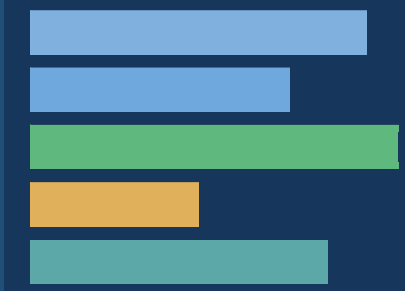
SchedPro
Planning & Baseline Tool

SchedPro

BOQ → Primavera P6 Baseline

Build a full schedule in minutes, not days



From a Bill of Quantities to a ready-to-import Primavera P6 baseline.

Days → Minutes	Any-Language BOQ	One-Click P6 Export

USER MANUAL
Version 1.0

Confidential Product Overview

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01 The Problem — Why Schedule Preparation Is Broken

Every planning engineer knows the pain. You receive a Bill of Quantities running to thousands of lines. The mobilization window is a handful of weeks. You need a fully resource-loaded, logic-linked Primavera P6 baseline — and you are expected to build almost all of it by hand.

The hard truth is that most of that time is not spent doing engineering. It is spent doing **data entry** — copying, classifying, numbering, splitting, linking, and reconciling, line after line after line.

Activity	Without SchedPro	With SchedPro
BOQ Parsing & Classification	Manual copy-paste, 7–10 days	Automated, ≈ 2 days
Parameter Combination Generation	Manual enumeration, error-prone	One-click, mathematically exact
Activity Code Assignment	Look up & type each code by hand	Auto-assigned from classification engine
WBS & Resource Dictionary Build	Days of structured data entry	Built in minutes via dictionary loader
Engineering / E1 Log Matrix	Built separately, often incomplete	Auto-generated with IDs & WBS links
Procurement / E2 Log Matrix	Built separately, often incomplete	Auto-generated with IDs & WBS links
Logic Relationship Setup	Manually define each link	Pattern defined once, replicated globally
Final XER Export for P6	Formatted manually or via workarounds	Native XER output, import-ready

> **The numbers are stark.** Planning engineers spend up to **70%** of their baseline-preparation window on mechanical data-entry that requires no engineering judgment whatsoever. The remaining 30% — the part that actually needs expertise — gets squeezed, rushed, or skipped.

This is exactly what SchedPro is built to fix.

02 What SchedPro is, and the Gap it Fills

SchedPro is an Excel-based project controls automation engine that turns a Bill of Quantities into a complete, import-ready Primavera P6 baseline. You paste your BOQ, define your project structure once, and SchedPro generates the WBS, the activities (expanded across every building, floor and area), the quantities and costs distributed to each location, the resources and manpower, the logical relationships, the calendars — and finally an XER file you import straight into P6.

Building a P6 baseline by hand is slow and error-prone. A planner spends days creating the WBS, naming and numbering hundreds of activities, splitting quantities across locations, assigning resources, linking predecessors and successors, and reconciling everything before a single import. **SchedPro compresses that work into minutes — and makes it repeatable and consistent.**

What You Get

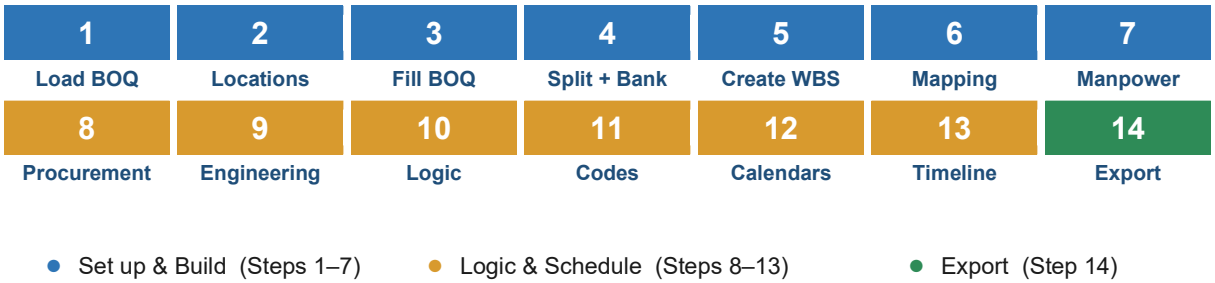
- **A standardized WBS** and a fully expanded activity list, numbered consistently from a reusable Standard Bank.
- **Quantities and costs distributed** across your locations using closed-set distribution profiles.
- **Manpower, durations and crew sizes** calculated from productivity templates.
- **Procurement and engineering deliverable activities** generated automatically from the BOQ and finalized in editable tables.
- **All relationship logic** (trade order, crew flow, cross-area, floor stacking, external links) driven from one table and stamped across every location.
- **Calendars, a forward-pass timeline** to catch loops before export, and one-click export to a full XER (or WBS-only, relationships-only, resources, activity codes).
- **Full multilingual support —** BOQs in Arabic or any language are read correctly; columns, numbers and units are detected by content, not by English headers.

The Core Breakthrough

Once a project's parameters are established, the entire **Master Mapping Sheet** — the structural nucleus of your P6 schedule — is generated from your BOQ in a single button press. What previously took a planner multiple days is completed in seconds, with **zero cross-referencing errors**.

03 The Workflow at a Glance

SchedPro follows a clear sequence. Each step is a ribbon button or a sheet you fill in, and each stage feeds the next — the whole flow culminating in a P6-ready XER file. The roadmap below is the recommended order; the detailed guide in Section 04 explains every step.



> **NOTE**
> **Profiles can pre-fill much of this work** from a proven template for your project type (hotel, hospital, residential, and so on). Section 05 explains how Profiles connect to every step. But note that till June 2026 this is a beta feature and not fully functional and tested.

04 Step-by-Step Guide

STEP 1

Load the BOQ

Click **Load BOQ** to prepare the **Input_BOQ** sheet, then paste your BOQ into it. A typical BOQ has an item number, a description, a unit, a quantity, a unit rate and a total amount.

SchedPro resolves each column in priority order: an explicit Column Setup map → a matching English header → content auto-detection (description is the long-text column; quantity / rate / amount are the numeric columns; unit is the short, repeated-text column) → default position. Thanks to content auto-detection, a BOQ in **any language** is read correctly without changing your headers.

EXAMPLE *An Arabic BOQ whose unit column holds values like m², linear-meter or count is detected as the unit even with no English word present, and Arabic-Indic digits in the quantity column are read as normal numbers.*

STEP 2

Identify Your Parameters in the Locations Sheet

The **Locations** sheet defines the dimensions of your project — the axes across which activities are distributed. The standard dimensions are **Building, Area and Floor**, and you can add more (e.g. Trade or Zone or Cluster etc.). This is where you tell SchedPro what your project actually looks like.

- In **row 4**, set the label of each dimension (Building, Area, Floor, and any extra dimension).
- Below each label, list the **real values** — the actual buildings, floors and areas.
- The **Active** column marks the end of your dimensions, so you can delete blank dimension columns safely.

After editing, the Input_BOQ filter headers stay in sync automatically. To force a refresh, use **Sync Headers**.

STEP 3

Fill the Input_BOQ Columns

With the structure defined, complete the Input_BOQ rows. Beyond the core BOQ values, the important columns are:

- **Filter columns (Project / Floor / Area / Trade)** — control where each item is distributed. Leave blank to apply everywhere, name specific locations, or type ![filter] to remove a specific location.
- **Activity Group** — items sharing a group are merged into one activity (quantities and costs sum) or split with a common pattern; this drives Step 4.
- **Distribution Profile (optional)** — assign a profile so a distributed item's quantity is spread across areas according to that profile.
- **WBS Code / Resource Code (optional)** — set them on the BOQ directly if you prefer.

TIP *Filters support exclusions, so one rule can cover many locations: ALL EXCEPT GBATH, NOT GBATH, -GBATH or !GBATH — and you can list several exclusions separated by commas.*

STEP 4

Split Activities + the Standard Bank

Use **Create Activities (Split)** to turn your Activity Groups into the final activity set. Grouped items merge into a single named activity; an item that must appear in several locations is split into the right children, each carrying its share. This produces a clean, non-duplicated activity list before mapping.

The Standard Bank — why it matters

The **Activity_Bank** (Standard Bank) is a reusable library that maps activity and trade names to a standard activity number and standard properties. When you generate the mapping, SchedPro looks up each activity and assigns it a consistent number from your convention. This is the backbone of clean numbering — every occurrence of "Blockwork" or "Gypsum board partitions" gets the same standardized number across the whole project, so activities sort correctly, never collide, and follow the same trade order everywhere.

- Click **Standard Bank** to create the sheet with a baseline set of standard entries.
- Customize it — add your trades, set the numbers and the in-room order you want.

TIP *Because numbering flows from the Standard Bank, a little time here pays off on every future project — reuse the same bank for consistent activity numbers across all your schedules.*

STEP 5

Create the Project WBS

Click **Create WBS** to build the Work Breakdown Structure, then **Show WBS Trees** to review the hierarchy. SchedPro supports a multi-level WBS with location-aware leaves, so the same trade lands under the correct area branch.

Assign WBS codes with **Assign WBS**. A convenience here: type a base code (e.g. a first-fix mechanical code) and SchedPro completes it to the unique valid WBS leaf for each row by appending the right dimension values — so you don't type the full code on every line.

STEP 6

Generate the Mapping

This is the core engine. Click **Generate Mapping** and SchedPro produces the **Mapping_Output** sheet: every activity expanded across the locations it belongs to, with quantity and cost distributed to each location, the WBS code, the resource, and a unique activity ID. Everything later — manpower, relationships, export — builds on this mapping.

If the numbering isn't satisfying

Use **Number Activities** to renumber the mapped activities cleanly, and **Unify Numbers** to make numbering consistent where the same activity recurs — without redoing the whole mapping.

STEP 7

Apply Manpower (Templates & Crews)

Open **Manpower Template** to set, per trade, the productivity and crew composition (how much one crew produces per day and how many workers are in a crew). Then **Calculate Manpower** uses each activity's quantity and the template to compute the duration (Days) and the number of crews.

- Adjust the **No. of Crews** on the manpower sheet to compress or extend any activity's duration.

STEP 8

Create the Procurement List

SchedPro generates procurement (material delivery) activities straight from the BOQ. Click **Generate Procurement Names from BOQ** and it cleans each line down to the real material name (stripping boilerplate like “supply, install, testing and commissioning of…”). You can also build the list manually from a material list.

Open **Edit Procurement Families** to review the families — each carries keywords, a discipline, and standard durations (submittal, approval, PO, fabrication, delivery). Then **Generate Procurement List** builds the activities. The tool learns from your edits, so matching improves over time.

STEP 9

Create the Engineering List

Click **Engineering List** (or **Generate Engineering List**) to create the engineering deliverable activities — shop drawings, material submittals and approvals per discipline — that precede construction. Review and finalize exactly as you did for procurement, adjusting disciplines and durations to your project.

STEP 10

Work on the Logic (Relationships) Table

All relationships are driven from one table on the **Logic** sheet. For each rule you pick a Category and type the predecessor and successor by name; **Generate Relationships** then stamps that rule across every relevant room, floor and area and writes the result to **Logic_Generated**.

- **Trade Order** — the sequence of trades inside one room.
- **Crew Flow** — how a crew moves between rooms on a floor.
- **Cross-Area** — specific links between areas.
- **Floor Stacking** — link a trade on one floor to a trade above; the server cascades it up the whole stack.
- **External Link** — connect an engineering or procurement activity to a construction trade (direction detected automatically).

The Settings block defines the cluster (what counts as one “room”), the auto-sequence option, and the Project Start Date. If the layout drifts, **Rebuild Logic Sheet** restores a clean single table while keeping your rules, order and start date.

STEP 11

Add Activity Codes (Optional)

If your P6 setup uses activity codes, click **Create Activity Codes** to define them, **Assign Activity Codes** to attach them, and either include them in the full export or produce a codes-only file with **Export Activity Codes**. This step is optional — the full export works whether or not codes are present.

STEP 12

Apply Calendars and Vacations

On the **Calendars** sheet, define your working calendars (work week and holidays) and vacations. You can also set per-activity calendar overrides. Assigning the right calendar matters because the timeline uses it to compute real working dates.

STEP 13

Run the Timeline (Forward Pass)

Before exporting, click **Run Forward Pass**. Using durations, relationships and calendars, it computes early start and early finish for every activity from the Project Start Date, and it detects logic loops (cycles) and reports them so you can fix them before P6 ever sees the schedule. **Draw Timeline** gives a Gantt-style preview to sanity-check the programme.

TIP *This is your safety check — catching an open end or circular dependency here is far cheaper than discovering it after import.*

STEP 14

Export

When the schedule looks right, export it. You have several options depending on what you need:

Export	What It Produces
Export Full XER	The complete baseline: project, WBS, activities, codes, resources, relationships and calendars — import directly into P6.
Export WBS	The project skeleton and full WBS tree only.
Export Relationships	The relationships only, to apply onto an existing schedule.
Export Resource Dictionary	The resource dictionary only.
Export Activity Codes	A codes-only file you can import onto any schedule.

> Import the XER into Primavera P6 as a new project — and your baseline is ready.

05 Profiles — The Fast Start [BETA Feature]

BETA

A **Profile** is a ready-made template for a project type — hotel, hospital, residential, RO plant, and more — hosted on the SchedPro server. Instead of building from a blank sheet, you pick the profile that matches your project and SchedPro pre-fills the parts that are typical for that type, which you then customize.

What a Profile Contains

- **Distribution profiles** — how a distributed item's quantity is spread across areas and floors. These are closed sets: an area not part of the profile receives nothing (excluded, not zeroed), keeping distribution clean and intentional.
- **Standard logic relationships** typical for the project type.
- **Standard engineering deliverables and procurement families** for that type.
- **Suggested activity splits.**

How Profiles Connect to the Steps

Profile Action	Relates To
Project Setup	Step 2 — pick your project type to load the profile's parameters as a starting point.
Suggest Splits	Step 4 — propose the activity splits typical for the type.
Distribution Profiles	Steps 3 & 6 — control how quantities are distributed during mapping (closed sets).
Apply Procurement	Step 8 — load the profile's procurement families.
Apply Engineering	Step 9 — load the profile's engineering deliverables.
Apply Logic	Step 10 — load the profile's standard relationships.
Apply All	Applies the profile's splits, distribution, procurement, engineering and logic together.
Manage Profiles	Build or edit profiles — including building a profile from an existing XER.

In Short

A profile lets a new project start from a proven baseline for its building type, so you spend your time **customizing rather than building from scratch**. You can always edit everything the profile fills in — it is a starting point, not a lock-in.

06 Who Benefits from SchedPro

Individual Planning Engineers

Stop acting as a data-entry clerk. SchedPro handles the mechanical work so you can focus on what you were trained to do: analyzing the critical path, evaluating float, optimizing resources, and identifying risk.

Project Controls Teams

Deliver professional, fully resource-loaded baselines within tight mobilization windows. A 5,000-line BOQ that would take weeks is handled in hours — giving the team time to validate logic and review assumptions.

General Contractors & EPC Firms

Reduce the risk of baseline errors that cascade into claim disputes. System-level validation ensures that if your inputs are correct, your outputs are mathematically exact — every time, on every project.

Consultants & PMC Organizations

Standardize schedule production across concurrent projects. Same classification engine, same logic, same output — regardless of who presses the button. Quality becomes a system property, not a person-dependent skill.

07 Key Technical Capabilities

Smart Classification & Validation

- **Multilingual BOQ reading** — columns, numbers and units are detected by content, not by English headers, so a BOQ in Arabic or any language is read correctly without touching your headers.
- **System-level validation** — outputs are mathematically exact given correct inputs. The engine applies deterministic logic to every row instead of relying on human cross-referencing.
- **Strict uniformity enforcement** — parameter labels and naming conventions are enforced consistently across all fields, so casing mismatches are caught before they produce wrong combinations.

Combinatorial Parameter Engine

- **Multi-dimensional site hierarchy** — supports Building, Area, Floor, Zone, Trade and more, generating every valid combination for your project geometry automatically.
- **Boolean exclusion operators (!Tag)** — exclude a specific location from a specific trade without manually filtering hundreds of rows; list several exclusions, comma-separated.
- **Distribution profiles** — split a single BOQ quantity or cost across multiple filters at user-defined percentages, essential for shared infrastructure that serves multiple zones.
- **Activity groups** — merge logically related BOQ items under a single schedule activity, keeping the P6 view clean without losing traceability to source BOQ lines.

Integrated Procurement & Engineering Automation

- **Auto-generated procurement chain** — enter a material name once and SchedPro produces submittal → approval → purchase order → delivery, with auto-numbered reference IDs.
- **Direct WBS association** — each procurement and engineering activity is tied to its WBS node automatically, with no manual cross-referencing (when WBSs are created matching the procurement codes in families)
- **Engineering deliverables list** — shop drawings, submittals and approvals per discipline, generated from the BOQ and finalized in editable tables.

Native Primavera P6 Export

- Full XER file output — no intermediate tools required.
- WBS, resource dictionary, activity codes and relationships all compiled in a single export.
- Targeted exports: WBS-only, relationships-only, resource-dictionary-only, or activity-codes-only.
- A built-in forward pass detects logic loops before you ever import into P6.