 4. Therefore there is 1 worker as a ship crew on her harbor mat. She takes a third ship of capacity 6 and returns the 2 capacity ship. Now there are 3 workers (1+2) needed. She takes 2 more workers from the job market and places them on the ship crews space.
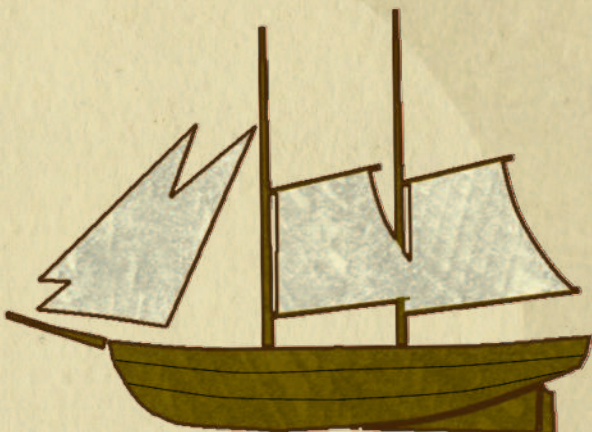
A player only pays for these workers (ship crews) at the end of a game round (decade). Afterwards, he may fire these workers and return the ship to the *special markers* mat. However, he may not fire or transfer these workers with the *worker* action.

The following development tile influences this additional action: *inventor*.

A player owning the *inventor* may take a ship of the next higher level. In this case, he has to return the *inventor* or immediately pay for its next usage.

> **Inventor**
> Next level allowed 4 times at additional costs
> £5/10/15/20

⚙ III. Production Phase

After all players have conducted their actions, they produce the active good, sell it, and pay wages to their workers as well as the operational costs of their machines.

Selling goods causes the share value to rise. Factories that produce other kinds of goods are irrelevant in this phase. They do not produce and the workers are not paid any wages.

Factories produce the active kind of goods automatically. A player cannot pass on production even if it is obvious that he will lose money by producing the goods. Main and additional actions are not possible any more!

In **Water Frame**, the players may not store surplus goods in this phase. Storing goods is only possible when the player has the *small warehouse* development tile or has workers in his large warehouse on his *harbor mat*.

⚙ III.1 Production and Sale

At the start of this phase, every player should check if the appeal indicator for the active good is placed correctly. A production row can only produce a good if the required amount of workers and/or machines has been placed there. For example, if a production row requires 3 workers (and/or machines) and there is only 1 worker, the row does not produce any goods.
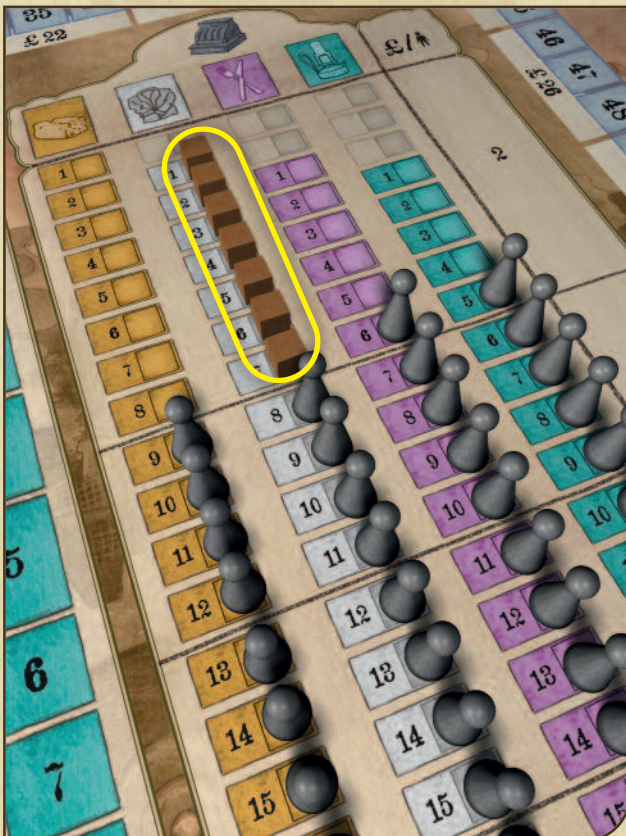
Each active production row produces the amount of goods corresponding to the level of the factory. The amount of produced goods is indicated to the right of each production row on the factory mat.

Example: *The first two production rows of Marion's level I clothes factory are occupied with workers and machines. Thus, the factory produces 1+2 = 3 goods. The quality is 9, as determined by the factory, +0 quality (she did not invest in additional quality), and +2 distribution because of the distribution marker. The selling price is £7. Therefore, the appeal of the clothes produced in Marion's factory is 9+0+2-7 = 4.*

Marion's clothes have an appeal of 4

The *job market* table indicates the demand for goods in England. Each numbered empty space in the active goods column represents a group of buyers. The start player places a goods token from the common supply on each of these spaces. Spaces that contain workers and spaces that are not numbered do not generate demand and remain without goods tokens.

Example: *There is demand for seven clothes in England.*

Supply is determined by the amount of goods that all players have produced in the production rows of factories of the active kind of goods, the amount of goods stored from previous rounds, and the position of the neutral importer.

If a player does not own a factory of the active kind of goods, he may not sell any goods even if he has some stored from previous turns.

If the demand in England is greater than the supply, the players may sell all of their produced goods in clockwise fashion, one after the other.

How much a player may sell is, however, **limited by the appeal of his goods!** If a player produces 3 or more goods but their appeal is only 2, they may only sell 2 goods.

If supply is greater than demand, the players will need to determine how many goods each player may sell:

a. To keep track of things the first player places a goods token next to the appeal indicator showing the highest value (on the *market share* table).

b. The first player calls out all players whose appeal indicator is in the same space as the token. These players take one goods token each from the *job market* and place it in their factory of the active kind of goods, as long as they have not taken as many goods tokens as their factory produces. A player may *not* voluntarily pass on selling goods of the current production as long as there is still demand in England. The players should keep this in mind when selecting the spaces for their contracts.

c. If a player has taken as many goods tokens as his factory can produce but has not reached the number of goods that he is allowed to sell, he may voluntarily sell stored goods of the active kind of goods. To do so, he takes a goods token from the *job market* and places it next to the sold goods on his own mat. In addition, he returns a goods token from his warehouse to the common supply.

d. The first player moves the initially placed token to the next lower space on the *market share* table and calls out all players whose appeal indicator is placed on this or any higher space. Players whose goods have the most appeal are always the first players to sell their goods.

The importer is also taken into account when selling goods. During the importer's turn, the first player removes a goods token from the *job market* and places it separately aside.

If there are players called out who have already sold the maximum amount of goods (because of the appeal of their goods) or have sold all their produced and/or stored goods, they will be skipped over.

Example: Marion produces only three goods in her food factory and does not have any stored food. She is called out for a fourth time and indicates that she cannot sell any further goods.

If there are more players that can sell goods than there are goods tokens in the *job market*, the order will be determined as follows:

1. The player who has the most appealing goods (whose appeal indicator is the most advanced).
2. In a tied situation, the importer always comes last.
3. The higher quality of the goods (the base quality plus the quality marker).
4. If there is still a tie, the concerned players will take a token at the same time. In order to give goods tokens to all players involved in such a tie, additional good tokens may be taken from the common supply, if necessary.

This procedure ends when all goods tokens from the *job market* have been distributed or all players have sold their produced and stored goods. Excess tokens from the *job market* are returned to the common supply.

Example: Step 1 – Marion sells 1 clothes first because her appeal indicator is the single indicator on space 4. Step two – the initially placed token is moved to space 3 and Marion sells her second clothes. Next, Harold sells 1 clothes and then the importer sells 1 clothes. Step three – now Marion places the initially placed token onto space 2 and sells her third clothes, followed by Harold and the importer. Demand has been met and no further goods may be sold in England. Even if demand had been higher, Harold would not have been allowed to sell more than three goods because the appeal of his goods is three.
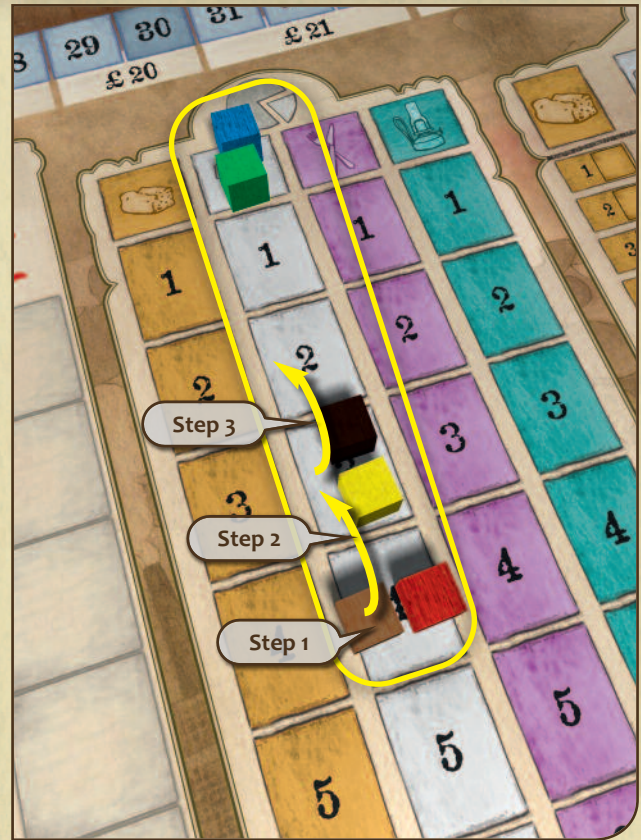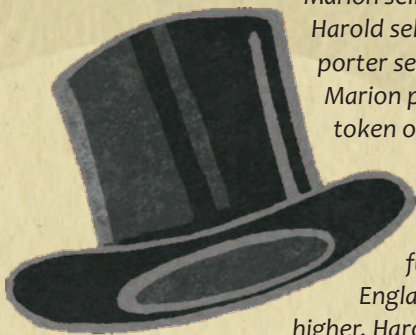
After the end of each sale, every player checks how many goods their factory produces. If a player's factory produced more than what he sold in England, he may take additional tokens from the common supply and put them in his warehouse.

Example: Harold has sold 2 food to the job market (taken from the track), however, he produces 3 food. He takes a goods token from the common supply and places it in his warehouse.

Attention: *Experienced* players will immediately recognize when all produced goods may be sold so that they can skip these detailed procedures. However, we highly rec-ommend precisely following these procedures, especially for the first few games.

For each sold goods token on their factory mat (from the *job market* and the *patron* development tile), players receive money equal to the price set for this kind of good on their *price scale*. The sold goods tokens remain on the factory mat.

Example: At the end of the sale, Marion receives £21 (£7 each for 3 goods).

The complete sales procedure is automated. A player may *not* voluntarily pass on selling goods of the current production as long as there is still demand in England. However, a player does not have to sell goods from his large or small warehouse to fulfill the demand in England. **A sale from the warehouse is done voluntarily!** A player who has stopped his sales in a sales phase may not sell later again in the same phase.

The following development tiles influence the *sale*: *extra shifts, school, patron, small warehouse.*
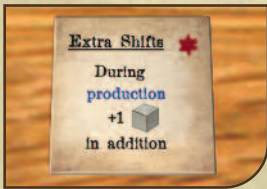
If a player who has already sold all goods from the production of his factory during a sale is called, he may return his *extra shifts* to the common supply to produce and to sell an additional goods. In this case he takes another goods token from the *job market*. The player may only do this during the first call after the sale of all goods from the factory's production. If he does not want to, he may only sell goods from his warehouse. Even if the player produces further good tokens and puts them in his warehouse, he may return the *extra shifts* to take another goods token.
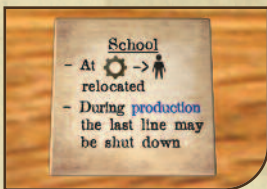
A player owning a *school* may close his last occupied production row. The player may decide that the goods in this row will not be produced and, therefore, wages for workers and operational costs for machines will not be paid.

Example: Harold has a level II cutlery factory and workers in the first three production rows. He would produce 5 goods. He notices that he will only sell 3 goods during the sale. Therefore he states that he will close the third row for this sale. He only produces 3 goods and has to only pay the 5 workers in the first two rows.

If a player has the *patron* for the active kind of goods, he may sell another goods to the *patron* directly after the regular sale to the *job market*. The selling price is the one on his *price scale*. The player sells the *patron* either a goods from his current (surplus) production or a goods from his warehouse. Selling to a *patron* is voluntary.

If a player has the *small warehouse,* he may store 5 goods tokens without having to run the large warehouse with workers. Stored goods are placed on the *price scale* of the appropriate kind of goods.

If a player does not have a warehouse, ship, or patron, he does not have to take goods tokens out of the supply when he is producing additional goods – he would have to return them immediately anyway.

III.2 Increase in Share Value because of Sold Goods

If players operate successfully on the market, their share values will rise.

Each player who has sold precisely one good in this production phase advances his share value indicator *one* space. Each player who has sold two or more goods advances his share value indicator *two* spaces (even if he has sold more than two goods). A player who has not sold any goods does not advance his share value indicator, even if he owns a factory that did produce during this production phase. A goods token sold to the *patron* counts as a regularly sold goods.

If the player whose appeal indicator (for the active good) is the single most advanced and he has sold at least one good, he advances his share value indicator an additional space. His indicator must also surpass the indicator of the importer.

Finally, the single player who sold the most goods advances his share value indicator an additional space. This player has to have sold more goods than the importer.

Subsequently, all players return their goods tokens and those of the importer to the common supply.

A player may advance up to four spaces on the share value track in this phase. In case of a tie, no additional increases for appeal or the most sold goods are awarded. It is mandatory to advance on the share value track. A player may not pass on such advances!

Example: Marion advances four spaces – two spaces because she sold at least two goods in England, one space because her goods had the most appeal, and one space because she sold the most goods. Harold advances two spaces because he sold two goods.

The following development tile influences the *share value increase: charisma*.
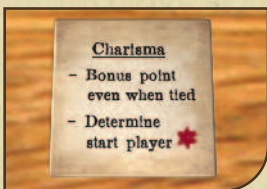
If a player has the *charisma* development tile and is participating in a tie when a bonus increase is awarded, *he* receives the bonus increase.

⚙ III.3 Paying Wages and Operating Costs of Machinery; Effects of Distribution

Regardless of the economic success, the players must pay for workers and machines in factories of the active kind of goods, even in production rows that did not produce anything.

Each machine has operating costs of £1. Each worker's wage is indicated to the right of the job market – in the row next to the lowest empty space.

Example: Marion has three workers and one machine in her clothes factory. The wages are set at £2 and she has to pay £7 to the bank (3 X £2 wages, 1 X £1 operating costs for machines).

Workers in factories receive £2 each
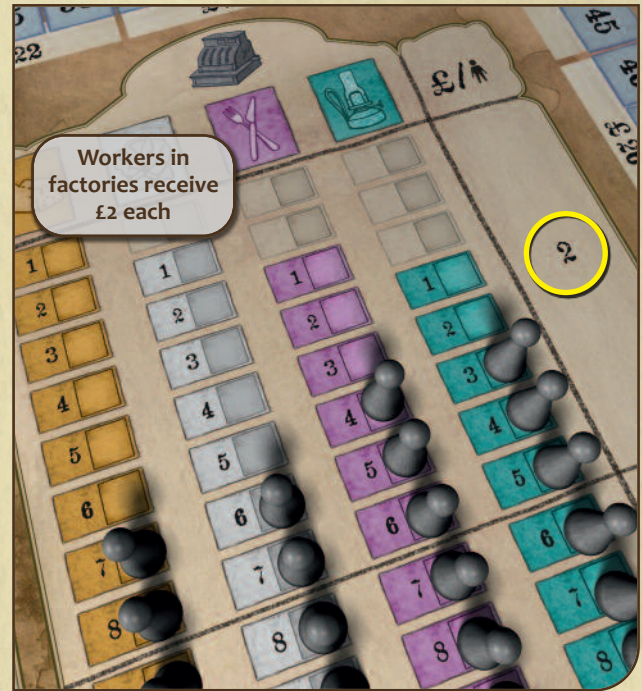
The distribution markers for the active factories (if there are any) must be reduced by one. Markers of level 1 are completely removed from the factory mat. As a consequence, the players must adjust the appeal indicator on their *market share* table.

Should the players appeal indicator be reduced to less than zero, it remains on the zero space. As an exception, the price is now adjusted and reduced by one in order to comply with the formula *quality + distribution – price = appeal*. When this happens, the share value indicator is moved back 1 space.

The following development tiles influence the *wages* and *operational costs for machines: foreman, workshop, school*.

If a player has the *foreman* in his active factory, up to 4 workers in this factory receive a wage that is reduced by £2 (to a minimum wage of £1 per worker). The other workers, if any, receive the regular wages.
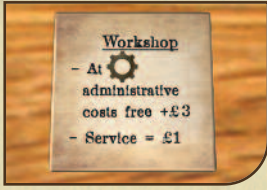
If a player has the *workshop* and has assigned the maintenance (operational costs) function to the current factory, he only pays a flat fee of £1 for all his machines, no matter how many are in the factory.

Example: There are 6 workers and 3 machines in Marion´s lamps factory in the first 3 production rows. The wages are £4 according to the job market. Regularly Marion has to pay a total of £27 wages (£24 for 6 workers plus £3 operational costs for 3 machines). With a foreman she only pays £19 (the first 4 workers receive a total of £8, the other 2 receive £8 per the regular wage rate, and then £3 for her machines). With a foreman and a workshop her costs would be reduced to £17 (£8 + £8 + £1).

When a production row is closed via a *school*, no wages or operational costs are paid it.

III.4 Shipment of active goods

The players now decide if they intend to fulfill their contracts for the active kind of goods. In the *production* phase, players may only fulfill contracts of the active kind of goods – they may not ship any other goods. Fulfilling a contract is voluntarily.

To fulfill a contract, a player must have goods tokens of the active kind of goods and sufficient ship capacity – according to the space of the contract on the *ongoing contracts* track.

A player must fulfill a contract completely in this phase; partial shipments are not possible. *For a contract in space 6, the player therefore needs 6 goods from production or from the warehouse and a total shipping capacity of 6.*

To calculate the shipping capacity, a player may add the capacity of both of his ship markers, no matter their location (at his pier or the administration table). Using the ships is free of charge.

For each delivered goods token, the player gets money according to the building costs of the factory (basic quality) of the active goods (i.e. without taking into account the quality and distribution markers).

The price indicated on the *price scale* of the factory mat does not count. The player puts delivered goods tokens back in the common supply.

For each ship used, the player has to move his share value indicator 1 space backwards. This means, if he uses only the capacity of a single ship, he moves the indicator one space backwards, even if he owns two ships.

When a player has sold goods tokens of the active kind of goods via the regular demand at the *job market* and then shipped goods, he first moves the share value indicator forward, then backward.

After fulfilling the contract, the player removes the contract marker from the *ongoing contracts* track and places it in his personal supply of markers.

Example: Marion fulfills her contract of 6 clothes and uses her 2 ships with a total capacity of 6 (a ship of capacity 2 and another ship of capacity 4). Because the clothes factory is at level I she receives 6 x £9 = £54. For the 2 used ships, her share value indicator is moved 2 spaces backwards.

Contracts of the active goods that are unfulfilled must be increased by 1 space. Therefore, a player has to deliver more goods to the East India Company during the next *production* phase of the active kinds of goods.

Any contract markers already on space 10 remain in place. The player immediately moves his share value indicator 2 spaces backwards.

2-player game: The players suffer a decrease in share value when their contract marker is already on space 4. The contract marker stays on space 4, and the player immediately moves his share value indicator 2 spaces backwards.

The following development tiles influence the shipment of the active kind of goods: *office, agent in the colonies.*
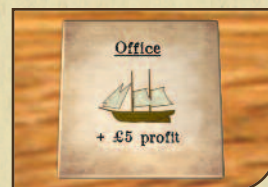
If a player owns the *office*, he receives an additional profit of £5 when shipping.
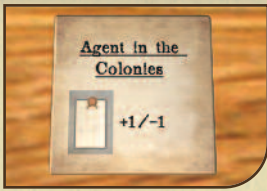
If a player has the *agent in the colonies*, he may increase or decrease the value of one contract by 1 goods. Therefore he will need more or less goods and shipping capacity. As an example, he could fulfill a contract on the 6 space as a 5 or 7 contract.

III.5 Storage and Decay

Produced goods which players could not sell are now stored. Players either need their large warehouse or the *small warehouse* development tile. All goods for which there is no room in these two warehouses are returned to the common supply without compensation. The players need workers to use the spaces in the large warehouse. Workers in a column permit the storage of several goods of one kind. Workers in a row permit the storage of several different kinds of goods. The player may only use storage space already in place.

NOTE: Players are not allowed to hire or transfer workers at this time to change their warehouse capacity. This is only possible in the action phase with the *workers* action marker.

The following development tile influences *storage*: *small warehouse*.

If a player owns the *small warehouse*, he may store up to 5 goods tokens without using the large warehouse and any workers. The stored goods are placed on his *price scale* of the corresponding kind of goods.

A player may not use spaces with goods as price spaces. In the rare case that a player already has his price marker on one of his last spaces, he may only store as many goods of this kind as there are spaces to the right of the price marker.

The player may store up to 5 goods of any kind. If he has more goods, he may return any goods from the warehouse to the common supply (without compensation) to store other goods.

Example: Marion has stored 2 food and 1 clothes in her small warehouse. She would like to store 3 lamps. To do so, she must return either 1 food or 1 clothes.

IV. End of the Cycle

At the end of the first three cycles, the player to the left of the start player becomes the new start player. This is followed by the next cycle and the first player advances the timetable indicator. The new economy phase starts.

The end of round phase follows after the fourth cycle (end of decade).

The following development tile influences the *selection of the start player*: *charisma*.
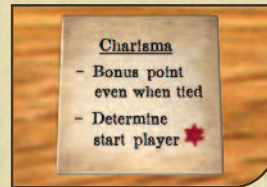
If a player owns the *charisma* development tile, he may return it to determine the start player.

6.0 END OF ROUND PHASE

The start player advances the timetable indicator to the event space.

I. Returning Action Markers

All players return their action markers to their supply from their column of the *administration* chart. All markers in their own color and the grey markers they have previously obtained will be available to them in the next round.

## II. Event Phase – Pay for Workers on Ships and in the Warehouse; Reveal Event Marker

In each *event phase*, players pay the wages for workers on ships and in their warehouse before resolving the event.
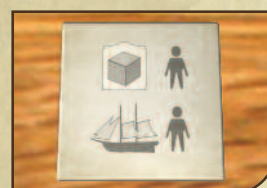
The back of the event marker reminds players that they must pay the costs for workers in the warehouse and on the ships at the end of the decade. The current wages for all workers on ships (the ship crews) and in the
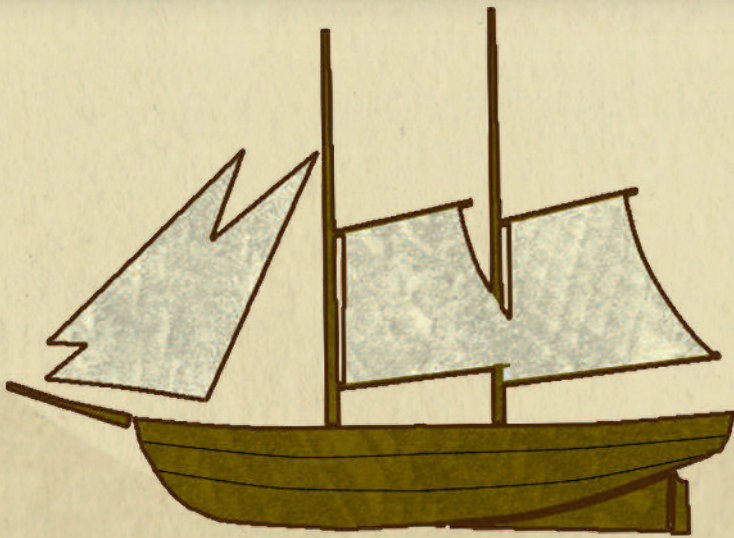
warehouse, according to the information on the *job market,* are paid.

Example: Marion has 1 worker on her ship with capacity 4; the ship with capacity 2 does not need a worker/ship crew. She does not have workers in her warehouse. She pays the current wage of £4 for her 1 worker.

When the workers on ships and in the warehouse have been paid, each player may fire as many as he desires (returning ships, too). All fired workers are placed in the *fired workers* area. If the player does not have enough space in his warehouse after firing workers, he returns goods from it to the common supply.

If a player wants to fire workers from a ship, he has to return the ship to the common supply on the *special marker* mat. He may not exchange the ship or only fire a part of the workers.

Now, the *event marker* is flipped and the event is resolved. The event effects are depicted on the front – all details are in the player´s book.

When the timetable indicator reaches the *End of Game* event marker, the game will end after resolving the event marker. As indicated on the event marker, all players will conduct a final common *stock exchange* action:
Each player has the opportrnity to sell any goods remaining in their warehouse at the fixed price, repay loans, and purchase as many shares as their cash supply allows. Afterwards, the winner of the game is determined.

Example: Marion's share value is £22 at the end of the game because her share value indicator is on space 36. She already owns 16 shares and has £84 in cash. Marion buys 3 more shares for a total of £66. She ends with 19 shares in her portfolio and £18 in cash.

The following development tile influences the *event phase*: broker.

If a player has the *broker*, he may sell as many warehouse goods as desired, buy shares, and sell shares in each *event phase*.

⚙ III. Changing the Start Player

At the end of the game round (decade), each player multiplies the number of his shares with the share value. The player whose portfolio is valued the least determines the new start player. In case of a tie, the tied player who has less cash determines the new start player. If there is yet another tie, the tied player who sits farthest away from the current start player will determine the new start player.

It is possible to determine the current start player as the start player.

The following development tile influences the *start player selection*: charisma.
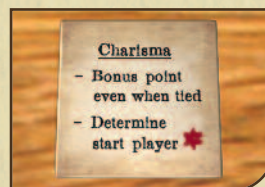
If a player owns the *charisma* development tile, he may return it to the common supply to determine the new start player.

⚙ IV. Obsolescence of Factories

Before a new decade begins, all players determine whether the factories become obsolete. In **Water Frame,** this happens in the 1790 to 1810 game rounds. All factories of the indicated level become obsolete.

In each of his factories that become obsolete, a player must hire two workers whom he takes from the *fired workers* space (not from the *job market*). He places these workers onto the factory mat next to the factory marker (not on a production row).

In the 1790s, Marion's food factory becomes obsolete. As a consequence, she must place two workers onto the factory.
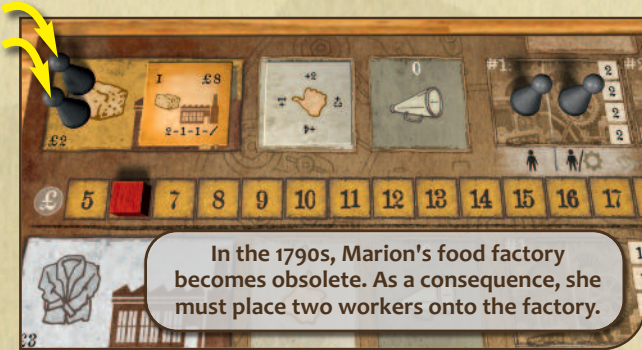
The new workers are required in order to guarantee the same quality and quantity of produced goods in the obsolete factory.

This happens automatically and cannot be prevented by the player! In particular it is not possible to close the factory at this time. A player may only close the factory during the factory action.

If there are not enough tokens in the *fired workers* space, the missing workers are taken from the *job market*. In the rare case that there are not enough workers for obsolete factories in the *job market*, the workers that are available will be individually distributed among the factories (not players) in turn order

beginning with the start player. If several factories of a player are concerned, he will start with the upper-most factory.

For each worker that could not be hired because of a lack of workers, the player has to pay a fee corresponding to the current wage of £5 to the bank. In this case, the factory does not receive an additional worker. The player does not have to hire a worker later on when there are workers in the *fired workers* space or in the *job market*.

Example: Marion and Angelica each own a factory that has become obsolete. Harold has two obsolete factories. Altogether there are only five workers available. Marion and Angelica each take one worker for their obsolete factories. Next Harold takes one worker for each of his factories. The last remaining worker is given to Marion. Angelica must pay £5 and Harold must pay £10 for the workers they could not hire.

A player must pay these additional workers normal wages during the production phase. He may not fire them as part of the workers action.

If a player brings a factory up-to-date (i.e. modernizes it to the current level), he places the additional workers back onto the *fired workers* space.

7.0 EMERGENCY SALE OF SHARES, LOANS

A player may conduct any action even if he does not have enough cash for the action. In this case, he must sell enough shares in an emergency share sale at their current value to obtain enough cash. The same applies whenever a player has to pay more cash than he currently has in his possession.

Any remainder is paid out to the player. It is not possible to sell more shares in an emergency share sale than required to pay for the chosen or required action.

Emergency share sales have a negative effect on the share value. For each share sold in this manner, the share value is reduced by a number that corresponds to the first digit of the current space of the share value indicator. As a first step, the player determines by how much the share value is reduced for each share sold and, only in a second step, the indicator is moved back for all the sold shares at the same time.

Example: *Marion's share value indicator is located on space 28. She sells two shares in an emergency share sale to raise £38. The share value is reduced by two spaces per share. Therefore, Marion's share value indicator must be moved back four spaces onto space 24. As she had to pay £30, she receives £8 in cash.*

If a player does not own any shares but is still in need of money, he has to take out a loan. Loans are only available as £10 loans. To take out a loan, a player places shares from the bank onto the share value track. The number of shares indicates how many £10 loans he has taken out. Additionally, the player must reduce his share value indicator by one space for each loan taken out.

Repaying loans is only allowed as part of purchasing shares during the *stock exchange* action. The player must pay £13 to the bank for each £10 loan taken out before he can purchase any shares!

Loans should be avoided!

8.0 END OF THE GAME AND WINNER

Arkwright ends when the players have concluded the final game round, including the *End of Game* event.

When the players resolve the *End of Game* event, they must pay the current share price when they purchase shares.

All players who still have loans at the end of the game automatically lose and are not considered during the final scoring.

Before the winner is determined, the remaining players check if their share value decreases. The following steps are only conducted right before the winner is determined:

1. For each factory that still has a worker via the *workers* action on the factory marker (from last game round), the player moves his share value indicator 4 spaces backwards and returns 2 shares to the bank.

2. For each contract marker on the *ongoing contracts* track, the player moves his share value indicator back as many spaces as the value of the contract.

Example: *Marion still has a contract marker on space 6. She must move her share value indicator 6 spaces backwards.*

When a player has a contract on space 10, he still has to move his share value indicator backwards 10 spaces. Any reduction of the share value because this 10-space-contract was not fulfilled during the game does not matter!

The *agent in the colonies* development tile does not influence unfulfilled contracts in any way.

Finally, each player determines the value of their company. Players multiply the number of shares they own with the current share value.

The player with the highest value is the winner. If there is a tie, the player with the most cash is the winner. If there is still a tie, there are several winners.

Example: *Marion has bought 3 shares at value £24 when the End of Game event was resolved. She now has a total of 19 shares. Her share value indicator is on space 41. She could not fulfill her contract on space 6 – therefore, her share value indicator is moved back to space 35. Her shares now have a value of only £22.*

Marion has made 19 x £22 = £418.

Without the contract, her result would have been 19 x £24 = £456.

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