Welcome to True Story, the historical turn-based game.

Here, you get a tribe of Neolithic farmers. They just settled down and agreed to pay part of their harvest to you, their ruler, so that you could organise a defence against hunters-gatherers still roaming around.

Note that you cannot directly order your people what to do. They are looking for economic opportunities on their own. Your task is to make sure they have enough resources for their enterprises, and have the infrastructure they need.

At the beginning of the game, your responsibility as a ruler is to protect your people from raids of hunters’ tribes, and expand the land your people can plough. To make land available for your people, you need to clean it from nomadic tribes.

Later, you will be able to affect other sides of your people’s life, - you can improve the transport infrastructure increasing the effective radius of your town centres and their trade capabilities. You can improve their health increasing natural growth. You will be able to improve their educational level, improving the speed they are progressing in technology and competitiveness of their high-tech goods. You can even decide to directly control all the economic life via planned economy policies.

There are number of possible victories. You can defeat every other nation in a military way. You can be the first nation who reached demi-god powers through technology (eternal life, unlimited energy supply and molecular manipulation). You can be so popular and wise that people of the world would voluntarily agree on your candidature as a leader of unified humankind.

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**Overview**

Each player starts with a single Neolithic settlement. You can establish (or conquer) additional settlements later. Every settlement originally has 3 sectors, - agricultural (represented by farmers), industrial (represented by crafters), and construction (builders).

Each sector has some income and expenses. Income is based on demand on sector’s product; expenses, - on number of workers’ in the sector, and their salary expectations. Difference is sector’s profit (or loss). In case of profit, sector expands, in case of loss, - shrinks. Profits of sectors reinvested inside it.

Additional sources of capital are:

1) People’s savings, - difference between salaries (depending on tools used in industry), and employees spending (depending on their wealth level);

2) Bank capital. If used, creates a bank-owned share in the sector. Part (half?) of profit from this share goes to bank sector, instead of the borrowing (and expanding) one.

Total sectors’ list is:

Agricultural (farms), - makes sure your people don’t starve;

Extracting (mines, lumber mills), - supplies industrial (and building) enterprises’ with resources needed;

Industrial (crafters workshops, then factories), - produces goods needed by your people, and weapons ordered by the state. Has competitive power, depending on tools’ effectiveness and settlement’s wealth level. Vulnerable to foreign imports, but can benefit from exports;

High-tech (high-tech factories), - similar to industrial, but competitive power strongly depends on educational level of the settlement;

Construction (builders’ brigades), - allows people to upgrade their properties, and implements state’s building and infrastructure projects;

Trade (trade companies), - move goods between settlements having big enough difference in competitive power;

Banking (banks), - speed up expansions of other sectors, providing capital they need;

Services (service professionals), - no benefits? Or help to accumulate people wealth, due to time saved for main occupation? Required only in settlements with high wealth level.

Also, there are state-owned sectors:

Military service (soldiers), - can protect the settlement, and expand its borders;

Justice (policemen), - tax the settlement; suppress resistance;

Public health (medics), - increasing natural growth and adults/children ratio via longer life (more adults mean more workers)

Education (teachers), - increasing knowledge product of daily activities (leading to tech progress), and competitiveness of high-tech goods

Economy

Your people can establish enterprises when they see opportunities for it. To make enterprise possible, 4 conditions need to be in place:

1) Resource-based enterprises (like farms), needs resources (like arable land).

2) All enterprises need uncovered demand on their products to be established.

3) All enterprises need some initial investment to be established, - you people need to accumulate capital first before risk it.

4) Every enterprise has minimal size (workers) to be established.

Once established, enterprises start to work, giving their owners either profit (in case of sufficient demand on its products) or loss. Also, they may have other effects. E.g. every town needs to have sufficient food produced, otherwise people will starve. More crafters in the town will allow you to produce more weapons.

If enterprise is profitable, it will expand, as far as resources and workers are available, and it didn’t reach its growth limit (based on enterprise type and technology level). In case of loss owner may decide to cut the jobs. It can also happen if due to equipment’s upgrades he now need less hands for resources he have, and cannot acquire more resources.

Enterprise can upgrade its equipment after technology advances or new resources became available. Enterprise can request state dotation to do it, to keep workplaces for settlement.

Each enterprise has some savings (originally in form of grain, in later ages, - as money), that used to accumulate profit, cover losses, pay for expansions and upgrades, and get costs of equipment sold after jobs’ cuts.

Workers on the enterprise get wage depending on what is effectiveness of their labour, i.e. on tools they are using.

From the beginning, your people can establish 3 types of enterprises:

1) Farms. They produce food, and need arable land to expand

2) Crafter workshops. They produce goods for your people, weapons and tools. Tools allow all enterprises to expand.

3) Builder brigades. They build houses for people that can pay for it, help to establish new enterprises and fulfil state orders on structures like barracks or state granary.

Later, technologies will provide your people with other options. Not all assets are available to all types of enterprises, - e.g. steam-powered machinery can be purchased by factories, but not by crafter’s workshops. Possible enterprise’s types are:

1) Farms (requires arable land);

2) Crafter workshops;

2.5) Toolmaker workshops;

3) Builders’ brigades;

4) Mines (requires mineral deposits);

5) Lumber mills (requires woodland);

5) Trade companies (requires established trade relationships, sea/road infrastructure);

6) Watermills (require running water);

7) Factories;

8) Machine-building factories (assets’ producers);

9) Electric plants;

10) Small service enterprises;

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**Investment capital**

Enterprises can be established and expanded only when there is certain amount of capital accumulated in the settlement. Accumulation happens if given type of enterprise is profitable; otherwise capital decreases, and can lead to closure of enterprises or job cuts. Note that there is no internal competition in the model, so all enterprises of a given type works together, and their profits sum up.

Also, most profitable enterprise type receives additional investment from people’s savings, - difference between people’s income and spending.

The algorithm is as follows:

1. If there is enough capital to expand the enterprise with the best possible assets, and it didn’t reach maximum size yet, enterprise expands
2. If after (1) there is still enough capital to upgrade assets on existing enterprise, and better assets are available, do upgrade;
3. If after (1) and (2) there are no possibilities to expand or upgrade, but still some capital to invest, establish new enterprises (given that there are resources available and uncovered demand on products)

Depending on number of new enterprises, upgrades and expansions, we calculate demand on tools/machinery for a given year

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**Resources and local logistics**

Each town has list of hexes in its economic zone. Every hex has some resources to extract or use. Some, like arable land or wood land, can be used indefinitely (unless over-used and exhausted). Others, like ore deposits or fossil fuels, can be fully extracted, and you will need to find new sources, either on other sites or via deepening your mines.

Each resource has its own, unique set of possible uses.

Arable land is needed for agricultural enterprises, - farms, plantations, etc., which grow food for our people. Food available sets a limit to the size of your population;

Wood is needed to upgrade your people’s properties, and in state structures;

Flynt, copper+tin, iron and coal allow our people improve their tools, increasing effectiveness of their labour;

Wood and coal can be used to transform ores into metals;

Iron, copper, aluminium, titan, uranium allow our people to create machinery that replaces tools in industrial enterprises in later stages of the game;

Running water, coal, oil, gas, uranium supply machinery in our enterprises with energy it needs to operate

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**Economic zone of control**

From the beginning, every town can establish control over the hexes neighbouring to it. Should you want to increase its reach, you’ll need to build a road to hex you interested in. More advanced roads will provide access to more remote areas. Roads are built by state, - road project costs your treasury certain amount of grain/money, and creates demand on building services.

Roads are:

1) Dirt road;

2) Brick road;

3) Railroad;

4) Asphalted road;

5) Pipeline;

To take the hex under control, you need eliminate nomadic tribe that may use it as a hunting ground, and assign an army to patrol it. Note that to tax the hex your army strength need to match the population of the hex.

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Assets

Every enterprise, when ready to expand, needs to invest in its assets, - essentially, the tool that new worker will use daily. In industrial enterprise it will be tools or machinery, in trade enterprises, - transport.

Every asset needs a crew to operate. First assets are tool sets, made of stone, - every of them, obviously, need just one worker. In later ages, each machinery needs certain number of workers.

Also, every asset have a price. When enterprise expands, it has to pay for it from its account. In process, it increases demand on given type of assets (tools, ships, machinery etc.) When it shrinks, it can sell it, - price is added to its account.

Every asset has a list of resources it needs to be produced, except stone tools. If resources are not available, enterprise may go with whatever option it has.

Every enterprise tries to purchase best possible equipment. It may be something you cannot yet produce, but can import from the neighbour you are in contact with. Note that it will mean some of your capital will go to neighbour pocket, - avoid it, if possible!

Latest industrial assets has educational requirements for workers.

Possible assets are (from worst to best):

**Industrial assets**

Stone tools (1 worker, no resources)

Flynt tools (1 worker, flint)

Bronze tools (1 worker, copper, tin, wood)

Iron tools (1 worker, iron, coal)

Watermill machinery (10 workers, iron, coal, wood)

Steam-powered machinery (25 workers, iron, coal, wood)

Electrical plant (50 workers, coal/oil/uranium/running water) – provides power to late-game factory assets

Electric-powered machinery (10 workers, iron, copper, power to supply. Worker needs school degree)

Robotic line (5 workers, iron, copper, aluminium, oil (plastic?), power to supply. Worker needs college degree)

AI Robotic line (1 worker, iron, copper, aluminium, oil (plastic?), power to supply. Worker needs university degree)

**Trade assets**

Canoe (1 worker, wood)

Wheeled cart (1 worker, wood) – do we need land trade assets? To replace with roads?

Galley (10 workers, wood, copper, tin)

Quadreme (25 workers, wood, iron)

Caravel (30 workers, wood, iron; workers need school grade)

Galleon (50 workers, wood, iron; workers need school grade)

Steamboat (25 workers, wood, iron, coal to supply; workers need college grade)

Diesel trade ship (30 workers, iron, copper, aluminium, oil to supply; workers need college grade)

AI trade ship (5 workers, iron, copper, aluminium, oil to supply; workers need university grade)

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Population and labour pool

Population increases each year by certain percent of existing population, as far as food supply is sufficient. Percent of increase depends on settlement public health, which depends on how crowded your town is and what sanitation infrastructure and policies are in place (there are no any in Neolithic though). New people distributed by wealth levels as per existing distribution, but one level lower. E.g. if your town has 30% house owners and 70% huts owners, youngsters will be on 30% huts owners, and on 70% homeless.

Each young person needs to make a career choice. They are distributed by the town’s enterprises’ vacancies per ratio on uncovered demand. If no jobs available, they’ll try to establish cheapest possible enterprise from all possible options (more profitable, if there are few choices).

Other way to increase labour pool is through assimilation of captives. Each time your army wins a battle, some enemies are captured, and brought to your town.

Possible public health facilities are:

1) Graveyard;

2) Junk yard;

3) Healers;

4) Sewers;

5) Hospitals (workers need university degree);

6) AI-powered medical facilities (workers need university degree);

Wealth levels

Your people accumulate wealth year after year if their income fully covers their expenses. Once their savings are big enough, they upgrading their dwellings, thus increasing their wealth level. Homeless people buy shaky huts providing basic shelter from rain, hut owners buying decently insulated houses, house owners may want to upgrade the property with basic plumbing once technology allow it etc.

Each wealth level has normal level of spending, - wealthier people tend to spend more. It benefits village economy, since local demand on goods increases, and your crafters have more work to do and be paid for. Also, wealthier people more tolerant to your government style, and usually you can impose higher taxes on them without raising protests.

But beware! Wealthier employees have higher expectations on salary, and this may negatively affect competitiveness of your goods should you establish a trade route with less prosperous settlement. Also, higher spending means their savings will accumulate slower, thus their progress in wealth level will slow down, and so will the amount of capital to invest into new enterprises.

Weapons and Army

To protect and expand your lands you need an army. Every soldier in it should be supplied with a weapon from tribe’s armoury, and food sufficient for the length of the campaign. At the beginning, you don’t have professional soldiers, - you can get your fellow villagers to the army temporarily, and you need to pay them the expenses, from your own granary.

Weapons are with you until they’re broken though. You can place an order for weapons in your village, and grain you spent on it will increase your crafters’ income.

You can draft more people than you have weapons in time of need, but generally it is a bad idea: the weapons that your people will bring with them will be inferior to what your professional crafters can make.

Once you have an army, you can either leave army on guard, patrolling the lands you already own, set a campaign plan for it for the current year, or even take it under personal control.

Campaign plan is basically a sequence of hexes to attack. The following outcomes of every attack are possible:

1. If the army managed to defeat an enemy army patrolling the given piece of land with no town in it, or there were no defending army, you have right to tax the population of the hex. If it is within economic radius of one of your settlements, you can include the hex into its economic area. It would mean that hex’ inhabitants will do their shopping in your settlement, boosting its economy. Also, your town-dwellers will have opportunity to establish resource-gathering enterprises there, if any resources are not in exploitation yet.
2. If your army attacked enemy town and won, the whole settlement became fully yours if you can suppress resistance of its civilians. If you cannot, the city cannot be taxed neither by you nor previous owner, but people there still doing their economic activities, - establish enterprises, accumulate wealth etc. You can sack them though.
3. If the hex attacked didn’t belong to any settled ethnos, your army may encounter nomadic tribe there. In this case battle also occurs, and if you succeeded you also can include the hex into economic zone of one of your settlements.
4. If your army lost, either in field or during the siege, it returns home. Campaign plan in this case interrupted.

**Weaponry**

Every weapon has crew to operate it, attack power, and resources needed to produce it. Some weapons can be combined with additional equipment, - horses, shields etc.

Weapons available are:

1. Stone axe (1 soldier, no resources)
2. Bow (1 soldier, no resources)
3. Bronze spear (1 soldier, copper, tin, wood)
4. Iron sword (1 soldier, iron, wood)
5. Catapult (3 soldiers, iron, wood)
6. Crossbow (1 soldier, iron, wood)
7. Steel pike (1 soldier, iron, coal)
8. Arquebus ( 1 soldier, iron, coal, gunpowder to operate)
9. Bombard (3 soldiers, iron, coal, gunpowder to operate)
10. Rifle (1 soldier, iron, coal, gunpowder to operate. Requires factory to produce)
11. Machine gun (2 soldiers, iron, coal, gunpowder to operate. Requires factory to produce)
12. Mortar (2 soldiers, iron, coal, gunpowder to operate. Requires factory to produce)
13. Field cannon (3 soldiers, iron, coal, gunpowder to operate)
14. Biplane (2 soldiers, iron, wood, copper, gunpowder+oil to operate)
15. Bazooka (1 soldier, iron, aluminium, gunpowder. Requires factory to produce)
16. Assault rifle (1 soldier, iron, aluminium, gunpowder to operate. Requires factory to produce)
17. Tank (3 soldiers, iron, coal, gunpowder+oil to operate. Requires factory to produce)
18. Fighter plane
19. Modern tank (3 soldiers, iron, aluminium, titanium, gunpowder+oil to operate. Requires factory to produce)
20. Bomber
21. Jet fighter
22. Jet Bomber
23. Stealth bomber
24. Stealth fighter
25. Guided missile
26. ICBM

Additional equipment (prebuilt units only?)

1. Shield;
2. Horse;
3. Leather armour;
4. Bronze armour;
5. Chainmail;
6. Iron plate armour;
7. Mines;
8. Builder kit;
9. Propaganda papers;
10. Inflatable boat;
11. Kevlar armour;
12. Chemical ammunition;
13. Nuclear charge

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Technologies

Your people, during any activity, accumulate experience in a certain branch of knowledge, - economy, military, industry etc. In the beginning of the game it is based purely on the amount of related events and people involved into production, battles, etc., but with invention of writing you will be able to leverage this outcome via education level of your people. It can be improved via educational facilities, built and maintained by state.

Once you’ve accumulated enough experience in certain branch, technology breakthrough happens. Note though that later technologies need some theoretical basis too, produced in a specialised scientific institutions. Also, technologies may have other technologies as prerequisites.

Technologies can open the following things:

1. New assets (tools/machinery/transport);
2. New enterprises’ types;
3. New wealth and educational levels;
4. New state-owned buildings;
5. New weaponry and equipment;
6. New concepts, - money, education, military training, religion, state-owned enterprises;
7. Other technologies to discover

**Trade**

Once rulers of neighbouring towns agreed to allow their traders on each other’s markets, trade route is established. Each town has a competitive power, based on average effectiveness of inhabitants’ tools (the higher, the better), and average wealth of inhabitants (the lower, the better). Competitive powers compared, and amount of import for each town is calculated. Town with higher competitive power exports more than imports, and vice versa. Also, each town has trade competitiveness power, based on effectiveness of town’s transport (ships, etc.) which is compared to calculate how trade jobs are distributed between 2 towns.

In addition to goods’ exchange, towns can export resources (timber, bronze etc.), or assets (machinery, transport) if the destination lacks them.

Trade can be established only if at least one of towns is in trade radius of another. Trade radius depends on level of transportation technology (naval trade assets available), and road type connecting 2 towns. If town 1 can reach town 2, but town 2 cannot reach town 1, all trade jobs are in town 1 (both for import and export); otherwise, trade competitiveness is compared. Note that if ships are not banned to export to town 2, trade radius is equal, since town 2 can import trade ships from town 1.

Trade is possible only if at least 1 of towns accepts merchants from another, - governments may ban the trade. If town 1 banned traders from town 2, its’ merchants still can enter town 2 until town 2 will ban them in retaliation.

**Financial year processing**

1. Total amount of consumers’ products sold calculated. It includes household goods (sum of expenses of all wealth levels in settlement). This amount decreased by amount of goods imported, and increased by amount exported.
2. Based on this, calculate balances of end-product enterprises.
3. Now we can do expansions of end-product enterprises and calculate demand on tools and resources for them.
4. Calculate balances for trade enterprises. Their income, - amount of trade \* profitability of trade route (based on difference between settlements’ competitive power). Their expansions create demand on transport assets
5. This allow to calculate balances of tool/machinery/transport making enterprises

Every year every enterprise calculate its balance. Its revenue is equal to sum of all products sold in a current year. For every product, amount sold is calculated as a share of demand on it per ratio to enterprise’s share in productiveness pool for a given product. Expenses includes employees’ wages (depending on their wealth level (?) and education), and machinery’s operational costs.

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**Education**

Once writing is invented, you can provide your people with education. It increases accumulation of knowledge, competitiveness of your high-tech products and allow to fill the skill-demanding vacancies in your enterprises. Possible educational levels are:

1. Literacy (speeds up knowledge accumulation)
2. School grade (requires school facilities)
3. College
4. University

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**State Building projects.**

State can initiate its own building projects:

1. Chief granary, - place where you store grain collected as taxes;
2. Barracks, - home of your soldiers;
3. Roads, - way to connect remote hexes to town centres;
4. City walls;
5. Public health facilities (see Population and labour pool);
6. Educational facilities