

VERSALOX

Game and Systems Reference

From 0.5-metre blocks to programmable production networks

A detailed paper about the game idea, the visual scale, survival and construction, items and materials, knowledge and progress as well as energy, Versux, tablet and Vorysken.

With examples, schematic illustrations, a source index and a complete appendix of the items, materials, recipes and quests registered in the project reference.

Edition	Foundation
1.0 · English	Project snapshot: 11 October 2026
Public prototype	Prototype 0.0.2 · Era 1 and 2
Purpose	Look it up, understand the connections and document further expansion

This paper describes a state of development. Registration of a piece of content and existence of a feature does not imply completed balance, full playtesting, or release. The diagrams are explanations, not game screenshots.

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PART I

Game and world

The basic idea combines a changeable world with tangible objects, handcrafted processes and later your own control logic.

1 • What defines Versalox

Versalox is a single-player survival, crafting and building game in a procedurally generated hybrid voxel world. Progress leads from the first camp through specialized workshops to powered machines and player-controlled production networks. Players build both a place to live and the processes that keep it running.

The central cycle is: explore, gain resources, acquire knowledge, process it, build it and improve it. A new tool opens up material, a station opens up a process and a connection opens up the interaction of several devices. Automation relies on these physical foundations: it requires existing equipment, energy, data access and a path for resources.

Players shape the world themselves. Stations, machines, storage and their relationships are the focus. A comprehensive NPC population or economic simulation is not currently a core system. Multiplayer is likewise not part of the single-player version described here.

Reading the three development states

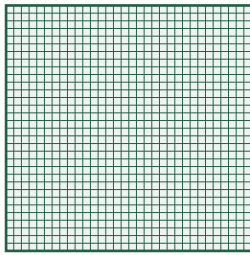
Labeling	Meaning
Public	The available prototype 0.0.2 focuses on Era 1 and 2.
Project prototype	Present in the local project, but still in progress. The additional systems are not automatically part of the public download.
Planned	Direction or concept without promise of finished game content.

The current working framework includes ten Eras. Content is registered for Era 1 to 8, but with different depths. Era 9 and 10 are planning frameworks. Existing advanced Versux functions do not preempt a fully developed Era 9.

Basis: [S01], [S02], [S05], [S34]. Source index at the end of the main part.

2 • Block scale, textures and models

The terrain grid uses blocks with an edge length of **0.5 m**. A full block measures $0.5 \times 0.5 \times 0.5$ m and has a volume of 0.125 m^3 . Two block edges equal one metre. This grid provides the spatial basis of the ground; it does not require every item to be a cube or exactly one block in size.



0.5 m / 32 pixels

1 block = 0.125 m³

1 Versi = 625 V = 125 litres

2 block edges = 1 metre

64 texture pixels = 64 model units per metre

The corresponding block-related material surfaces use a 32×32 pixel base scale. 32 texture pixels are on 0.5 m, so 64 pixels per meter. One pixel corresponds to 1/64 m or 1.5625 cm. Standardized Blockbench models appropriately use 64 model units per Unity meter.

Point filtering preserves the clearly visible pixels. Suitable surfaces tile their texture along longer components rather than stretching a small tile large. The scale combines terrain, tools, machines and inventory representation into a consistent visual language.

32×32 is not a blanket file format. Atlases, plant images and icons rendered from models have different resolutions. For example, 32 pixel tiles may lie within a larger raw-material atlas; Velkorn uses transparent 48×64 plant images and several new model icons are 128 pixels in size. What matters is the intended pixel density on the surface.

The current standard character has approximately 1.70 m upright height. This roughly corresponds to 3.4 block edges. The first person view and shoulder camera show the same character. Models, animations and effects remain prototypes and will be further developed.

Basis: [S01], [S12], [S31], [S32], [S39]. Source index at the end of the main part.

3 · World generation, terrain and time

The world is generated from a seed and the generation profiles used. Under the same conditions, reproducible initial data is created. Changes made by the player are saved separately from the untouched starting terrain. For example, when reloading an area, mined terrain, harvested wild plants, and placed structures must return to their saved state.

The world loads and unloads sections as you play. The current grid constants are 32×32 cells horizontally and 128 cells vertically. With 0.5 m per cell, this corresponds to 16×16 m and 64 m height in the respective data section. These data dimensions neither describe the total extent of a world nor a global maximum height.

Time source	Uses and Limitations
GameTime	Continuous calendar time, day and time of day. Normal: two real seconds per game minute, i.e. 48 real minutes per game day.
Realtime	Active real time of the world. Starts at zero, is retained when saving and does not count pauses or closed games.
Production time	Limited simulation step for production, consumption and calculation credits; After long frames, lost work is not made up.

The true pause menu pauses time, production and script execution. An open tablet or editor alone doesn't pause the world. Sleeping shifts calendar time; the skipped period produces no additional crop, water and energy. Active seconds during the visible sleep animation continue to count.

Streaming rules vary by system: fields and wells honor stored active runtime within their own boundaries. Vorysken jobs and corresponding unloaded machines do not become an unlimited background simulation. The treatment of abandoned facilities is still open for future trips to other planets.

Basis: [S27], [S30], [S34], [S35], [S39]. Source index at the end of the main part.

4 • Survival, character and equipment

Health, hunger, thirst, endurance and exhaustion determine early supplies. Food and water are therefore production goals even before the first machines. Fire, cooking, drying and a place to sleep, along with storage and a return point, form the basis of a permanent camp.

- Food can be gathered, fished or hunted. Fire pit and roasting stones enable cooking; Drying racks process meat and hides.
- Hunting, Melee, Bait Traps and Fishing have their own actions. Four documented creature types are Hopustree, Wizzlet, Murrak, and Rauk.
- Tamed creatures have trust, commands, names, homes, and saved locations, among other things. This is not a full animal breeding or population simulation.
- Death, inventory left behind, and respawn are tied. The return marker serves as a bound return point; exact behavior depends on the current state of the game.

The left and right hands can be used separately with suitable tools and objects. Tool wheels make changing easier. Consumption quickslots are used for food, for example. Changing hands does not change profession assignments or restore spent durability.

Tool condition

Supported tools have individual durability. Wear occurs when the work is successful, for example when blocks are actually removed. A worn tool remains as an object and requires repair. The documented Simplenium pilot and the field hoe are existing examples; A general machine maintenance system with replaceable wearing parts is still being planned.

Basis: [S01], [S11], [S12], [S33]. Source index at the end of the main part.

PART II

Items, crafting and building

Quantities, divisible amounts of material and spatial objects fulfill different tasks. Their transitions explain manufacturing, storage and placement.

5 • Items, instances and inventory

Shape	What remains?	Example
Normal item stack	Item type and number of pieces within the stack limit	Stick, Fiber strip, ingot
Item instance	Identity and own condition per copy	Tool durability, filled container, program media
Material inventory	Material type and exact integer base quantity	Earth, clay or ore concentrate
World object	Position, rotation and, if applicable, operating status	Terrain block, warehouse, machine

A normal stack occupies one inventory slot. Exceeding its stack limit requires another stack. Each stateful instance occupies its own slot and must retain its identity during a transfer. A medium containing revision r3 and code is therefore different from a blank instance of the same item type.

The current code provides ten base item slots, with applicable bonus and talent slots added separately. The material inventory has its own base capacity of 100 Versi and does not use these item slots. A carry bag adds organizational options through its own internal slots while remaining an item itself.

The stack limits are defined per item. The frequent size classes 1, 4, 8, 16, and 32 support early balance; individual content can have different values. The appendix lists the registered limits, not the promise of a final balance. Even a catalog limit does not replace the instance rule: individual containers and tools must be managed separately.

Manufacturing, storage, removal and dismantling check inventory and space. Full inventory should not automatically cause resources to disappear: a finished product or harvest remains available for extraction according to the rules of the respective station.

Basis: [S02], [S11], [S40]. Source index at the end of the main part.

6 • Materials and five quantity units

Materials are divisible resources with a material type, form and properties. Soil and sand are loose bulk solids, for example; clay can be wet, dry or fired. Processing can change form and properties without converting the quantity into an ordinary item stack.

Unit	Integer V	Volume	Liters
V	1	0.0002 m ³	0.2
Vo	5	0.001 m ³	1

Unit	Integer V	Volume	Liters
Ven	25	0.005 m ³	5
Vado	125	0.025 m ³	25
Versi	625	0.125 m ³	125

1 Versi = 5 Vado = 25 Ven = 125 Vo = 625 V. Each level grows by a factor of five. The volume scale corresponds to the game model; it is not a realistic load simulation. Different substances can be contained in the same volume unit without the paper claiming identical mass.

The material station divides and combines offered portions without loss of quantity. Example: A supply of 1 Versi can be divided into five Vado; two of these Vado together correspond to 250 V or 50 Vo. Reportoning does not create a new resource or additional experience for a reversible loop.

Recipes can require both material quantities and ordinary items. The material inventory distinguishes total stock from the portions offered. Versux converts quantities explicitly, for example through ToV and the chosen unit. Internal material requests must resolve to whole numbers of V.

```
ToV(2, Units.Versi) -:- Print
// Ausgabe: 1250
```

From material to block

An earth block item can be formed from 1 Versi earth at the material creation station. This item is then placed in the grid as a terrain block. Shaping material, mining terrain and dismantling a finished machine are different processes. There is no general function that breaks down any item into its original ingredients without loss.

Basis: [S01], [S02], [S20]. Source index at the end of the main part.

7 • Crafting, stations and process states

Hand crafting creates simple objects directly. Specialized stations develop their own procedures and requirements. A recipe specifies ingredients and output; Depending on the system, profession, rank, activation, energy, capacity and processing steps are added.

Station or process	Task
Primitive workshop / workbench	Early tools, equipment and stations
Wood splitting place/Carpentry bench	Trunks, Split wood, planks and components
Material station	Portioning and combining
Material creation/mixing station	Form blocks or execute material recipes
Primordial resource station	Minting seeds and processing tubers into raw materials
Hand mortar / Smelting Furnace / ingot mould	Prepare, melt, pour and cool
Forming press / precision assembly / module workshop	Driven components, electrical components and devices

Time-based methods preserve their inputs, progress and outputs in station state. A profession assignment is checked before a new specialist process; a burning or cooling process that has already started does not run backwards simply because the player assigns a different Chrono.

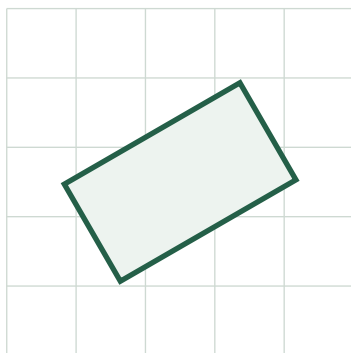
Depending on their function, station interfaces show stock, usable ingredients, results, energy and progress. Quantity fields and MAX simplify batch processing. A recipe may be visible yet unavailable: missing ingredients, the wrong profession, insufficient energy and insufficient output space are separate reasons.

The recipe attachment takes over all 121 registered recipe lines of the current generated reference. It is not a complete catalog of every interaction: frying stones, drinking, maintenance and special machine processes may have their own operating rules. Job, energy and time conditions are therefore additionally explained in the system chapters.

Basis: [S01], [S02], [S11], [S36], [S37], [S38]. Source index at the end of the main part.

8 • Free placement and rotation

Many objects, stations and machines can be located on the map independently of individual block centers. The footprint can span several adjacent floor blocks. Rotatable structures are aligned in **15° increments**. After 24 such steps a full revolution is achieved.



Terrain: fixed 0.5 m grid

Structure: free position on a valid base

Example rotation: $30^\circ = 2 \times 15^\circ$

Check the whole base, overlap and reach

Diagram; not a screenshot or scale model

Free means that the object can choose its supported position within the valid installation area. The placement remains checked: suitable ground, sufficient support, overlaps and reach. The green or red preview shows whether the current situation is permitted. Which axes of rotation or inclinations an object type allows depends on its placement rule; A general arbitrary 3D rotation is not guaranteed.

Terrain blocks remain in the 0.5-m grid. A block of earth cannot simply be placed diagonally into the terrain as a freely rotating cube. Modular foundations, walls, door parts, pillars and ladders can use their own docking and connection rules. Setting up, setting the grid and docking complement each other.

A well shows why the whole base counts: its area requires suitable, sufficiently level earth or grass. A single appropriate point under the center is not enough. Other structures may allow for other substrates. The building site must therefore match the specific type of property.

Dismantling returns eligible objects as items. Connections and contents must be removed according to the relevant removal rules, and the inventory needs space. Residual energy is currently not stored in the machine item. Storage with open jobs or buffer contents has additional safeguards against dismantling.

Basis: [S01], [S07], [S13], [S30]. Source index at the end of the main part.

9 • Build mode and default controls

The construction mode complements the hands and tools with two construction bars, each with ten saved shortcuts. These slots do not generate items and do not expand the inventory. A slot can also reference the exact instance of an item. If inventory is zero, the link remains and appears grayed out.

Input	Action
WASD / Mouse	Move/look around
Spacebar / Shift / Ctrl	Jump / sprint / crouch
E / hold E	Interact/dismantle appropriate objects
I/C/O/T/J	Inventory / Hand-Crafting / Chronos / Talents / Codex
Q / Shift + Q	Switch left/right tools; hold: tool wheel
B	Open or close build mode
G/Tab in build mode	Release or lock mouse/change construction bar
X + mouse wheel	Change the slot of the active construction bar
Mouse wheel without X / left-right arrows	Rotate a supported structure during placement
Right click / left click on preview	Place/cancel preview
Alt with supported area tools	Single block precision mining
F6 / 8 or 9	Select perspective/camera shoulder

With the mouse cursor unlocked, players can drag an item onto a build-bar slot or assign it with a click. Occupied slots can be swapped, and right-click removes a shortcut. The world continues during build-inventory operations, while movement and tool actions are locked.

Keys can be reassigned in the central control menu. The table is the standard layout, not a replacement for the in-game contextual clue. A Controller basic operation is available; Text input still requires a keyboard and not every additional action has a standard assignment.

Basis: [S01], [S07], [S08]. Source index at the end of the main part.

PART III

Knowledge and production progress

Eras open up technical possibilities. Chronos determine specialist knowledge, practical work develops professions and talents allow conscious specialization.

10 · Chronos, professions and talents

All-rounder knowledge is always available, occupies no profession slot and has no profession rank. The ten basic profession Chronos can be collected permanently. Specialist work requires the appropriate Chrono assigned to a personal profession slot and, where applicable, the required rank.

A free profession slot is available initially. The second is unlocked via a talent in Era 2 for a global skill point, the third accordingly in Era 3 and requires the second. A change of era alone does not open these places. Up to three professions can be assigned at the same time; The same Chrono is not entered multiple times.

Profession	Examples of jurisdiction
Miners	Extracting minerals and processing ore
Botanist	Wild plants, tree felling and natural plant resources
Fisherman/Hunter	Fishing or hunting and trap work
Farmer	Cultures, potted plants and primary resource cycles
Cook	Dry, grind, prepare and cook food
Carpenter	Process wood and produce wooden components
Stone and ceramic artisans	Clay, vessels, mineral stations and components
Textile and leather craftsmen	Hides, cords, bags and sleeping gear
Metal craftsman	Melting, casting and appropriate technical production

Learning and assigning are separate actions. O opens the Chrono collection; the professional chronicle is the introduction and can also be drawn up. Once access has been opened permanently, the book does not have to be carried with you at all times. Proof such as a completed entry station does not automatically grant you the profession.

Only suitable successful skilled work gives the relevant assigned profession professional XP. There is also general character experience, levels and global skill points. Reportoning, inserting, and undoing unchanged inputs do not produce an arbitrarily repeatable experience. Processes that have already started continue to run after a chrono change.

Story mode checks progression requirements. Sandbox makes experimentation easier by bypassing certain requirements. This bypass does not introduce new production technology or remove every physical constraint of a machine.

Basis: [S09], [S10]. Source index at the end of the main part.

11 · The ten Eras and their current scope

Era	Focus	Classification
1 · The first ascent	Camp and survival	Broad basic flow; public in 0.0.2
2 · The workshop area	Wood, clay, material and settlement	Broad basic flow; public in 0.0.2
3 · Fire and mineral	Simplenium, high temperature and casting	Playable project section
4 · Cultivation	Velkorn and renewable food	First cultivation cycle
5 · The permanent settlement	Permanent water supply	Compact well section
6 · Metal and mechanics	Veyrium and component socket	First metal section
7 · Industry and supply	Heat, movement and electricity	First energy and production chain
8 · Electricity and automation	Components, Versux and logistics	Several technical prototype systems
9 · Versux and high technology	Larger systems and later applications	Planning framework; no developed Era
10 · Space travel	Travel and other planets	Long-term planning

The main quest combines the introduction with suitable procedures and new possibilities. The current generated reference contains 129 targets: 46 in Era 1, 40 in Era 2, 17 in Era 3, 10 in Era 4, 3 in Era 5, 4 in Era 6 and 9 in Era 7. There is no main quest sequence registered for Era 8 yet. A short transition like Era 5 does not prove that settlement expansion has already been completed.

The Primitive Chronicle adds 50 optional quests across Era 1 to 3. Up to three can be tracked. The appendix lists all registered titles and objectives. They support a range of activities without creating a second mandatory main route.

Seven tutorial cards accompany major system transitions. Full, New Systems Only and Off control automatic hints; the basic explanations remain permanently available in the Codex. Tutorial progress and main quest completion are separate states.

Basis: [S02], [S03], [S04], [S10], [S34]. Source index at the end of the main part.

12 · From camp to workshop

Early construction begins with loose sticks, fibers, stones, food and water. Fiber strip, a sharpened stick and the primitive workshop provide access to equipment and stations. Fire pit, Drying rack, sleeping area, storage and a shelter add up to a functioning camp.

Wood is more than an abstract raw material. At the wood-splitting station, logs can be cut into sections and processed into Split wood. The carpentry bench turns suitable parts into planks and building elements. Irreversible processing is distinct from simply removing an intermediate item.

Clay is extracted, dried, shaped, mixed and fired. Ceramic vessels and a clay water container support local water logistics. The material station supplements the handling of individual items with a continuous quantity scale. Looms and leather processing create cords, bags and other equipment.

Pressed clay provides modular foundations, walls, window and door panels, doors, pillars and ladders. Movable doors and stacked components turn a shelter into a usable settlement. Placed components do not automatically require the crafting profession; the specialist examination concerns the corresponding production or technical activity.

A named Settlement stone evaluates functions in a 16-m area using a checklist. It makes the progress of the workshop visible. It is not an NPC administrative center and does not yet establish an automatic economy. Well placement in settlement areas later uses this spatial context.

Basis: [S01], [S09], [S11], [S13]. Source index at the end of the main part.

13 • Plants, water and renewable food

Early crops include, for example, berries, tea, herbs and ivy. primordial plants expand the cycle to include imprinted seeds and tubers from which resources are extracted. The primordial resource station combines biological raw materials with water and selected materials. Five plant forms belong to the documented early system.

Velkorn: a complete farming example

- Wild Velkorn provides grains that are also seeds. A field hoe converts a free grass or earth cell into a field; the floor remains at the same level.
- Sow one grain. Watering with 1 V of water provides a reserve for 1,200 seconds of growth. The current ripening cycle requires 180 watered seconds; dry soil pauses it.
- The basic crop yields four grains. A one-time addition of 1 V Stone Powder increases the next harvest to five and is consumed in the process. Save at least one grain for the next sowing.
- Three grains become one portion of meal in hand mortar. At the mixing station, a dough is created with 1 V water and a flatbread is created at the frying stone. The water for the dough comes from the appropriate local water container.

Farm furrows are cut into the block surface, with equal texture density and matching collider. Seed, water reserve, growth and addition are stored states. The subsoil of an existing field is protected against accidental degradation; harvest first and clear up the empty field.

The well as a local water supply

The well is built from loose stones and Split wood. It needs a suitable, level soil or grass base. An empty clay bucket takes one charge of water. The current well holds four charges of 1 Versi each and refills one charge in 30 seconds of active game time. A new well starts empty; dismantling discards remaining water. Groundwater simulation and automatic pipe supply are not implemented.

Seasons, compost, other crops, animal husbandry and automatic irrigation are ideas for expansion. They should not be equated with the existing Velkorn slice or the later resource cultivator.

Basis: [S11], [S12], [S13], [S27]. Source index at the end of the main part.

14 · Ore, concentrates, molten metal and ingots

Simplenium opens the early metal route. Veyrium follows with deeper, seed-dependent occurrences; Veyrit is the alloy of both. The terms refer to different materials. Ore, concentrate, liquid melt and finished ingot are correspondingly different intermediate states.

Step	Example and meaning
Extraction	The right tool breaks down the ore block into material.
Process	The hand mortar separates ore into concentrate and stone powder. For Veyrium: 1 Versi ore → 1 Vado concentrate + 4 Vado stone powder.
Melting	The furnace processes suitable concentrate and fuel, not untested any raw material.
Pouring	Melt is transferred to a suitable trough in the ingot mould.
Cool and remove	The finished item is created after the saved casting and cooling state.

The Veyrium example conserves quantity: 125 V of concentrate plus 500 V of stone powder equal the 625 V of one ore block. The current smelting process consumes 1 Vo of concentrate and one loaded piece of Charcoal to produce 1 Vo of molten metal after 30 seconds. Under these recipes, one ore block therefore supplies enough concentrate for 25 ingots.

Veyrit is produced from two Veyrium ingots, one Simplenium ingot and Charcoal, yielding three Vo of alloy. An ingot mould has four separate cavities that can hold different metals. The furnace processes one batch at a time; changing the metal requires an empty combustion chamber.

Clayone complements the high temperature chain via clay dust, mixing and firing. Component sockets, later Veyrit plates and electrical components create the transition from the workshop area to the machine. The technical identifier of an older item can still contain era6, although the game activation is now assigned to Era 7.

Basis: [S14], [S15], [S36], [S37], [S38]. Source index at the end of the main part.

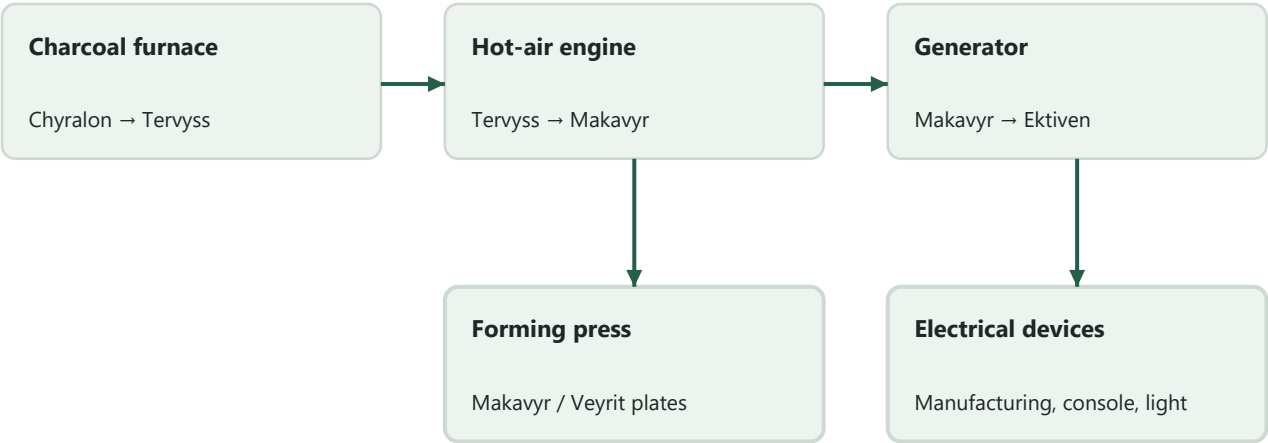
PART IV

Energy and connections

Machine supply, data access and resource movement are three tasks with their own media, capacities and spatial paths.

15 · The four types of energy

Term	Meaning	First use
Chyralon	Chemical energy in fuel	Charcoal in the Charcoal heat furnace
Tervyss	Thermal energy	Heat conduction to the hot-air engine
Makavyr	Mechanical energy	Drive shaft to press or generator
Ektiven	Electrical energy	Electrical cable to devices



Conduits carry compatible energy; data and resources need separate routes.

The furnace converts stored Chyralon to Tervyss with the documented prototype efficiency of 80%. The hot-air engine converts Tervyss into Makavyr with 75%. The generator supplies Ektiven from this. These values are used for game balance and do not determine the real physics of substances of the same name.

Buffers have a limited capacity and energy type. Connections only transfer compatible power between matching ports. Generation, stored quantity, throughput and consumption are different quantities. A filled buffer helps in the short term, but is no substitute for a long-term adequate supply.

Multiple outputs do not multiply the output of a source. If the motor, press and generator are to be supplied together, they share the actually available energy according to the rules of the network. Additional lines create more routes, not free production quantities.

Basis: [S01], [S15], [S18]. Source index at the end of the main part.

16 • Conduits, data and transport

Energy connections provide power, data connections carry readings and commands, and transport connections move resources. Versux uses the data network rather than adding a fourth conduit category. A powered generator beside a console cannot replace its power connection; a data command cannot replace a resource route.

Connection	Current maximum route	Task
Heat conduction	16 m	Tervyss
Drive shaft	8 m	Makavyr
Ektiven line	32 m	Electricity
Data line	64 m	States, measured values and control
Resource transport line	32 m	Appropriate item or storage transport channel

The length includes the entire course including intermediate points and rounded curves. The current construction price is rounded up to one line item per meter or part thereof. A route of 3.2 m therefore costs four corresponding items. The limit applies per connection, not to the total length of the system.

During construction, compatible connections are selected, route and preview are checked and intermediate points are set if necessary. Direction, occupancy, collision and available items are part of the test. When removed, the paid amount is returned according to the saved connection state.

Data connections and devices have message budgets. Request and response require exchange capacity. Cable and wireless share certain equipment budgets; An additional transmitter is therefore not an unlimited data source. When busy, views can remain at the last received state instead of reporting each value as freshly read.

Combined lines with multiple media are prepared, but not implemented as general game content. In the future, such a line would only transfer the shared capability of both end points. Liquids are a transport medium in their own right; Tanks, pumps and liquid pipes are missing from the described prototype.

Basis: [S17], [S18], [S29], [S30]. Source index at the end of the main part.

17 • Components and technical devices

The forming press processes Veyrit into plates. The precision assembly station produces contact strips, insulating supports, switching cells, light cores and empty modules. The module workshop processes these into control boards, computing cores, display and input modules as well as complete devices. Material, electrical supply and profession together form the manufacturing requirements.

Device	Role
Versux console	Editor, administration and responsible control
Base software	Standalone item for using the console
Lamp / daylight sensor	Electrical consumer or measuring device

Device	Role
Wireless data adapter / tablet	Transmitter on the console or portable access
Programming station / program media	Physical writing or transport of an application
Versux data store	Values and program library in byte capacity
Versux compute station	Own programs and expandable computing budgets
Vorysken-Central / storage housing	Resource management or modular stocks
Resource cultivator	Current first automated plant cycle

A recipe component with a technical name does not automatically have an independent runtime function. A computing core as an ingredient is something different than an inserted compute module. Likewise, Vorysken item modules, Vorysken material modules and Versux storage modules are three different capacities.

Operating devices means opening locally with E or calling up an explicitly supported remote view. Energy, software, connections and authorizations are checked for the respective actions. Simply opening a view does not give any console control rights.

Basis: [S16], [S22], [S23], [S24], [S29], [S30]. Source index at the end of the main part.

PART V

Versux and mobile access

The language links typed operations. Programs run on actual in-game devices and remain bound to their capabilities, permissions, memory and computing power.

18 • Understanding and starting with Versux

Versux is the in-game programming language and runtime platform. The notation `--` combines work steps into a pipeline. Ports represent readable or writable device properties; Values can be numbers, text, truth values and supported lists. Syntax help and device/connector reference show the actual capabilities offered.

For the first attempt, the console needs Ektiven at the input and installed base software. Stop a running console program in the editor before mutating one-time executions. Read-only and Print tests can also run under the rules described. Run once tests the editor design; Saving and starting the program are separate actions.

```
Memory.Notiz -- Change "Hallo Versalox"
Memory.Notiz -- Read -- Print
```

The first line writes a local text value; the second reads and prints it. This creates neither a physical item nor a new revision of a program medium. A syntax, capacity or access error prevents the pending changes of that call from being committed.

Expressions and reuse

Local variables, arithmetic operators, Gate branches, bounded repeat, functions, foreach, list functions and text functions are implemented. The math library includes Min, Max, Clamp, Round, roots, logarithms, trigonometric functions and interpolation. Code uses a decimal point.

```
let stock = 8
let deficit = Max(0, 20 - stock)
deficit -- Print
2.5 -- Round -- Print
// Ausgaben: 12 und 3
```

Language limits are intentionally finite: 4,096 source characters, repeat with 0 to 64 iterations, lists of up to 256 elements, text values of up to 4,096 characters and up to 16 nested function calls. Unbounded while loops, imports and a general Map/Record system are not part of this version.

Basis: [S21], [S22], [S28]. Source index at the end of the main part.

19 • Events, device addresses and control rights

An event program responds to observed changes and does not run in an infinite loop. Free instructions before the event blocks are a one-time preparation with a conscious start. Restoring a running program does not perform this preparation again. Time events do not catch up on a series of missed calls after sleep or pause.

```
on Realtime.Seconds.Changed {
    Realtime.Seconds -- Read -- Print
```

}

This example reports active seconds without changing devices. A sensor can provide a corresponding darkness state and a lamp can be switched via its own data line. A sensor cable is not necessary to switch a lamp directly; it provides the additional basis for an automatic rule.

Devices have stable identities and separate display names and Versux aliases. Aliases allow readable code addresses, for example Plantera_1. An alias is not a material name or an item instance ID. Rename does not replace the actual saved device identity. Roles of an application must be bound to appropriate devices; same names do not confer connection.

Reading and writing are different operations

Reachable consoles can read a suitable device. Exactly one console owns write control, and the device must be in Versux mode. Local mode blocks ordinary remote control. Taking over locally does not automatically pause the machine; Paused is a separate state.

```
Plantera_1.Controller -- Read -- Print
Plantera_1.ControlMode -- Read -- Print
Plantera_1.CanControl -- Read -- Print
```

Use the actual alias of your reachable machine. Its owning console may deliberately manage the control mode; another console cannot claim ownership through code alone. Automatic events may relinquish control to Local but cannot enable Versux themselves. Connections, energy and permissions are checked both when requesting and committing actions.

Versux changes to a call are adopted together. If a later part fails, no partially written memory values or device actions are left behind. Previous successful calls retain their status. Computational work that has already been used and data exchange paid for are not reset free of charge in the event of an error.

Basis: [S17], [S19], [S20], [S24], [S27]. Source index at the end of the main part.

20 • Drafts, saved code and physical software

An editor draft, a saved version, an inserted disk and a current revision are separate states. This separation prevents typing in a window from unnoticed rewriting a running process.

Condition	What changes him?
Editor draft	Edit; Run once tests this design
Saved console program	Conscious storage
Disk capture	Conscious writing on the programming station
Current version	Conscious start from a selected source; remains bound until the next start

The console retains its own fixed program slot. The console program or disk source is explicitly chosen; at most one permanent program runs per console. A pure Print example is a one-time test. Start program uses an event program. Inserting a disk doesn't start anything.

The physical software workflow

- Make programming station and data carrier, place the station and supply it with Ektiven.
- Insert data carrier; Edit name and code. Writing currently costs 2 Ektiven. Invalid syntax or missing provision does not change the previous version.
- Remove the described specimen and insert it into a suitable target device. Stop running programs before changing or removing.
- Select source and roles if necessary, start consciously. Editing your own draft does not change the loaded revision.

Emptying also costs 2 Ektiven and requires confirmation. The disk retains its physical identity and becomes Blank r0; after the next write it is r1. An accessible programming station can be edited via the tablet, but an inventory item is not physically used via data line.

For a route without a data connection, you can take a draft with you, expressly copy it on site to a programming station supplied with Ektiven and write it there. On the other hand, data and transport connections are required for storage delivery of a data storage medium. The later logistics section explains this connection.

Basis: [S22], [S25]. Source index at the end of the main part.

21 · Memory, external data and the library

Memory.Name is always the local storage of the executing device. A console and a compute station can therefore each have a value Notiz without it being the same entry. Local variables belong to the individual call; Permanent values belong in Memory or in the order log.

Capacity	Current value
Local storage of a console	1,024 B
Local storage of a compute station	1,024 B
External Versux data storage	Four module spaces; without module 0 B
Each Versux memory module	8,192 B
Full external casing	32,768 B
Library program entry	16 B + UTF-8 bytes of memory ID, name and code

```
Memory.Notiz :- Change "Nur dieses Gerät"
Archiv.Memory.Notiz :- Change "Gemeinsame Daten"
Archiv.Memory.Notiz :- Read :- Print
```

For this external example, the real storage alias Archiv must be used, the device must be powered and explicitly accessible, and write access must be allowed. Multiple consoles can read the same memory as long as each has a valid path. A replacement storage with the same name does not automatically take over an orphaned device binding.

Read, ReadOr, Exists, Change and Delete manage stored values. Names are limited to 48 characters and follow the supported naming rules. Changing a value's type requires deleting it first. ReadOr handles a missing value; it does not make an unreachable memory device accessible.

The data view selects Local or External for the view only. It does not move values or change the program startup source. Library entries and values share the byte capacity in question. Stopped programs can therefore occupy memory even though they do not reserve any running computing power.

Byte counts represent logical in-game storage capacity. More memory modules do not increase data-conduit capacity or computing performance and do not add Vorysken resource storage. Modules are changed physically on site; removing one must not reduce remaining capacity below the stored content.

Basis: [S23], [S25], [S26]. Source index at the end of the main part.

22 · Compute stations and multiple programs

The compute station runs its own programs; the console remains the editor and control manager. Each explicitly assigned execution has a fixed ID, a loaded revision, run state, event observations, output, compute reservation, and its own jobs. An additional entry does not overwrite any existing program.

Compute modules	Steps per call	Common steps/s
0	2,048	8,192
1	4,096	16,384
2	6,144	24,576

The console remains fixed at 2,048 steps per call and 8,192 per active simulation second. compute modules only increase the station, not plant growth, storage space or world time. An additional hard runtime limit also protects alternative execution counters.

Running programs reserve processing capacity. Their combined reservations must fit the station. Three reservations of 2,048 steps/s require 6,144 steps/s and fit the base station. Another reservation of 4,096 would bring the total to 10,240 and must be rejected or adjusted. Stopped entries reserve no running processing capacity.

Each call is checked against its program budget and the shared station budget. One-off tests and initialization also share the station. At most one second of execution capacity can accumulate, and it recovers through active production simulation time. Stopping, changing sources, sleeping, and saving/loading do not replenish it for free.

If the budget is exceeded, only the affected event program stops. The incorrect call does not apply any partial changes. Other programs can continue to run. Effort, event frequency or reservation are adjusted and the program is deliberately restarted; there is no automatic waiting scheduler.

Management and diagnostics

In the editor, select target leads to compute station. In Programs, a click initially only highlights the entry; Opening in the editor explicitly changes the document. Library allocation, start/stop, reservation and removal apply to the selected execution. Drafts remain separate per station and execution ID.

Current Program and All Programs filter the output. Currently, individual histories are limited to 256 entries and shared views to 512; old entries are replaced without stopping programs. Output and consumption measurement are temporary and restart after loading. However, saved code, orders, reservations and credit remain intact.

The diagnosis shows measured costs and a preliminary check. Unknown data dependency is shown as unknown. Resetting the measurement does not replenish your calculation credit. The administrative limit is 128 execution allocations; In practice, bytes and reservations already limit the number.

Basis: [S24], [S25], [S26]. Source index at the end of the main part.

23 • Jobs for programs and machines

A Versux order is a limited work request to an eligible recipient program. It contains sender, ID, offered task, quantity and typed parameters. The recipient must explicitly offer the task and complete it through his program. An order alone does not produce goods and does not accelerate the physical cycle.

```
Compute_26 :- SubmitJob "Program_1", "42", "Calculate", 3, 10
Compute_26 :- JobStatus "42" :- Print
```

This example requires the actual device and program aliases, a powered and enabled compute station, and a running program that offers Calculate. The quantity 3 is a limited requirement, the parameter 10 is a value. The example shows the protocol call, not an automatically existing calculation recipe.

Status or rule	Meaning
Queued / Accepted	Waiting or accepted by this very program
Completed	Progress complete and result completed
ProgramChanged	Bound program version has been changed
Unknown	ID does not exist in this sender's range
Sender + order ID	Prevents duplicate execution of identical requests

AdvanceJob documents completed units, CompleteJob requires complete progress. A machine program must count actual completed production runs; a mere change of seconds does not prove a harvest. Order progress and reserved data changes are part of the transaction of the call.

A maximum of one order will be accepted per program at a time. The protocol is limited to 128 IDs per recipient; IDs are not quietly forgotten. Quantity, parameters and result have further finite limits. Identical repetition delivers the existing state; modified work with the same ID will be rejected.

A program change does not transfer old orders to any new code. Stop maintains saved progress and does not automatically abort a physical process. A limited order that has already been accepted can end after changing to Local; new remote work and explicitly external write access remain subject to their rights checks.

Basis: [S25], [S26]. Source index at the end of the main part.

24 • Tablet, wireless access and apps

The tablet is an equippable item. E lifts it from the occupied hand into an operating position with both hands. The home screen is on the actual model screen; the world remains visible and continues to run. Motion, camera and tool actions are locked during UI operation. Esc closes the control and lowers the tablet back.

For remote access, a console requires Ektiven, base software, and an inserted, powered-on wireless data adapter. The current range is **20 m to the selected console**. The adapter does not require an external data socket. base software costs 0.02 Ektiven/s, switched on radio additionally 0.05, together 0.07 Ektiven/s even without the tablet opened.

App	Current task
Versux	Console access, editor and accessible station programs
Devices	Status, supported control commands and common operational views
Warehouse	Vorysken centers, stocks and delivery/removal orders

The home screen works without a transmitter. Programs run on the target device, not on the tablet, so closing an app does not stop a program. Losing wireless access ends the remote session but leaves running programs and saved jobs intact. Unsaved UI drafts may remain in the same session; this does not mean they have been saved on the device.

Direct data neighbors of the console and members of suitable connected Vorysken centers including explicit distributors are visible. Normal devices and other consoles do not form forwarding chains of arbitrarily long lengths. Energy connections or spatial proximity do not confer general data rights.

Remote writes check transmitter access, the data route, the target's power supply, control ownership and mode. Physical modules and inventory media are changed on site. Where physical storage transport is implemented, the remote view can initiate a transport job. Wireless commands do not copy items through a data conduit.

Basis: [S22], [S25], [S29], [S30]. Source index at the end of the main part.

PART VI

Vorysken and practical automation

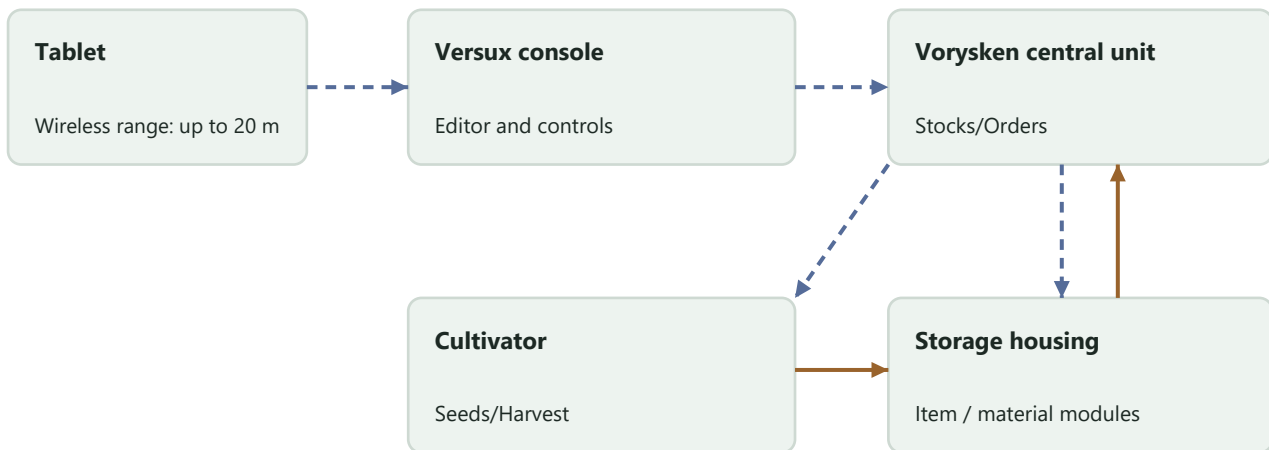
Resources have real stocks and reserved spaces. Permanent orders combine service with limited transportation and energy consumption.

25 · Building Vorysken and planning capacity

Vorysken provides storage and inventory management; Versux provides programming and control. The central unit aggregates stock and manages reservations and jobs. The resources remain in storage housings fitted with suitable modules. The central unit's job buffer is not freely usable extra storage.

Component	Current content or value
Vorysken central unit	Management, reservations and saved order buffer
Storage housing	Four module spaces; without modules there is no resource capacity
Item storage module	256 pieces, including individual copies
Material storage module	10,000 V = 16 Versi solid materials
Four item modules	1,024 pieces
Four material modules	40,000 V = 64 Versi
Mixed example: 2 + 2	512 Items and 20,000 V = 32 Versi, separate capacities

There is no resource-type limit within the relevant total capacity. Normal stock of the same type is summed in the overview, while individual instances retain their own identity and state. A filled container is stored as an instance. Loose liquid material is not permitted for new Vorysken storage-transfer jobs in this prototype.



Dashed blue: data / wireless. Brown: physical resource transport.

Each operating device also needs Ektiven; power connections are not shown.

The central unit and storage housings need Ektiven. A housing needs data access for inventory management and an additional storage-transport connection for transfers. A console can reach the central unit through a data conduit. These three categories remain independent even within one connected installation.

A Vorysken distributor offers four branches and separate data/transport feed lines. The branches share the throughput of the supply line. Several distributors directly at one central unit are possible; Arbitrary chaining and network merging are not a general routing promise. The central administration is allowed to transfer data via this explicitly supported route.

Basis: [S18], [S29], [S30]. Source index at the end of the main part.

26 • Depositing, withdrawing and waiting

Deposit

For a deposit, the central unit checks source stock and reserves free destination capacity in specific housings. The whole accepted quantity moves from the player inventory into the saved job buffer. The simulation then transfers it into the modules according to throughput and available energy. Players can close the window and continue playing.

Withdrawal

Available inventory that is not already reserved is reserved for the order. The amount travels via the lines to the central buffer and is delivered to the player if local or remote access is valid. A full inventory does not necessarily prevent order acceptance; Quantities that are ready are waiting for delivery or collection.

Limit or consumption	Prototype value
Storage transport	8 Transfer units/s, both directions together
A transfer unit	1 Item/Instance or 125 V solid material
Storage transport costs	0.05 Ektiven per moved unit and line section

Limit or consumption	Prototype value
Automatic item channel	2 normal items/s; own suitable route and costs
Central / housing idle	0.04 / 0.02 Ektiven/s
Per energy buffer	32 Ektiven
Distributor	0.02 Ektiven/s at the central unit

The central unit pays the transport energy. A transfer of 1,000 V requires eight storage-transfer units. With an otherwise unused conduit rated at 8 units/s, that represents one ideal second of conduit work and costs 0.4 Ektiven for one segment. More segments, shared budgets, delivery conditions or waiting can extend the actual process. This does not guarantee the duration of an entire UI job.

Pausing keeps reservations. Cancel releases unnecessary reservations, leaves already stored quantities in the warehouse, and keeps unclaimed returns available. Radio loss, power failure, and full inventory do not clear a buffer. History entries are not additional inventory; completed orders may not deliver twice.

Modules with content or required reservation are protected against removal. The central unit cannot be dismantled with an open order or buffer contents. Maximum 64 open orders and a limited history prevent unlimited queues. Disposal is an expressly confirmed permanent removal of unreserved inventory and is not a normal transport order.

Basis: [S30]. Source index at the end of the main part.

27 • Resource cultivators and software transport

The first production cycle connects a resource cultivator with a Vorysken storage housing. It uses existing Clatonin, soil, fiber and stone plants. Once a seed is planted, it remains as a plant. The machine delivers one suitable tuber per cycle and can produce an additional seed with the currently documented base chance of 10%.

Two stacking locations in the harvest buffer must be able to accommodate the entire output. When the buffer is full, growth pauses without further consumption of growth energy. Current machine test times are 30 seconds for first and subsequent harvests. Growth costs 0.1 Ektiven per active second, i.e. 3 Ektiven for a completed test cycle. These values are prototype balance; Plants planted outdoors have their own catalog times.

The seed overview allows the source inventory or accessible Vorysken on site. A stock choice creates a permanent requirement; it does not yet plant an invisible seed. If delivery is successful, exactly one unreserved seed is removed from storage and used. Lack of energy, inventory, data or transportation leaves the request waiting.

Seeds in and harvests out share the appropriate item transport. A return via ReturnInput stops growth, resets the current cycle and returns exactly the seed used; existing harvest is retained. There are no additional seeds and no completion counter for the aborted cycle. Waiting for a buffer or storage location is part of this order.

Physical program media in the same storage network

The programming station also has a program-medium transport port. With data and transport routes, it can request a specific stored instance, write its name and revision, and return it to storage. The affected slot is locked during transport. The process moves the same instance, including its code and roles; it does not create a copy.

A tablet can select storage disks and operate the order. The player inventory is not a magical remote source. However, an existing locally used version can also be written to without Vorysken with valid data access. Insertion or delivery still does not start a program.

Automatic crafting, larger prioritized production chains, water and nutrients for the cultivator, and broader liquid transport remain expansion goals. An existing storage job or generic machine command does not establish that these future systems are implemented.

Basis: [S22], [S28], [S30]. Source index at the end of the main part.

28 • A connected building experiment

This example is a test path in the further project, not a promise for public 0.0.2 download. Story releases or suitable sandbox equipment are required. The steps connect the explained systems without assuming missing machine adapters.

- **Set up supply:** Charcoal furnace, hot-air engine and place generator validly. Build heat pipe and drive shaft, insert fuel and check the actual energy generated in the operating menus.
- **Produce components:** Supply press and electrical production stations, produce panels and modules. A console needs its base software; a generator just standing next to it is not enough.
- **Test a simple data setup:** Power the lamp and sensor separately with Ektiven and connect both to the console with data conduits. Use the editor's night-light example, check the actual aliases and control ownership, then start it deliberately.
- **Set up warehouse:** Supply the central unit and storage housing, use appropriate modules and build data and storage transport routes. Check a small delivery and wait until it has actually arrived in the inventory.
- **Connect production:** cultivator supply, establish their data and item transport path. Plant an existing seed locally or request it from storage. Observe growth, complete harvest and subsequent storage separately.
- **Test remote access:** Insert radio adapter, equip tablet and access within 20 m. A missing transport line must not be covered up by a functioning radio.
- **Preserve state:** Save and load both an open job and a running state. Compare code, stocks and jobs with the original setup; diagnostic output is not expected to persist.

Targeted interruptions

A small network is easier to audit than a full factory. Turn off power, disconnect data, fill inventory and leave radio range one after the other. Every case should give a comprehensible reason for waiting. Upon return, no inventory may be duplicated and no saved order may generate a second delivery.

Basis: [S15], [S17], [S20], [S22], [S29], [S30]. Source index at the end of the main part.

PART VII

Visual design, limits and reference material

The reference holds together the visual basis, the current data status and open development directions. The appendix serves as a concrete content inventory.

29 · Art foundations and readable interfaces

The imagery combines angular, simple models with sharply filtered pixel textures. Models are intended to make dimensions, control surfaces and connections understandable. New machines in particular are functional prototypes: form, animation, effects and detailed design are not always completed.

Blockbench sources, FBX exports and Unity prefabs form the asset workflow. The tool standard uses tool_root as the outer origin; grip and carrying markers define the relationship to the hand. The Visual group uses a 1/64 scale. Collision, placement footprint and interaction points must match the actual model, not merely its rendered image.

A change to the graphics must not replace the game item unnoticed. Item ID, saved state and recipe remain separate contracts. With your own new external dimensions, however, the preview and subsurface testing must be consciously updated. The shallow well model and the field hoe are documented examples of proprietary models in this pipeline.

Font	Usage
Silkscreen	Titles and buttons provided for them, mostly capital letters
Tiny5	Running text, device names, quantities, player texts and statuses with preserved spelling
Monogram Extended	Versux code, examples, syntax help, and technical messages

Code must keep pipe, capital I and small l distinguishable. Display names and self-written texts may remain case sensitive. The tablet and console use common logical views, even if the representation on the tablet is in the world view. This PDF uses readable document fonts; it does not imitate the small game fonts.

Basis: [S01], [S12], [S13], [S31], [S32]. Source index at the end of the main part.

30 · Saving, prototype limits and future plans

The current generated reference uses **save-game schema 43**. The cleanup on 9 October removes older migrations and recovery paths. This cleaned-up project version is intended to use a new test world. Older documents stating that arbitrary existing worlds can be imported do not provide a current compatibility guarantee.

Current save/load includes player state, terrain changes, placed structures, conduits, progression, contents, jobs, programs and valid running states. Reservations are derived from jobs and must not be counted as a second quantity of resources. Output histories and consumption measurements are explicitly temporary.

The 187 registered items, 20 materials and 121 recipes describe a verifiable catalog snapshot, not how much of the entire game is finished. Status documents identify remaining issues in areas such as UI, localization, art asset registration and individual progression checks. This paper was checked against documentation and selected code constants; it does not replace a complete new Unity playthrough.

Still explicitly open

- Wider industrial and settlement content, final balance and refined visuals.
- General machine maintenance and automatically supplied spare parts.
- Combined lines, liquid pipes, tanks, pumps and comprehensive automatic crafting.
- Elaborated Era 9 and space travel in Era 10, including travel between own planets.
- A comprehensive character editor is planned before the new planetary surfaces. Individual existing character changes do not replace that complete feature.

The planetary direction initially provides for its own surfaces with the previous flat coordinate and construction grid; Mountains, valleys and caves remain possible. A spherical exterior view and travel are planned second representations of the same planet. Fully walkable spherical surfaces with radial gravity are not the chosen first basis. Circumferential surfaces and behavior of abandoned production networks are later or open decisions.

This paper does not contain a publication date for the new systems. Public availability must be checked on the download page; The version still shown in the website draft is Prototype 0.0.2.

Basis: [S05], [S06], [S25], [S27], [S30], [S33], [S34], [S35]. Source index at the end of the main part.

31 • Troubleshooting and glossary

Observation	Exam
Console cannot be used	Check own Ektiven input, energy in buffer and base software.
Device is visible, not responding	Check target supply and data path; Visibility is not yet a fresh metric.
Reading works, writing doesn't	Check relevant console and Local/Versux mode.
Inventory visible, no delivery	Check additional transport route, reservation, destination location and transport energy.
Tablet loses connection	Check 20-m range, adapter turned on, transmitter power and valid session.
Program stops due to budget	Check call costs, event frequency and reservation; consciously restart.
Module cannot be removed	Check content, remaining capacity, reservations and inventory space.
Change does not appear in running code	Differentiate draft, saved version, starting source and loaded revision.

Term	Meaning
Era	Technical and playful progression section
Chrono	Permanently acquired specialist knowledge of a profession

Term	Meaning
Versi	625 V, in the solid model a full 0.5-m block
Item instance	A concrete specimen with identity and condition
Port / connection	Physical or verbal access to a skill offered
Alias	Readable code address of a device or execution map
Revision	Saved or loaded program version
Memory	Persistent data storage of the executing or explicitly addressed device
Reservation	Tied capacity, resource or computing power for a specific use
Vorysken	Resource inventory, modular warehouses and permanent transport orders
Versux	Language, runtime and control of supported devices

32 · Sources and scope of this reference

The sources were read from the local project on 11 October 2026 and retained as a snapshot for this paper. Newer, specific system documents take precedence over older general overviews. Historical migration and test reports are not treated as guarantees of current functionality. The source identifiers in the chapters refer to this register.

The main part explains all the main systems identified here in their context. The appendices fully inherit the registered lines of the generated reference: items, materials, material units, recipes, main objectives and optional chronicle tasks. Not every internal class, test protocol, and debug function is a game system; such implementation details are not considered additional game content.

The numbers refer to the secured project reference. This edition does not contain any additionally generated art concepts or fabricated screenshots. Schematic illustrations are for explanation purposes only. In the event of later changes, capacities, language limits, recipe catalog and storage format in particular should be readjusted.

Source	Project file and theme
S01	Docs/Versalox_Game_Overview.md Game idea, scale and basic mechanics
S02	Docs/Generated/ContentCatalog.md Registered items, materials and recipes
S03	Docs/Generated/MainQuestSequences.md Current main quest sequences
S04	Docs/Generated/ChronicleQuests.md Optional history tasks
S05	Docs/Generated/README.md Catalog numbers and storage format
S06	Docs/CurrentPrototypeStatus.md Cleanup from 9. October and prototype limits
S07	Docs/Build-Mode.md Construction strips, inventory and operation

Source	Project file and theme
S08	Docs/Controls-and-Input.md Standard control and input
S09	Docs/Professions.md Chronos, profession slots, professions and experience
S10	Docs/Tutorials.md Introduction, tutorial modes and codex
S11	Docs/Era1_Era2_ImplementedContent.md Early game systems and workshop area
S12	Docs/Era4_Cultivation_Implemented.md velcron, fields and food chain
S13	Docs/Era5_Well_Implemented.md Well and local water supply
S14	Docs/Era6_Metals_Implemented.md Veyrium and Veyrit
S15	Docs/Era7_Energy_Implemented.md First industrial energy chain
S16	Docs/Era8_Components_Concept.md Hardware production in prototype
S17	Docs/Data_Connections.md Data lines, sensor and current route lengths
S18	Docs/Connection_Foundation.md Separate media and connection rules
S19	Docs/Versux_Generic_Machines.md Machine capabilities, names and aliases
S20	Docs/Versux_Control_And_Material_Units.md Tax jurisdiction and material conversion
S21	Docs/Versux_Collections_And_Software.md Functions, lists, text and language limits
S22	Docs/Versux_Physical_Software.md Programming station, data carrier and transport
S23	Docs/Versux_Data_Memory.md Local and external data storage
S24	Docs/Versux_Compute.md Computing modules and execution budgets
S25	Docs/Versux_Multiple_Programs.md Library, multiple programs and diagnostics, including 11. October
S26	Docs/Versux_Job_Stations.md Station orders and executable calculation example
S27	Docs/Versux_Time_Foundation.md Active real time, world time, pause and sleep
S28	Docs/Versux_Return_And_Math.md Input Feedback and Mathematics
S29	Docs/Versux_Tablet_Radio.md Tablet, apps, radio and operating position
S30	Docs/Central_Storage_Logistics.md Vorysken, orders, distributor and plant machine
S31	Docs/Tool_Blockbench_Standard.md Model scale, grip marker and import
S32	Docs/Character_Blockbench_Workflow.md Character scale and representation
S33	Docs/Tool-Wear-and-Machine-Maintenance-Concept.md Tool pilot and planned maintenance

Source	Project file and theme
S34	Docs/EraRoadmap_1_to_10.md Era framework, character editor and planet planning
S35	Docs/WorldgenArchitectureRoadmap.md Worldgen fundamentals and explicitly planned architecture
S36	Docs/Hand_Mortar_Processing.md Ore processing
S37	Docs/Smelter_Processing.md Smelting and batches
S38	Docs/Ingot_Mold_UI.md Casting and cooling
S39	Assets/Scripts/World/Voxels/WorldGridMetrics.cs Code matching: Grid or inventory capacity
S40	Assets/Scripts/Gameplay/Resources/VersaloxInventory.cs Code matching: Grid or inventory capacity

For the public release: versaliate.itch.io/versalox. Companion web Codex: www.versaliate.com/codex.html. The paper and expanded articles are available on the Versaliate website.

PART A

Registered content catalog

This inventory comes from the captured generated project reference. Translated item and material names are followed by their original German display names in brackets for in-game lookup. These source names may differ from localized game text.

A1 · All 187 item definitions

Each Era: catalog entry, type and registered stack limit. Quantity entries and technical entries are also part of this inventory; A registration does not require an independent portable world object for each entry. Stateful instances are managed separately.

Era 1 · 59 Items

Subject	Type	Stack limit
Amber [Bernstein]	Collectible	16
Bronze coin [Bronzemünze]	Collectible	32
Crystal [Kristall]	Collectible	16
Fossil	Collectible	16
Gold coin [Goldmünze]	Collectible	32
Silver coin [Silbermünze]	Collectible	32
Versa coin [Versa-Münze]	Collectible	32
Anchor stone [Ankerstein]	Craftable	1
Fire pit [Feuerstelle]	Craftable	4
Carrying bag [Tragesack]	Craftable	1
Showcase [Schaukasten]	Craftable	4
Drying rack [Trockengestell]	Craftable	4
Fence [Zaun]	Craftable	16
Fence gate [Zauntor]	Craftable	8
Fiber strip [Faserband]	Craftable	32
Herbal bandage [Kräuterverband]	Craftable	16
Leather water bag [Lederwassersack]	Craftable	1
Path tool [Wegwerkzeug]	Craftable	1

Subject	Type	Stack limit
Primitive Chronicle [Primitive Chronik]	Craftable	1
Primitive fishing rod [Primitive Angel]	Craftable	1
Shelter entrance [Unterstandeingang]	Craftable	16
Shelter roof [Unterstanddach]	Craftable	16
Shelter side [Unterstandseite]	Craftable	16
Storage location [Lagerstelle]	Craftable	4
Primitive trap [Primitive Falle]	Craftable	8
Primitive workshop [Primitive Werkstelle]	Craftable	4
Professional chronicle [Berufschronik]	Craftable	8
Roasting stone [Bratstein]	Craftable	16
Sharpened stick [Geschärfter Stock]	Craftable	1
Sleeping place [Schlafplatz]	Craftable	4
Torch [Fackel]	Craftable	16
Return marker [Wiederkehrmal]	Craftable	1
Berries [Beeren]	Resource	16
Berry seeds [Beerensamen]	Resource	16
Cooked fish [Gegarter Fisch]	Resource	8
Cooked meat [Gegartes Fleisch]	Resource	8
Dried fish [Trockenfisch]	Resource	8
Dried fur [Getrocknetes Fell]	Resource	8
Dried meat [Trockenfleisch]	Resource	8
Flint [Feuerstein]	Resource	16
Fur [Fell]	Resource	8
Raw meat [Rohes Fleisch]	Resource	8
Ivy cuttings [Efeu-Steckling]	Resource	16
Ivy vines [Efeuranken]	Resource	16

Subject	Type	Stack limit
Loose stone [Loser Stein]	Resource	16
Bright meadow flowers [Helle Wiesenblumen]	Resource	16
Blue meadow flowers [Blaue Wiesenblumen]	Resource	16
Golden meadow flowers [Goldene Wiesenblumen]	Resource	16
Colorful meadow flowers [Bunte Wiesenblumen]	Resource	16
Pink meadow flowers [Rosa Wiesenblumen]	Resource	16
Mushrooms [Pilze]	Resource	16
Plant fiber [Pflanzenfaser]	Resource	32
Raw fish [Roher Fisch]	Resource	8
Resin [Harz]	Resource	16
Stick [Stock]	Resource	16
Tea leaves [Teeblätter]	Resource	32
Tea seeds [Teesamen]	Resource	16
Wild herbs [Wildkräuter]	Resource	16
Wild herb seeds [Wildkräutersamen]	Resource	16

Era 2 · 69 Items

Subject	Type	Stack limit
Carpentry bench [Zimmerbank]	Craftable	4
Charcoal pit [Kohleplatz]	Craftable	4
Clay bucket [Tonkuebel]	Craftable	1
Plant pot [Pflanzkuebel]	Craftable	4
Clay plaque [Lehmplakette]	Craftable	16
Clay pot [Tontopf]	Craftable	8
Clay tablet [Lehmtafel]	Craftable	8
Clay water container [Tonwasserbehaelter]	Craftable	4

Subject	Type	Stack limit
Log pillar [Stammpeiler]	Craftable	16
Material container [Materialbehälter]	Craftable	4
Material creation station [Materialerstellungstation]	Craftable	4
Material mixing station [Materialmischstation]	Craftable	4
Material station [Materialstation]	Craftable	4
Pressed clay door wall [Gepresste-Lehmtuerwand]	Craftable	16
Pressed clay foundation [Gepresstes-Lehm-Fundament]	Craftable	16
Pressed clay wall [Gepresste-Lehmvand]	Craftable	16
Pressed clay window wall [Gepresste-Lehmfensterwand]	Craftable	16
Primitive kiln [Primitiver Brennofen]	Craftable	4
Primordial resource station [Urressourcenstation]	Craftable	4
Rawhide mat [Rohledermatte]	Craftable	8
Settlement stone [Siedlungsstein]	Craftable	1
Simple clay door [Einfache Lehm-tuer]	Craftable	8
Simple ladder [Einfache Leiter]	Craftable	16
Simple watering can [Einfache Giesskanne]	Craftable	1
Small clay pot [Kleiner Tontopf]	Craftable	16
Loom [Webrahmen]	Craftable	4
Wood splitting place [Holzspaltplatz]	Craftable	4
Era 2 Technical Core	Technical	1
Charcoal [Holzkohle]	Resource	32
Clatonin seed [Clatonin-Samen]	Resource	16
Clatonin primordial tuber [Clatonin-Urknolle]	Resource	16
Sturdy cord [Robuste Schnur]	Resource	32
Soil block [Dirt Block]	Resource	16
Dry clay [Trockener Lehm]	Resource	16

Subject	Type	Stack limit
Earth seeds [Erdsamen]	Resource	16
Earth tuber [Erdknolle]	Resource	16
Fiber seeds [Fasersamen]	Resource	16
Fiber tuber [Faserknolle]	Resource	16
Fired clay Ven [Gebrannter Lehm Ven]	Resource	16
Fired clay V [Gebrannter Lehm V]	Resource	64
Fired clay Vado [Gebrannter Lehm Vado]	Resource	8
Fired clay Versi [Gebrannter Lehm Versi]	Resource	4
Fired clay Vo [Gebrannter Lehm Vo]	Resource	64
Half log [Halbstamm]	Resource	16
Log [Stammholz]	Resource	8
Long board [Lange Diele]	Resource	8
Plank [Planke]	Resource	16
Floorboard panel [Dielenfeld]	Resource	16
Primordial seeds [Ursamen]	Resource	16
Primordial tuber [Primordiale Urknolle]	Resource	16
Seedling [Setzling]	Resource	16
Split wood [Spaltholz]	Resource	32
Stone seeds [Steinsamen]	Resource	16
Stone tuber [Steinknolle]	Resource	16
Wet clay [Feuchter Lehm]	Resource	16
Seed collector [Keimsammler]	Tool	1
Simple earth spade [Einfacher Erdspaten]	Tool	1
Stone axe [Steinbeil]	Tool	1
Earth Ven [Erde Ven]	Quantity entry	32
Earth V [Erde V]	Quantity entry	64

Subject	Type	Stack limit
Earth Vado [Erde Vado]	Quantity entry	16
Earth Versi [Erde Versi]	Quantity entry	8
Earth Vo [Erde Vo]	Quantity entry	64
Pressed clay V [Gepresster Lehm V]	Quantity entry	64
Pressed clay Vado [Gepresster Lehm Vado]	Quantity entry	16
Pressed clay Ven [Gepresster Lehm Ven]	Quantity entry	32
Pressed clay Versi [Gepresster Lehm Versi]	Quantity entry	8
Pressed clay Vo [Gepresster Lehm Vo]	Quantity entry	64
Stone unit [Steineinheit]	Quantity entry	32

Era 3 · 10 Items

Subject	Type	Stack limit
Hand mortar [Handmörser]	Craftable	1
Primitive smelting furnace [Primitiver Schmelzofen]	Craftable	1
Primitive ingot mould [Primitive Barrenform]	Craftable	1
Repair bench [Reparaturbank]	Craftable	1
Simplenium ingot [Simpleniumbarren]	Resource	16
Primitive pickaxe [Primitive Spitzhacke]	Tool	1
Simplenium pickaxe [Simpleniumspitzhacke]	Tool	1
Simplenium shovel [Simpleniumschaufel]	Tool	1
Hardened Clayone [Gehärtetes Clayone]	Quantity entry	9999
Raw Clayone [Rohes Clayone]	Quantity entry	9999

Era 4 · 6 Items

Subject	Type	Stack limit
Field [Ackerstelle]	Craftable	1
Velkorn	Resource	64
Velkorn dough [Velkornteig]	Resource	64

Subject	Type	Stack limit
Velkorn flatbread [Velkornfladen]	Resource	16
Crushed Velkorn grain [Velkornschrot]	Resource	64
Field hoe [Feldhacke]	Tool	1

Era 5 · 1 Items

Subject	Type	Stack limit
Well [Brunnen]	Craftable	8

Era 6 · 7 Items

Subject	Type	Stack limit
Component socket [Bauteilfassung]	Craftable	16
Charcoal heat furnace [Hitzeholzkohleofen]	Craftable	4
Makavyr forming press [Makavyr-Formpresse]	Craftable	4
Veyrium hot-air engine [Veyrium-Heißluftmotor]	Craftable	4
Veyrit ingot [Veyritbarren]	Resource	32
Veyrit plate [Veyritplatte]	Resource	32
Veyrium ingot [Veyriumbarren]	Resource	32

Era 7 · 5 Items

Subject	Type	Stack limit
Ektiven line [Ektiven-Leitung]	Craftable	64
Ektiven generator [Ektiven-Generator]	Craftable	4
Precision assembly station [Feinmontagestation]	Craftable	4
Heat conduction [Wärmeleitung]	Craftable	64
Drive shaft [Antriebswelle]	Craftable	64

Era 8 · 30 Items

Subject	Type	Stack limit
Versux base software [Versux-Grundsoftware]	Craftable	1

Subject	Type	Stack limit
Empty module [Leermodul]	Craftable	16
Vorysken storage housing [Vorysken-Speichergehäuse]	Craftable	4
Calculation core [Rechenkern]	Craftable	16
Contact strip [Kontaktleiste]	Craftable	32
Control board [Steuerplatine]	Craftable	16
Data line [Datenleitung]	Craftable	32
Wireless data adapter [Daten-Funkadapter]	Craftable	4
Display module [Anzeigemodul]	Craftable	16
Ektiven lamp [Ektiven-Lampe]	Craftable	16
Input module [Eingabemodul]	Craftable	16
Insulating carrier [Isolierträger]	Craftable	32
Resource transport line [Ressourcen-Transportleitung]	Craftable	32
Item storage module [Item-Speichermodul]	Craftable	16
Luminous core [Leuchtkern]	Craftable	32
Daylight sensor [Tageslichtsensor]	Craftable	16
Material storage module [Material-Speichermodul]	Craftable	16
Module workshop [Modulwerkstatt]	Craftable	4
Versux program medium [Versux-Programmdatenträger]	Craftable	1
Versux programming station [Versux-Programmierstation]	Craftable	4
Resource cultivator [Ressourcen-Zuchtmaschine]	Craftable	4
Switching cell [Schaltzelle]	Craftable	32
Versux compute module [Versux-Rechenmodul]	Craftable	16
Versux compute station [Versux-Rechenstation]	Craftable	4
Versux console [Versux-Konsole]	Craftable	4
Versux data store [Versux-Datenspeicher]	Craftable	4
Versux memory module [Versux-Speichermodul]	Craftable	16

Subject	Type	Stack limit
Versux tablet [Versux-Tablet]	Craftable	1
Vorysken central unit [Vorysken-Zentrale]	Craftable	4
Vorysken distributor [Vorysken-Verteiler]	Craftable	4

A2 · All 20 material definitions

The shape and properties come from the registered data model. Relatedness refers to the initial or basic type stored there and is not evidence of a freely available reversion.

Material	Shape	Properties
Ash [Asche]	Powder	dry, grainy
Clay [Lehm]	Bulk solid	malleable, mineral
Earth [Erde]	Bulk solid	dry, grainy, organic, mineral
Plant fiber [Pflanzenfaser]	Fiber	dry, organic, flammable
Sand	Bulk solid	dry, grainy, mineral
Stone [Stein]	Piece	dry, mineral
Water [Wasser]	Liquid	moist, drinkable
Dry clay [Trockener Lehm]	Piece	dry, mineral, brittle
Fired clay [Gebrannter Lehm]	Piece	dry, mineral, refined, brittle, irreversible
Pressed clay [Gepresster Lehm]	Bulk solid	dry, malleable, mineral, refined
Wet clay [Feuchter Lehm]	Paste	moist, sticky, malleable, mineral
Clay dust [Lehmstaub]	Powder	dry, grainy, mineral, refined
Hardened Clayone [Gehärtetes Clayone]	Piece	dry, mineral, refined, brittle, irreversible
Molten Simplenium [Geschmolzenes Simplenium]	Liquid	mineral, hot, refined, metallic
Raw Clayone [Rohes Clayone]	Bulk solid	dry, malleable, mineral, refined
Simplenium concentrate [Simpleniumkonzentrat]	Powder	dry, grainy, mineral, refined, metallic
Simplenium ore [Simpleniumerz]	Piece	dry, mineral, impure, metallic
Stone powder [Steinmehl]	Powder	dry, grainy, mineral, refined
Veyrium concentrate [Veyriumkonzentrat]	Powder	dry, grainy, mineral, refined, metallic

Material	Shape	Properties
Veyrium ore [Veyriumerz]	Piece	dry, mineral, impure, metallic

A3 • All 121 registered recipes

Quantities in front of normal items are quantities. For material quantities, the unit remains stated; the reference sometimes uses base units or substance identifiers. The appendix shows inputs and outputs, not every activation, job requirement, energy fee or processing time. Special station processes may have additional rules.

Crafting

Station	Input	Output
Primitive workshop [Primitive Werkstelle]	1x Flint + 1x Loose stone + 1x Plant fiber + 1x Resin	1x Anchor stone
Primitive workshop [Primitive Werkstelle]	4x Loose stone	1x Fire pit
Primitive workshop [Primitive Werkstelle]	2x Dried fur + 1x Fiber strip	1x Carrying bag
Primitive workshop [Primitive Werkstelle]	4x Stick + 1x Fur	1x Showcase
Primitive workshop [Primitive Werkstelle]	4x Stick + 2x Fiber strip	1x Drying rack
Primitive workshop [Primitive Werkstelle]	1x Stick + 1x Loose stone + 1x Fiber strip	1x Fence
Primitive workshop [Primitive Werkstelle]	1x Stick + 1x Loose stone + 1x Fiber strip	1x Fence gate
Hand crafting	2x Plant fiber	1x Fiber strip
Hand crafting	1x Wild herbs + 1x Plant fiber	1x Herbal bandage
Primitive workshop [Primitive Werkstelle]	1x Dried fur + 1x Resin + 1x Fiber strip	1x Leather water bag
Primitive workshop [Primitive Werkstelle]	1x Stick + 1x Loose stone + 1x Fiber strip	1x Path tool
Primitive workshop [Primitive Werkstelle]	1x Dried fur + 2x Stick + 1x Loose stone + 1x Resin + 1x Fiber strip	1x Primitive Chronicle
Primitive workshop [Primitive Werkstelle]	2x Stick + 1x Plant fiber + 1x Fiber strip	1x Primitive fishing rod
Primitive workshop [Primitive Werkstelle]	2x Stick + 1x Fur + 1x Loose stone + 1x Fiber strip	1x Shelter entrance

Station	Input	Output
Primitive workshop [Primitive Werkstelle]	2x Stick + 1x Fur + 1x Loose stone + 1x Fiber strip	1x Shelter roof
Primitive workshop [Primitive Werkstelle]	2x Stick + 1x Fur + 1x Loose stone + 1x Fiber strip	1x Shelter side
Primitive workshop [Primitive Werkstelle]	3x Stick + 2x Loose stone + 1x Fiber strip	1x Storage location
Primitive workshop [Primitive Werkstelle]	3x Stick + 1x Loose stone + 2x Fiber strip	1x Primitive trap
Hand crafting	2x Stick + 1x Loose stone + 1x Fur + 1x Fiber strip	1x Primitive workshop
Primitive workshop [Primitive Werkstelle]	2x Stick + 3x Plant fiber + 1x Fur	1x Professional chronicle
Hand crafting	1x Loose stone	1x Roasting stone
Hand crafting	1x Stick + 1x Loose stone + 1x Fiber strip	1x Sharpened stick
Primitive workshop [Primitive Werkstelle]	2x Dried fur + 4x Stick + 1x Fiber strip	1x Sleeping place
Hand crafting	1x Stick + 1x Resin + 1x Fiber strip	1x Torch
Primitive workshop [Primitive Werkstelle]	3x Stick + 2x Loose stone + 3x Fiber strip	1x Return marker
Primitive workshop [Primitive Werkstelle]	2x Log + 2x Fiber strip + 2x Loose stone	1x Carpentry bench
Primitive workshop [Primitive Werkstelle]	10x Loose stone	1x Charcoal pit
Primitive workshop [Primitive Werkstelle]	1x Sturdy cord + 1 Ven Fired clay	1x Clay bucket
Primitive workshop [Primitive Werkstelle]	1 Ven Fired clay	1x Plant pot
Primitive workshop [Primitive Werkstelle]	2x Stick + 1x Fiber strip + 1 Ven Dry clay	1x Clay plaque
Primitive workshop [Primitive Werkstelle]	2 Vo Fired clay	1x Clay pot
Primitive workshop [Primitive Werkstelle]	1x Clay plaque + 5x Log + 1x Fiber strip	1x Clay tablet
Primitive workshop [Primitive Werkstelle]	4x Loose stone + 4x Split wood + 4x Stick + 1 Versi Fired clay	1x Clay water container
Loom [Webrahmen]	3x Plant fiber + 1x Ivy vines	1x Sturdy cord

Station	Input	Output
Primitive workshop [Primitive Werkstelle]	2x Stick + 1x Loose stone	1x Seed collector
Primitive workshop [Primitive Werkstelle]	2x Log	1x Log pillar
Carpentry bench [Zimmerbank]	2x Plank	1x Long board
Primitive workshop [Primitive Werkstelle]	4x Split wood + 1 Vado Fired clay	1x Material container
Primitive workshop [Primitive Werkstelle]	6x Loose stone + 4x Split wood	1x Material creation station
Primitive workshop [Primitive Werkstelle]	4x Loose stone + 4x Split wood + 1x Sturdy cord + 4 Ven Fired clay	1x Material mixing station
Primitive workshop [Primitive Werkstelle]	6x Loose stone + 4x Split wood	1x Material station
Primitive workshop [Primitive Werkstelle]	1 Vado Pressed clay	1x Pressed clay door wall
Primitive workshop [Primitive Werkstelle]	1 Vado Pressed clay	1x Pressed clay foundation
Primitive workshop [Primitive Werkstelle]	1 Vado Pressed clay	1x Pressed clay wall
Primitive workshop [Primitive Werkstelle]	1 Vado Pressed clay	1x Pressed clay window wall
Carpentry bench [Zimmerbank]	1x Log	4x Plank
Carpentry bench [Zimmerbank]	1x Half log	2x Plank
Carpentry bench [Zimmerbank]	4x Plank	1x Floorboard panel
Primitive workshop [Primitive Werkstelle]	4x Loose stone + 4 Ven Dry clay	1x Primitive kiln
Primitive workshop [Primitive Werkstelle]	2x Stick + 1x Loose stone + 1x Fiber strip	1x Simple earth spade
Primitive workshop [Primitive Werkstelle]	4x Loose stone + 4x Split wood + 1x Sturdy cord + 2 Ven Fired clay	1x Primordial resource station
Primitive workshop [Primitive Werkstelle]	3x Fur + 2x Fiber strip + 2x Loose stone	1x Rawhide mat
Primitive workshop [Primitive Werkstelle]	1x Clay plaque + 4x Loose stone + 5x Log + 1x Sturdy cord	1x Settlement stone
Primitive workshop [Primitive Werkstelle]	1 Vado Pressed clay	1x Simple clay door
Primitive workshop [Primitive Werkstelle]	2x Split wood + 4x Stick + 2x Sturdy cord	1x Simple ladder
Primitive workshop [Primitive Werkstelle]	1x Sturdy cord + 1 Ven Fired clay	1x Simple watering can
Primitive workshop [Primitive Werkstelle]	1 Vo Fired clay	1x Small clay pot

Station	Input	Output
Primitive workshop [Primitive Werkstelle]	1x Stick + 2x Loose stone + 2x Fiber strip	1x Stone axe
Carpentry bench [Zimmerbank]	8x Split wood + 4x Plant fiber + 2x Fiber strip	1x Loom
Primitive workshop [Primitive Werkstelle]	3x Loose stone + 2x Stick + 1x Resin	1x Wood splitting place
Primitive workshop [Primitive Werkstelle]	6x Loose stone + 1x Log	1x Hand mortar
Primitive workshop [Primitive Werkstelle]	6x Loose stone + 2 Vado Hardened Clayone + 1 Vado Dry clay	1x Primitive smelting furnace
Primitive workshop [Primitive Werkstelle]	4x Loose stone + 1 Vado Hardened Clayone	1x Primitive ingot mould
Primitive workshop [Primitive Werkstelle]	4x Stick + 4x Loose stone + 2x Sturdy cord	1x Primitive pickaxe
Primitive workshop [Primitive Werkstelle]	4x Plank + 4x Loose stone + 1x Simplenium ingot	1x Repair bench
Primitive workshop [Primitive Werkstelle]	3x Simplenium ingot + 2x Stick + 1x Sturdy cord	1x Simplenium pickaxe
Primitive workshop [Primitive Werkstelle]	2x Simplenium ingot + 2x Stick + 1x Sturdy cord	1x Simplenium shovel
Primitive workshop [Primitive Werkstelle]	1x Simplenium ingot + 2x Stick + 1x Sturdy cord	1x Field hoe
Primitive workshop [Primitive Werkstelle]	8x Loose stone + 8x Split wood	1x Well
Primitive workshop [Primitive Werkstelle]	2x Veyrium ingot	1x Component socket
Primitive workshop [Primitive Werkstelle]	1x Component socket + 4x Simplenium ingot + 4x Fired clay Ven	1x Charcoal heat furnace
Primitive workshop [Primitive Werkstelle]	1x Component socket + 4x Veyrium ingot + 4x Split wood	1x Makavyr forming press
Primitive workshop [Primitive Werkstelle]	1x Component socket + 4x Veyrium ingot + 2x Simplenium ingot	1x Veyrium hot-air engine
Primitive workshop [Primitive Werkstelle]	1x Veyrit ingot	4x Ektiven line
Primitive workshop [Primitive Werkstelle]	1x Veyrit plate + 1x Component socket	1x Ektiven generator
Primitive workshop [Primitive Werkstelle]	2x Veyrit plate + 1x Component socket	1x Precision assembly station
Primitive workshop [Primitive Werkstelle]	1x Simplenium ingot	4x Heat conduction
Primitive workshop [Primitive Werkstelle]	1x Veyrium ingot	4x Drive shaft
Module workshop [Modulwerkstatt]	1x Empty module	1x Versux base software

Station	Input	Output
Precision assembly	1x Contact strip + 1x Insulating carrier	1x Empty module
Module workshop [Modulwerkstatt]	1x Component socket + 2x Veyrit plate + 1x Control board	1x Vorysken storage housing
Module workshop [Modulwerkstatt]	1x Insulating carrier + 2x Switching cell	1x Calculation core
Precision assembly	1x Veyrit plate	2x Contact strip
Module workshop [Modulwerkstatt]	2x Contact strip + 1x Insulating carrier + 1x Switching cell	1x Control board
Module workshop [Modulwerkstatt]	1x Contact strip + 1x Insulating carrier	4x Data line
Module workshop [Modulwerkstatt]	1x Control board + 2x Contact strip + 1x Insulating carrier + 1x Veyrit plate	1x Wireless data adapter
Module workshop [Modulwerkstatt]	1x Contact strip + 1x Luminous core + 1x Insulating carrier	1x Display module
Module workshop [Modulwerkstatt]	1x Contact strip + 1x Insulating carrier + 1x Luminous core	1x Ektiven lamp
Module workshop [Modulwerkstatt]	1x Contact strip + 1x Switching cell	1x Input module
Precision assembly	2x Fired clay Ven	2x Insulating carrier
Module workshop [Modulwerkstatt]	1x Veyrit plate + 1x Switching cell	4x Resource transport line
Module workshop [Modulwerkstatt]	1x Empty module + 1x Calculation core + 2x Contact strip	1x Item storage module
Precision assembly	1x Veyrium ingot + 1x Charcoal	1x Luminous core
Module workshop [Modulwerkstatt]	1x Contact strip + 1x Insulating carrier + 1x Switching cell	1x Daylight sensor
Module workshop [Modulwerkstatt]	1x Empty module + 1x Control board + 2x Insulating carrier	1x Material storage module
Primitive workshop [Primitive Werkstelle]	1x Component socket + 2x Veyrit plate + 2x Fired clay Ven	1x Module workshop
Module workshop [Modulwerkstatt]	1x Empty module	1x Versux program medium
Module workshop [Modulwerkstatt]	1x Component socket + 1x Calculation core + 1x Input module + 1x Display module	1x Versux programming station
Module workshop [Modulwerkstatt]	1x Component socket + 2x Veyrit plate + 1x Control board + 1x Luminous core	1x Resource cultivator
Precision assembly	1x Veyrium ingot + 1x Simplenium ingot	2x Switching cell

Station	Input	Output
Module workshop [Modulwerkstatt]	1x Empty module + 2x Calculation core + 2x Contact strip	1x Versux compute module
Module workshop [Modulwerkstatt]	1x Component socket + 2x Veyrit plate + 1x Calculation core + 1x Control board	1x Versux compute station
Module workshop [Modulwerkstatt]	1x Component socket + 1x Control board + 1x Calculation core + 1x Display module + 1x Input module	1x Versux console
Module workshop [Modulwerkstatt]	1x Component socket + 2x Veyrit plate + 1x Control board + 2x Insulating carrier	1x Versux data store
Module workshop [Modulwerkstatt]	1x Empty module + 1x Calculation core + 1x Insulating carrier	1x Versux memory module
Module workshop [Modulwerkstatt]	1x Control board + 1x Display module + 1x Input module + 1x Veyrit plate	1x Versux tablet
Module workshop [Modulwerkstatt]	1x Component socket + 1x Calculation core + 1x Control board + 1x Display module	1x Vorysken central unit
Module workshop [Modulwerkstatt]	1x Component socket + 2x Veyrit plate + 1x Control board + 2x Contact strip	1x Vorysken distributor

Forming materials

Station	Input	Output
Material creation	1 Versi Earth	1x Soil block

Mixing materials

Station	Input	Output
Mixing station	3 Ven Dry clay + 1 Ven Earth + 1 Ven Water + 2x Plant fiber	1 Vado Pressed clay
Mixing station	1 Vado Clay dust + 1 Vado Stone powder	2 Vado Raw Clayone
Mixing station	1 V Water + 1x Crushed Velkorn grain	1x Velkorn dough

Seed imprinting

Station	Input	Output
Primordial resource station [Urressourcenstation]	1 Vo Wet clay + 1 V Water + 1x Primordial tuber	1x Clatonin seed

Station	Input	Output
Primordial resource station [Urressourcenstation]	1 Vo Earth + 1 V Water + 1x Primordial tuber	1x Earth seeds
Primordial resource station [Urressourcenstation]	1 V Water + 1x Primordial tuber + 1x Plant fiber	1x Fiber seeds
Primordial resource station [Urressourcenstation]	1 V Water + 3x Primordial tuber	1x Primordial seeds
Primordial resource station [Urressourcenstation]	1 V Water + 1x Primordial tuber + 1x Loose stone	1x Stone seeds

Tuber extraction

Station	Input	Output
Primordial resource station [Urressourcenstation]	1x Clatonin primordial tuber	1 Ven Wet clay
Primordial resource station [Urressourcenstation]	1x Earth tuber	1 Ven Earth
Primordial resource station [Urressourcenstation]	1x Fiber tuber	1x Plant fiber
Primordial resource station [Urressourcenstation]	1x Stone tuber	1x Loose stone

PART B

Quests and objectives

The registered destinations are completely adopted. Names and order come from the project reference; the formulations are not a promise of new public content.

B1 · All 129 main quest objectives

Era 1 · 46 Main objectives

No.	Target	XP
1	Collect something in the wild for the first time	2
2	Change the terrain for the first time	2
3	Drink water	3
4	Satisfy your hunger for the first time	3
5	Craft a fiber strip	3
6	Craft a sharpened stick	4
7	Open the codex	2
8	Kill a Murrak or Rauk	6
9	Invest your first skill point	5
10	Craft an herbal bandage	5
11	Craft a Primitive Workshop	5
12	Place the Primitive Workshop	5
13	Create a professional chronicle	5
14	Activate carpenter-Chrono	5
15	Craft a fire pit at the crafting site	5
16	Place a fire pit	5
17	Light the fire pit	4
18	Craft a roasting stone	4
19	Place a roasting stone in the fire pit	4
20	Cook meat on a fire pit	6
21	Craft a Drying rack at the crafting site	5
22	Assign the Cook Chrono	5
23	Dry your first food	6
24	Assign textile and leather Chrono	5
25	Dry two skins for the sleeping area	6
26	Create a sleeping place at the workshop	6
27	Place a sleeping spot	8
28	Craft an anchor stone at the crafting site	7
29	Craft a return marker at the crafting site	7

No.	Target	XP
30	Place a return marker	7
31	Bind yourself to a return marker	8
32	Create a storage point at the workshop	4
33	Place a storage spot	4
34	Activate the Farmer Chrono	5
35	Plant seeds or cuttings for the first time	5
36	Craft a path tool at the workshop	4
37	Create your first simple path	4
38	Craft a primitive trap	5
39	Activate hunter-Chrono	5
40	Bait a primitive trap	4
41	Take your first catch from a trap	7
42	Craft a primitive fishing rod	5
43	Activate the Fisher Chrono	5
44	Cast the line with berry bait	4
45	Catch your first fish	6
46	Craft the Primitive Chronicle at the crafting site	10

Era 2 · 40 Main objectives

No.	Target	XP
1	Craft a rawhide mat	6
2	Activate miner-Chrono	5
3	Collect wet clay	6
4	Dry your first clay	7
5	Craft a stone hatchet	7
6	Activate Botanist-Chrono	5
7	Gather your first wooden log	8
8	Build a carpentry bench	8
9	Build a wood splitting place	9
10	Split your first wooden log	9
11	Split your first half log	9
12	Make your first planks	10
13	Secure future lumber	8
14	Make a simple earth spade	7
15	Collect soil for the first time	7
16	Craft and place a material station	8
17	Divide 1 Versi soil into Vado units	9
18	Craft and place a charcoal pit	8
19	Produce your first Charcoal	8
20	Assign stone and ceramic Chrono	5

No.	Target	XP
21	Craft and place a simple kiln	8
22	Kiln-fire your first clay	8
23	Make and place a loom	8
24	Make your first sturdy cord	8
25	Prepare your first filled clay water container	9
26	Fill a material container	9
27	Form your first block of dirt	10
28	Mix your first pressed clay	10
29	Place a Settlement stone	8
30	Give your settlement a name	8
31	Craft a Seed collector	6
32	Collect a primordial seed from a wild primordial plant	7
33	Plant a primordial seed	7
34	Lay the foundation	8
35	Build a complete clay building base module	12
36	Harvest a primordial tuber	9
37	Imprint your first Clatonin seed	10
38	Plant a Clatonin seed	8
39	Secure a renewable Clatonin supply	12
40	Complete the settlement core	15

Era 3 • 17 Main objectives

No.	Target	XP
1	Craft a Primitive Pickaxe	7
2	Activate miner-Chrono	5
3	Mine 1 Versi Simplenium ore	14
4	Set up a hand mortar	8
5	Separate Simplenium ore in hand mortar	10
6	Grind dry clay into clay dust	8
7	Mix Raw Clayone	10
8	Fire Clayone to obtain Hardened Clayone	10
9	Set up a Primitive Furnace	10
10	Place a Primitive ingot mould within range	8
11	Assign metal craftsman-Chrono	5
12	Load the furnace with concentrate and Charcoal	8
13	Create Molten Simplenium	12
14	Pour at least 1 Vo into the ingot mould	10
15	Remove your first Simplenium ingot	15
16	Craft a Simplenium Tool	10
17	Mine 9 blocks in one hit	10

Era 4 · 10 Main objectives

No.	Target	XP
1	Gather grain from wild Velkorn	8
2	Craft a field hoe	8
3	Create a field	8
4	Sow one Velkorn grain	8
5	Water your Velkorn	8
6	Harvest your grown Velkorn	8
7	Crush three grains into coarse meal	8
8	Mix the dough and bake a Velkorn flatbread	8
9	Eat your homemade flatbread	8
10	Sow again after harvest	8

Era 5 · 3 Main objectives

No.	Target	XP
1	Craft a Well	8
2	Place a well within the settlement radius	8
3	Draw water from the community well for the first time	8

Era 6 · 4 Main objectives

No.	Target	XP
1	Mine Veyrium ore	8
2	Grind Veyrium ore in hand mortar	8
3	Cast your first Veyrium ingot	8
4	Create a component socket	8

Era 7 · 9 Main objectives

No.	Target	XP
1	Craft a charcoal heat furnace	8
2	Create Tervyss for the first time	8
3	Create Makavyr for the first time	8
4	Craft the alloy Veyrit	8
5	Press a Veyrit plate with Makavyr	8
6	Craft an Ektiven generator	8
7	Create Ektiven from Makavyr for the first time	8
8	Craft a precision assembly station	8
9	Operate the precision assembly station with Ektiven	8

B2 · All 50 optional chronicle quests

Era 1 · 30 optional tasks

Task	Target	XP
Small stock	Secure 10 food units in your inventory or storage.	10
Water for the way	Have a filled leather water bag.	10
Full and safe	Keep both hunger and thirst gauges above 80% at the same time.	10
Load capacity	Make a carrying bag.	10
Light spot	Craft or place a torch.	10
Camp supplies	Make a fence or fence gate.	10
Herb garden	Harvest a wild herb plant you planted yourself.	10
Berry culture	Harvest a cultivated berry bush.	10
Tea plant	Harvest a mature tea plant that you grew from a seed.	10
Ivy cutting	Harvest mature ivy that you grew from a cutting.	10
Mushroom picker	Collect 5 mushrooms.	10
Flower picking	Collect several meadow flowers.	10
Path network	Build 10 simple path tiles.	10
Organized storage	Place items in a storage location.	10
Shelter roof [Unterstanddach]	Place a shelter roof.	10
Shelter side [Unterstandseite]	Place a shelter side.	10
Shelter entrance [Unterstandeingang]	Place a shelter entrance.	10
Expanded fire	Have a fire pit fitted with 4 roasting stones.	10
Dry zone	Fill several slots of a Drying rack after starting the quest.	10
A place to stay	Set up a sleeping area, a storage area and a return marker.	10
Nice place	Place flowers or ivy around the camp.	10
First find	Own or have exhibited at least one found object.	10
On display	Store a found object in a display case.	10
Coin collector	Own or display bronze, silver and gold coins.	10
A trace of Versa	Own or display a Versa coin.	10
Natural relics	Own or display amber, fossil and crystal.	10
Small exhibition	Display several finds in display cases.	10
First companion	Tame a suitable animal with its favorite food.	10
Stay close	Give a companion a name and location.	10
Two friends	Have two tamed animals or two different species.	10

Era 2 · 12 optional tasks

Task	Target	XP
A full drying	Dry and remove four units of clay in a full rawhide mat.	10

Task	Target	XP
A full burn charge	Burn and extract four units of clay in a fully occupied primitive combustion chamber.	10
From trunk to ground	Process wood into a placeable plank panel.	15
Knowledge of water containers	Fill leather water bag, clay bucket and simple watering can on a clay water container.	10
Short supply routes	Use a clay water reserve for both clay mixing and imprinting a resource seed.	15
Organized materials	Store three different materials in three material containers at the same time.	15
Earth from the seed	Imprint a soil seed, plant it, harvest its tuber and extract soil from it.	15
Fibers from the germ	Imprint a fiber seed, plant it, harvest its tuber and extract plant fibers from it.	15
Stone from the seed	Imprint a stone seed, plant it, harvest its tuber and extract loose stones from it.	15
The cycle is maintained	Combine three primordial tubers into a new primordial seed and plant it.	15
A second floor	Within a named settlement, build an accessible upper level using a foundation, ladder, and at least one facility.	20
Light and air	Build at least three window walls and a functional door entrance within a named settlement.	15

Era 3 · 8 optional tasks

Task	Target	XP
Clean separation	Grind a full Versi Simplenium ore, keeping the concentrate and stone powder.	10
From dust to stone	Have clay dust, stone powder, Raw Clayone and Hardened Clayone at the same time.	15
Four samples in one ember	Fire four Ven of Raw Clayone in a fully occupied firing chamber.	15
Exploit embers	Smelt five portions of metal in the Primitive Furnace.	15
Four-part casting	Fill all four slots of a primitive ingot mould before removing an ingot.	15
A visible progress	Place at least five Simplenium ingots in the world as visible stock.	15
The mineral workshop	Build hand mortar, Mixing Station, Kiln, Melting Furnace and ingot mould.	20
Separate substances	Store three different Era-3 materials in material containers at the same time.	15

End of issue 1.0 · Secured project status from 11. October 2026. Further development content and final balance will be rebalanced in later editions.