

# Chronicle - Planning Map Module & AI Strategic Assistant

## Comprehensive User Manual for War in the East 2 (WITE2)

Welcome to **Chronicle**, the ultimate operational staff assistant for WITE2.

War in the East 2 generates a staggering amount of data every single turn. Chronicle acts as your digital High Command, ingesting your Commander's Report exports, analysing the exact TOE, fatigue, supply, and leadership of every unit on the map, and synthesizing it into actionable, Corps-level intelligence. It plots historical footprints, draws tactical axis-of-advance maps, and can even utilize Google's Gemini AI to draft complex, multi-turn operational directives.

## 1. Installation & Setup

Chronicle is a standalone Python application. It runs locally on your machine and does not alter your WITE2 save files.

### Prerequisites:

1. **Python 3.x:** Ensure Python is installed on your Windows or Mac system.  
<https://www.python.org/downloads/>
2. **Required Libraries:** Open your Command Prompt (or Terminal) and install the interface and data-processing libraries by typing:  

```
pip install customtkinter pandas
```
3. **Inkscape** Chronicle generates high-resolution .svg map overlays. Installing Inkscape and linking it in the app allows Chronicle to automatically open your newly generated planning map the second it finishes running. Obtained from the Microsoft Store free of charge

### To Run:

Simply double-click the `Planning_Map_Macro.py` file, or run it via the command line:

```
python Planning_Map_Macro.py.
```

## 2. The Data Engine (What You Need to Export)

Chronicle is fuelled by the .csv files generated by WITE2. **All of these files must be saved into the Commanders Report folder in the game on your computer.** The script will automatically detect the Scenario Name and the Turn Number based on the filenames the game generates.

### A. From the Editor (Export Once Per Scenario)

These files provide Chronicle with the static geography of the map. You only need to export these once per scenario from the WITE2 Editor.

- **city.csv** or **Location.csv**: Provides the exact X/Y map coordinates of every town. Chronicle uses this for pathfinding and drawing thrust arrows.
- **Location-Depot.csv**: Used by the engine to mathematically calculate the nearest active supply hub for exhausted units to retreat to.
- **Location-Industry.csv**: Fallback geographical data.

## B. From the Commander's Report (Export Every Turn)

Open the Commander's Report (CR) in-game, navigate to the specific tabs, and use the 'Export CSV' button/hotkey. Chronicle reads these files line-by-line:

- **Unit-Main.csv** (*Essential*): The core file. Chronicle reads the `x`, `y`, `Size`, `Type`, `HHQ` (parent), `%Toe` (strength), `Fat` (fatigue), `MP`, and `wdr1` columns. It uses this to evaluate if a unit is combat-ready, exhausted, static, or due to withdraw.
- **HQ.csv** (*Essential*): Establishes the chain of command. Chronicle actively scans the `Aslt` column to identify your global Assault HQs, and checks the `frzn` column to track when frozen garrisons will thaw.
- **Leader-Leaders.csv** (*Essential*): Reads the `Ini` (Initiative), `Adm` (Admin), and `Mech` values of your generals. This is used by the AI to recommend sackings or promotions.
- **Unit-Supply.csv** (*Essential*): Chronicle scans specifically for Panzer and Motorized divisions to calculate your theatre-wide `Fuel%` reserves.
- **Air-Pilots.csv** (*Optional*): Scans for the `Miss to Max` column to track your total Luftwaffe pilot deficit.

## 3. The Command Interface (GUI Tour)

### The Top Bar

- **Axis / Soviet Toggle**: Select which side's data you want to analyse. The algorithm's geographic cones and frontline maths will automatically invert to suit OKH or STAVKA perspectives.

### Left Panel: Configuration

- **CSV Folder**: Point this to the folder containing all your exported `.csv` files.
- **Map Image**: Select a base map image (e.g., a clean WITE2 map screenshot). Chronicle will draw its SVG vector graphics directly over this image.
- **Inkscape**: Point this to your `inkscape.exe` file for auto-opening.
- **Scenario Dropdown**: Automatically populates with detected scenarios from your CSV folder.
- **Gemini API Key**: Paste your free Google AI Studio API key here to activate the true High Command AI logic (see Section 5).

### Middle Panel: Timeline & Display Toggles

- **Current & History Dropdowns**: Select the turns you wish to compare.

- **Show History Lines / Current Turn Only:** Toggles whether the map draws movement tracking lines comparing a past turn to the current turn.
- **Footprints:** Toggles the drawing of transparent "Convex Hull" polygons around your Corps on the map, visually showing the physical space your armies are occupying.
- **Use AI API (Key Req):** Toggles whether the Strategic Directives use the Gemini AI or the built-in Local Tactical Fallback maths.
- **Make Map:** Toggle this off if you only want the text-based intelligence and want to skip SVG generation.

### Right Panel: OOB Filters

- **Army Group -> Army -> Corps:** This is a powerful cascading filter. Selecting an HQ here instantly filters the entire application. The Intelligence logs, the Strategic Directives, and the Map itself will *only* display data and draw arrows for the specific chain of command you have isolated.

## 4. The Intelligence Outputs

When you click **RUN ANALYSIS**, Chronicle populates the lower dashboard:

- **Weather Radar (Top Left):** Calculates a 4-week forecast mapping map Y-coordinates to weather zones (Arctic down to Caucasus), alerting you to impending Mud or Snow penalties.
- **Logistics & Air Intel (Top Right):** Warns you of average Panzer/Motorized fuel shortages and Luftwaffe pilot deficits.
- **Tactical Log (Left Box):** A granular, unit-by-unit breakdown. It assesses every single Corps, reading the TOE/Fatigue of its sub-units. It categorizes units into [READY], [PAUSE], [REFIT], or [STATIC]. It also calculates the optimal nearby Supply Hub/Railhead for retreating units, alerts you to Command Point (CP) overloads, out-of-range units, and lists imminent unit withdrawals.
- **Strategic Directives (Centre):** The interactive docket of operations. Features checkboxes so you can tick off orders as you execute them in-game. Can be sorted by Priority (Refits first, Advances last) or Geographically (North to South).
- **Theatre Readiness & Dossiers (Right Boxes):** Tracks your global Assault HQ limits. Tallies how many of your Corps are in optimal shape vs. ineffective. The bottom box holds Top Secret dossiers (see AI section below).

## 5. High Command AI vs. Local Tactical Logic

The script features two entirely different "brains" for generating your Strategic Directives in the middle docket.

### The Local Tactical Fallback (API Toggle OFF, or No Key)

If you run the script without an API key, it defaults to pure, cold mathematics.

- **How it works:** It reads the "mass status" of your Corps. If the Corps is exhausted, it orders a halt. If it is ready, it queries the `get_sector_targets` function. This function uses geographic cones (skewed North, South, or Centre depending on the

parent Army Group) to find the 6 mathematically closest enemy towns in front of the Corps.

- **The Result:** It is lightning fast, reliable, and provides excellent local tactical objectives. However, it lacks "creativity"—it ignores terrain, ignores unit names, and ignores the stats of the Generals in charge.

## The High Command AI (API Toggle ON, Valid Key Required)

If activated, Chronicle packages the mathematical theatre data into a JSON payload and sends it to the `gemini-2.5-flash` model.

- **How it works:** The AI acts as a true operational staff officer. It reads the *context* of the data.
- **The Result:** The AI might notice a Panzer division is commanded by a high-initiative General and explicitly order them to execute a deep thrust toward a strategic rail hub, while assigning slow infantry to a holding action. It provides a descriptive paragraph of its "Strategic Reasoning."
- **Secret Dossiers:** Most importantly, the AI analyses the `Ini`, `Adm`, and `Mech` stats of your generals. It actively populates the "High Command Dossiers" box in the bottom right, recommending historical sackings and leader swaps for generals who are failing to meet the demands of their assigned sector.

## 6. Understanding the Map Output

Chronicle's SVG generation is designed to look like a clean, World War II situation board.

- **Footprints:** Shaded polygons showing the physical footprint of the divisions inside a Corps.
- **Historical Movement:** If enabled, red circles and lines track where a Corps was X turns ago compared to today.
- **Tactical Rings:** Hollow, dashed circles drawn over specific towns, indicating recommended operational objectives.
- **Axis of Advance (Thrust Vectors):** A bold, dashed arrow projecting from the Corps HQ. Chronicle takes the suggested target towns, calculates their geometric "Center of Mass", and projects a single, clean best-fit axis line straight through that center of mass to the deepest target.
- **Refit Boxes:** If a Corps is shattered, instead of an attack vector, a yellow dashed defensive box is drawn around the HQ to signify a halt/refit order.
- **Rail Repair Lines:** Blue dashed lines actively direct your FBD/NKPS railway repair units toward the nearest damaged hub.