

22. Technologies

Technology advances occur through the drawing of Technology projects (later on called TECHS), and through both sides' investments into research. Technological research occurs each game turn.

Technological research is handled at the alliance level, for the same alliance (Entente vs. Central Powers). Each nation shall allocate a specific share of its budget to research and the whole lot is sent to a global pool.

The information window will give you all the details you need to know on technologies, their fields of application (naval, land, air or general), and the benefits they provide (new weapons or doctrines for instance), etc.



22.1 The Types of Technologies

Each side gets its own set of technology projects (some of them exist only on one side). Technologies are classified in the following main domains: land, air, naval and generic.

For historical, gameplay and chrome reasons, each project is assigned to one nation of the concerned alliance (for the Entente, projects are either Russian, French or British; and for the Central Powers they are either German or Austrians). **This is important** because the receiving nation will be the first able to use the said technology, even among friendly members of the same alliance.

Each project has a usually a year attached to it (1914 to 1917) which is the earliest date during which it can be researched.

- ❖ Projects with a year greater than the current year are not put into the side's technology pool.
- ❖ During the **Winter** Interphase, the next year's technology projects are put into the technology pool (i.e. made available for research)

All technologies are identified and unique, but in some cases, the same technology has more than one application, as there are several variants (e.g. gas and mortars).

Also some technologies have a basic start chance to be discovered that is higher than the regular 17%, usually 33% instead. It is supposed to represent some kind of leadership by that side on that specific type of technology (e.g. Germany has an advance in combat gas warfare, so her Chlorine Gas tech has 33% chance of success instead of 17%)

22.2 Procedure

Starting with **October 1914**, each side automatically carries out some technological research, at the start of each game turn, during the planning phase.

Starting with **1915**, each side may in addition invest up to **40 EP** per Interphase, to enhance the research. The amount is for the whole side, and can be shared among its different members.

Sequence

Each side executes its research during each turn's Planning phase. The actions are executed simultaneously. The research process works as follows:

- Each **Planning phase**, both alliances each can choose up to **five** technological research projects (TECH). These are the TECHs that will be researched.
- An initial test is performed the first time at the end of the phase, in order to determine if the TECHs can be researched or not. In case of failure, the research is abandoned and can be started again in another turn.
- In case of success and in each subsequent turn, the currently researched projects are tested again during the planning phase.
 - If the test is a failure, the project receives a slight improvement (i.e. its percentage of success increases for the next attempt).
 - In case of success, the relevant TECH is discovered and one nation in your alliance receives its benefits immediately (other nations of the same alliance will receive them a bit later, and opposing alliances will "learn" about it even later).

Maximum Number of Projects in Progress

A side may have no more than **5 technology projects** on research at the same time. No more than two projects may come from the same nation.

As soon as there are 5 technology projects on research, no more projects are researched. That side has to wait until successful research opens a space on the track.

22.2 Research Budgets

Each side may invest **40 EP** per Interphase (starting in Winter 1914) to enhance their research. This is done simply by moving the slider at the bottom of the technological window. The higher the amount spend, the higher the chance to make a discovery.

No single power needs to spend all alone the said 40 EP. The expense may be split between all the powers on the same side (Turkey excluded). The players freely decide how this expense is split, with a **5 EP** minimum per spending power.

Note that Turkey may not spend, and Italy may spend no more than 10 EP.

22.3 Discoveries and Progression of Research

Each side executes a research check every turn on the technologies under research. The project is tested under its percentage of success chance, which is indicated on its description in the Technological window.

Note: **+17%** for Central Powers research test when "Deutsch Tech" technology is available

There are two possible outcomes for each test:

- ❖ If successful : the relevant technology is discovered, and the project is given to the researching **Major Power** of that side whose flag appears on the technology box. This power benefits from the technology effect, but **without disclosing it yet!**

Exceptions: **Trench** and **Aviation** related technologies are be shown and applied immediately. They cannot be kept secret.

- ❖ If the check fails, the technology is not discovered yet, but receives a slight boost in its chance of discovery for the next turn (so in the long run, it will ultimately succeed).

22.3.1 Technology Progression

At the end of the technology phase, each side has **one** of its projects that advances by **16%** extra chance of success, chosen at random. This also includes those technologies which have been tested but failed.

If the side has invested **40 EP**, a second project in the list will advance by 17%, or alternatively the initial one will advance 33% (choice is random).

22.4 Implementation and Use

When a Major Power holds a **discovered** but still secret technology project, it may disclose it at any moment to enjoy the benefits of this technology.

All other friendly powers in the same Alliance also enjoy the benefits of the technology, but with a **1 turn** delay.

However, some technologies require the existence and knowledge of another technology before being used (e.g. fire through the propeller disk, and light tanks). This does not apply to researching these technologies, just to using them. (See the list of technologies in Appendices.)

When a technology is first used, the existence and availability of the project is informed to the opponent. Each subsequent turn, the said technology is tested, and maximum three turns later (may be earlier if test is successful) it becomes **Public** which means the opponent may now use it as if it had successfully researched it (see next paragraph).



22.5 Public Domain Effects

When a technology project reaches the “**Public Domain**” , it may be easily learned by the enemy. The enemy side just needs to select its own matching technology project (if it has one) and it's chance of success is almost 100% (but still need to be researched)

Reminder : each side has its own technology pool, some technologies may not become available, even if in the public domain.

A few technologies cannot be acquired by the enemy, even if “public”: **tanks** (heavy and light) and each side's specific technologies (see Appendices). Each side must develop them on its own.

22.6 Specific Cases

The technologies which enhance **Trench** combat and **Chlorine Gas** are automatically acquired by the enemy when reaching the “**Public Domain**”; there is even no need to put the project under research.

The concerned “Trench” technologies are **Mortars**, and **Land Mines**. Their acquisition also translates into an immediate increase of the Trench level of units on the map.