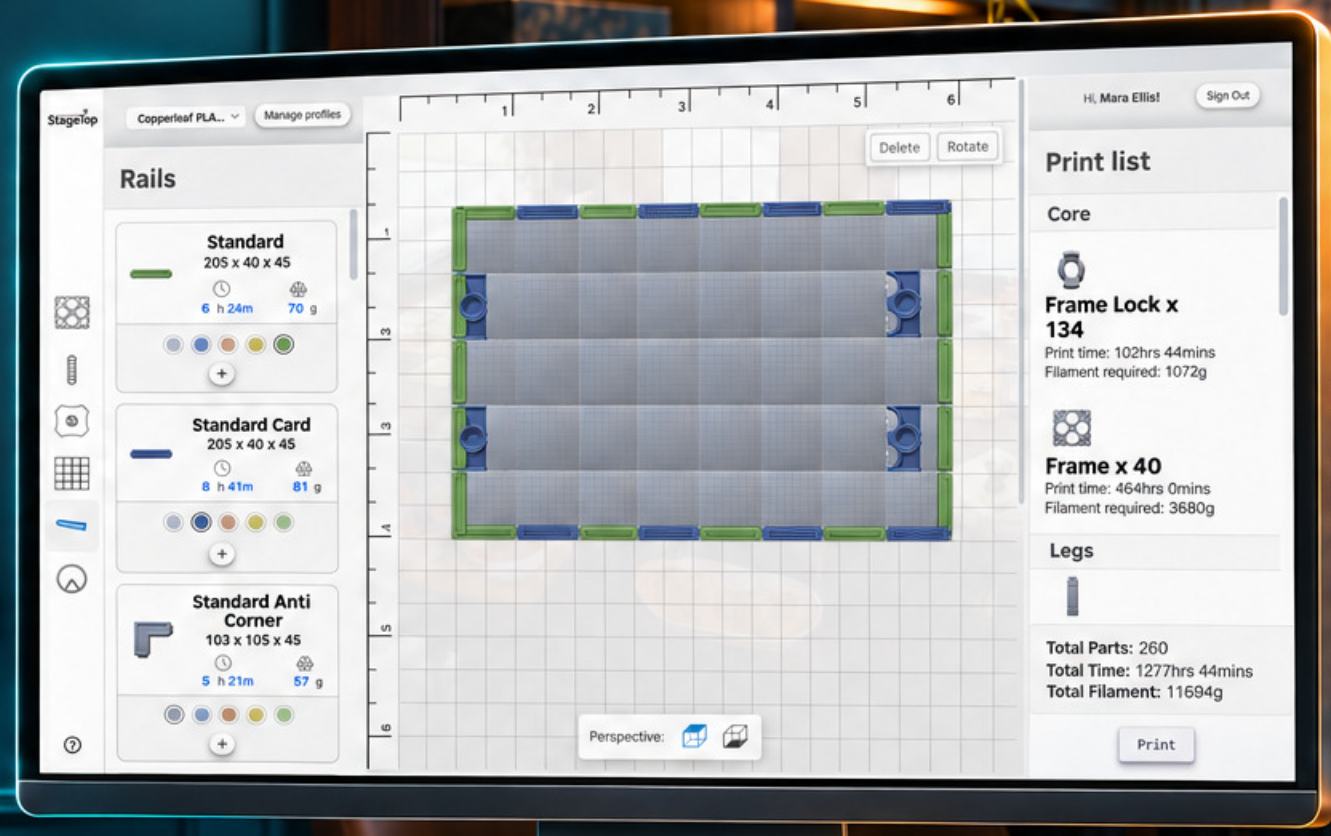
StageTop Configurator

Visual layout and print planning for modular gaming tables

FROM TABLE PLANNING. TO 3D PRINTER.

$324K Raised on Kickstarter





Emilian Manolache

Senior Full-Stack Developer

End-to-End: UI/UX, Fabric.js canvas engineering / Firebase integrations / Print planning

2023

StageTop

PRODUCT AND CAMPAIGN

GAMING TABLES, PLANNED IN THE BROWSER

$323,607

pledged to StageTop's Kickstarter

6,001

backers

131

selectable parts

6

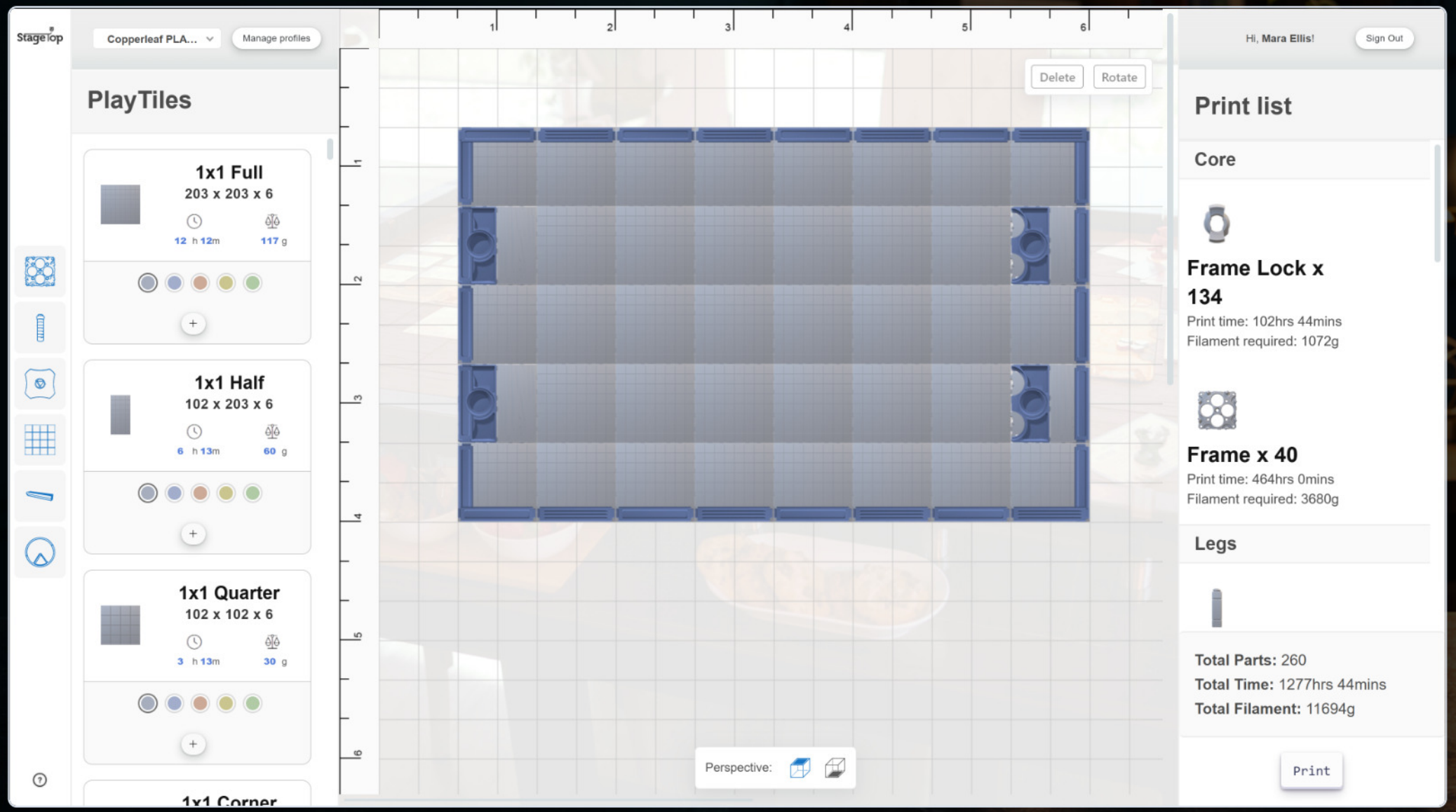
component families

4

default printer profiles

LAYOUT AND PRINT PLANNING

A component catalog, interactive 2D canvas and categorized print list in one desktop workspace.



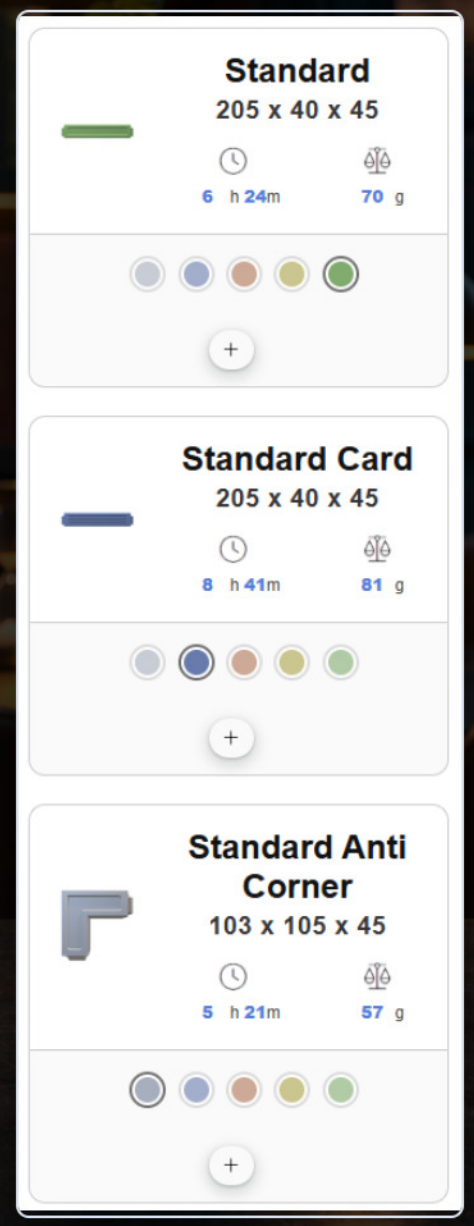
StageTop

CATALOG ENGINEERING

131 PARTS
SIX MODULAR FAMILIES

3	Core	**12**	Legs
7	Feet	**27**	Rails
67	PlayTiles	**15**	Accessories

Dimensions, colors and per-part print estimates help users choose components for the layout.

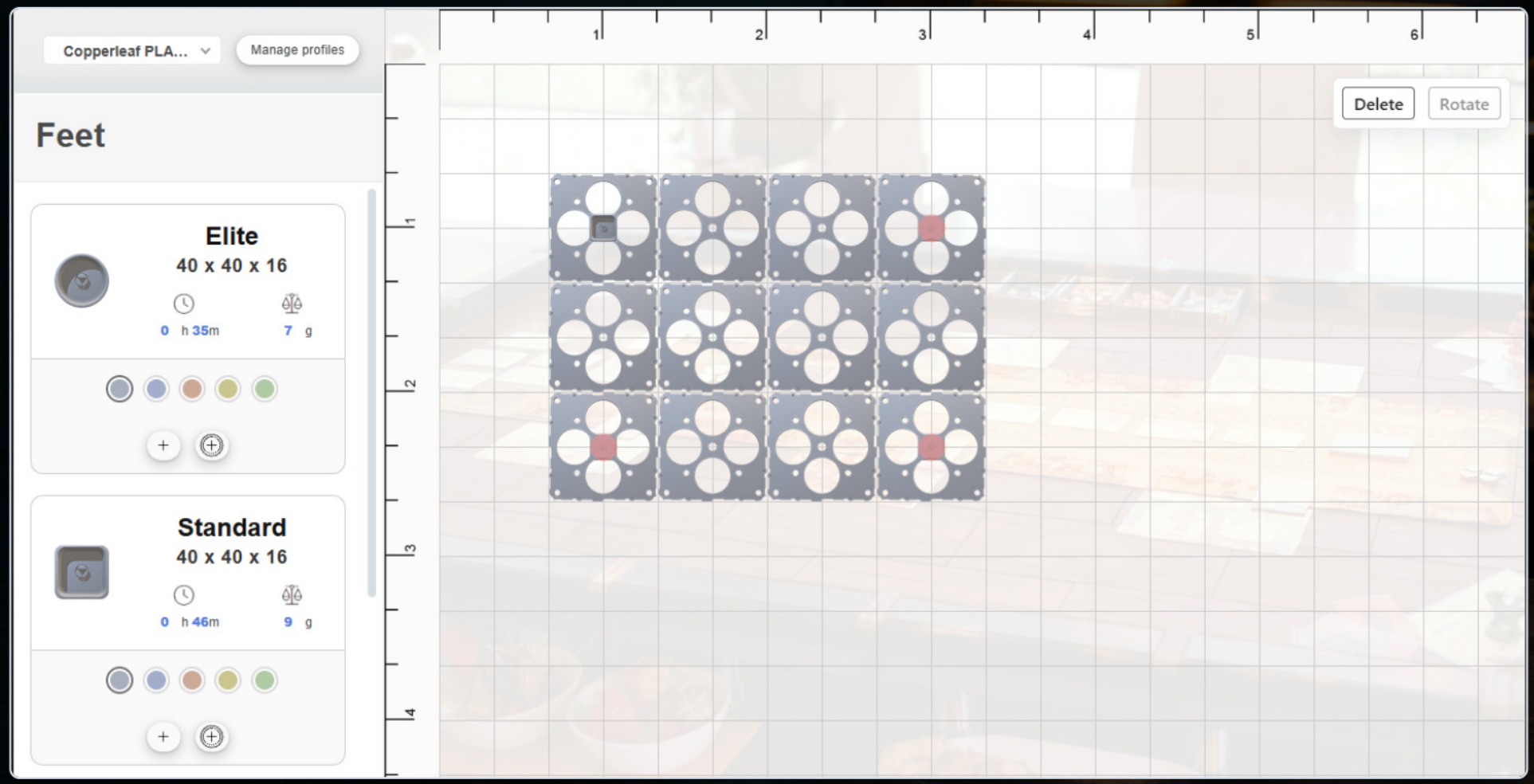


StageTop

CANVAS INTERACTION

PRODUCT RULES BUILT INTO PLACEMENT

Grid alignment, eligible 90° rotation and compatible-host guides support deliberate assembly.



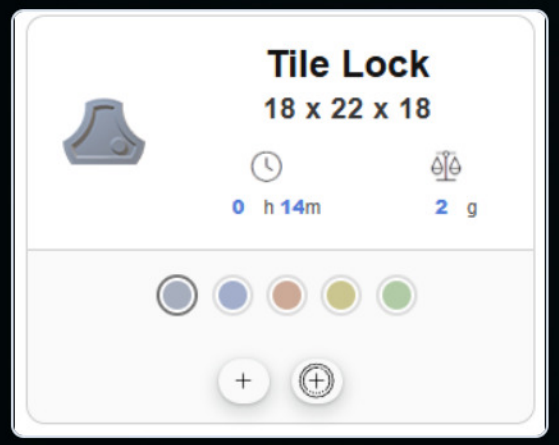
StageTop

AUTOFILL ENGINEERING

REPEATED ATTACHMENTS, FILLED THROUGH PART RULES

Autofill evaluates host anchors, skips occupied equivalents and checks targeted intersections.

SELECTED COMPONENT



CALCULATED QUANTITY

Core

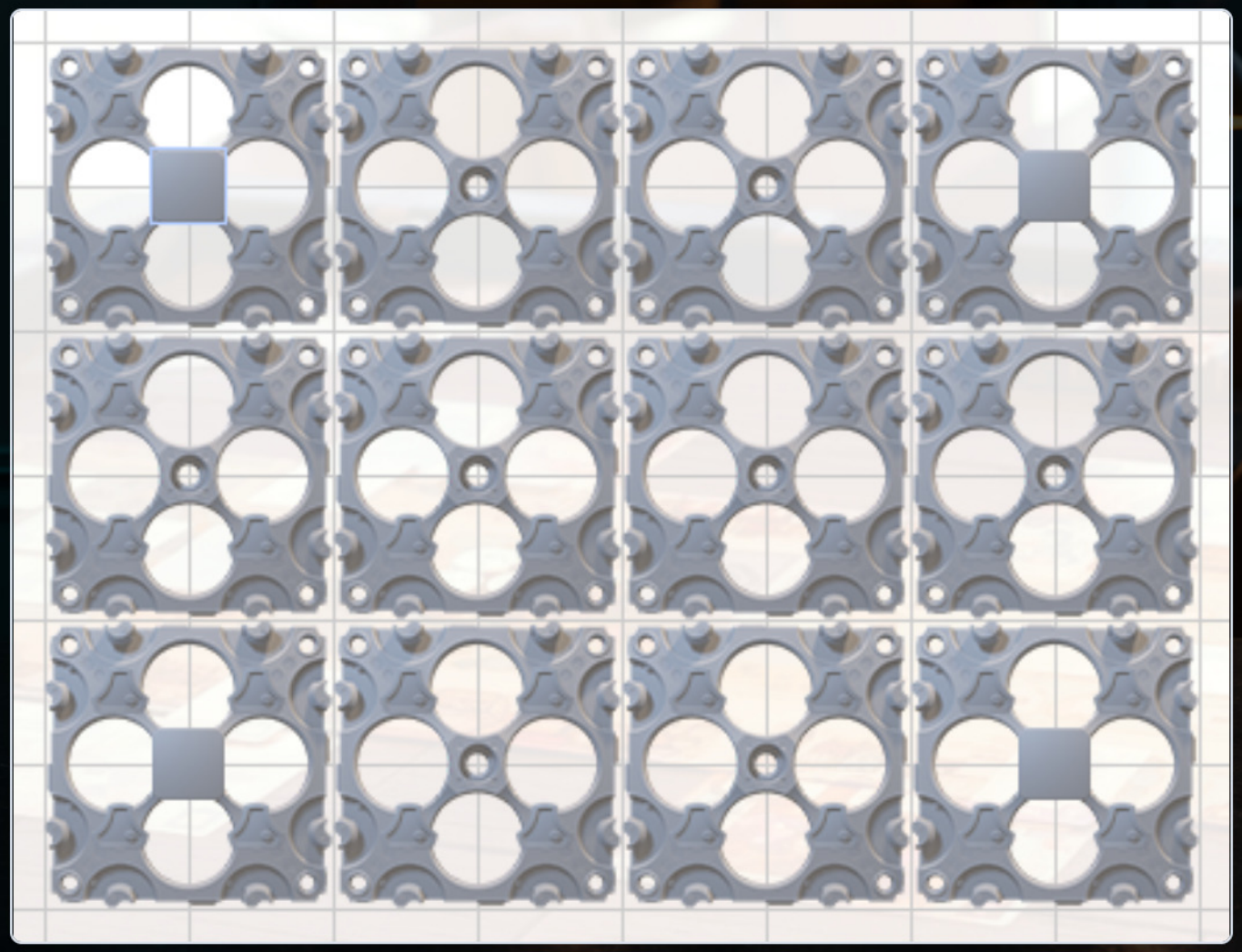


Tile Lock x 48

Print time: 11hrs 12mins

Filament required: 96g

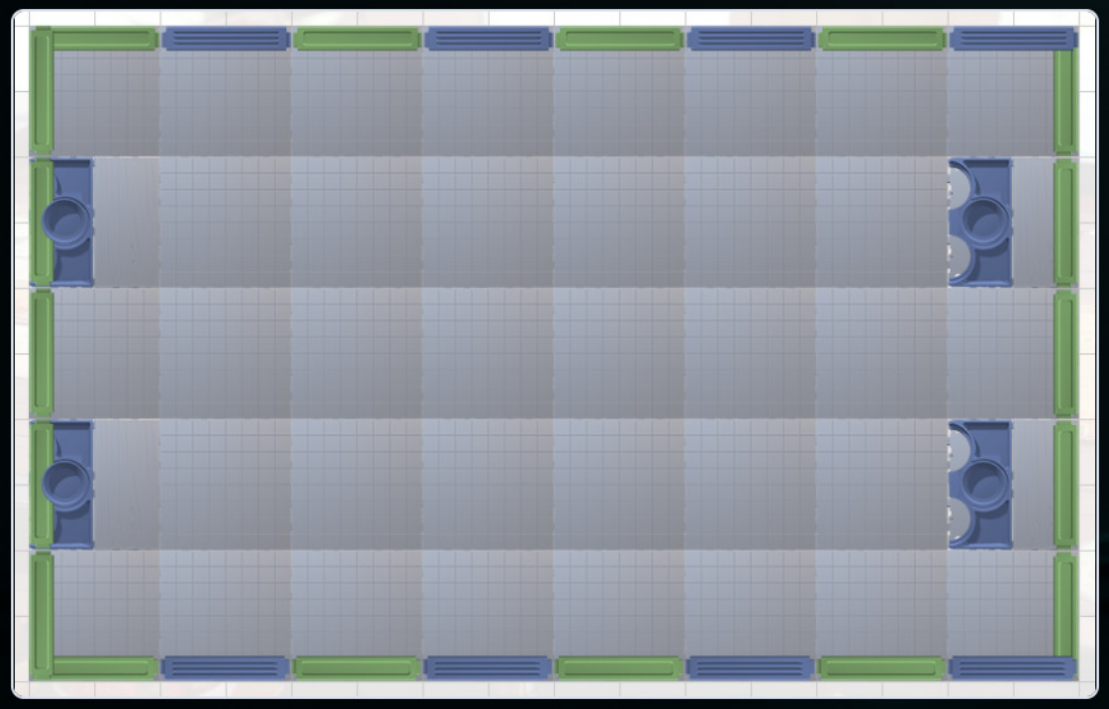
COMPATIBLE POSITIONS FILLED



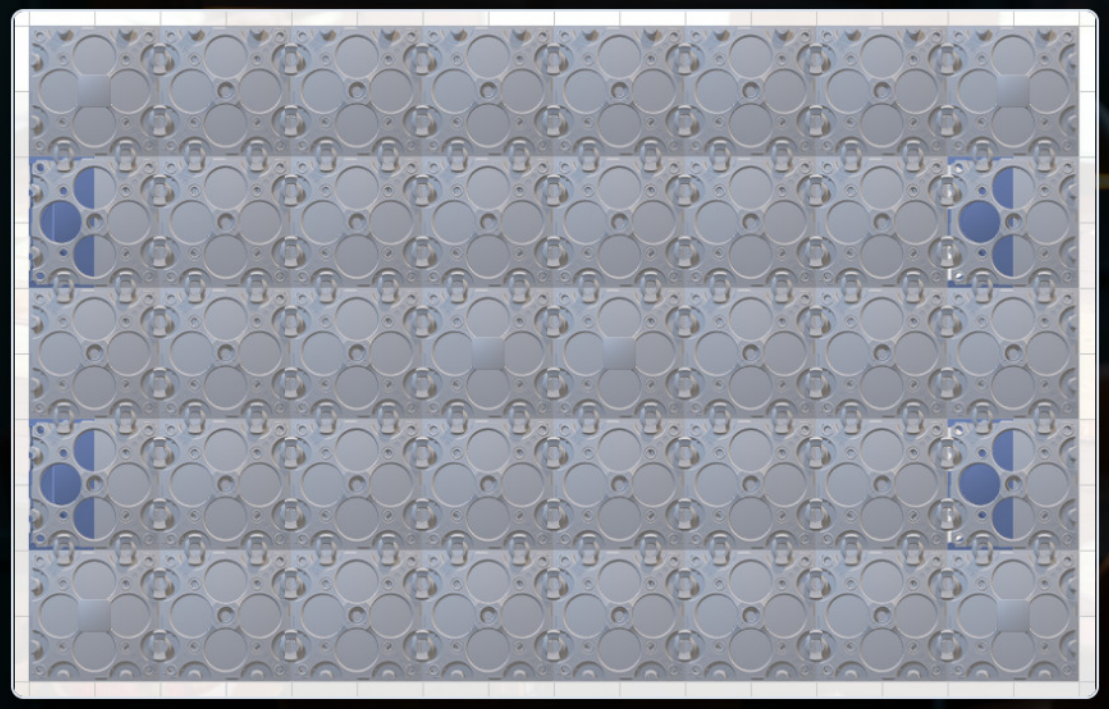
BOTH SIDES OF THE ASSEMBLY

Top and bottom images, with matching layer order, help users inspect the configured table.

TOP VIEW



BOTTOM VIEW



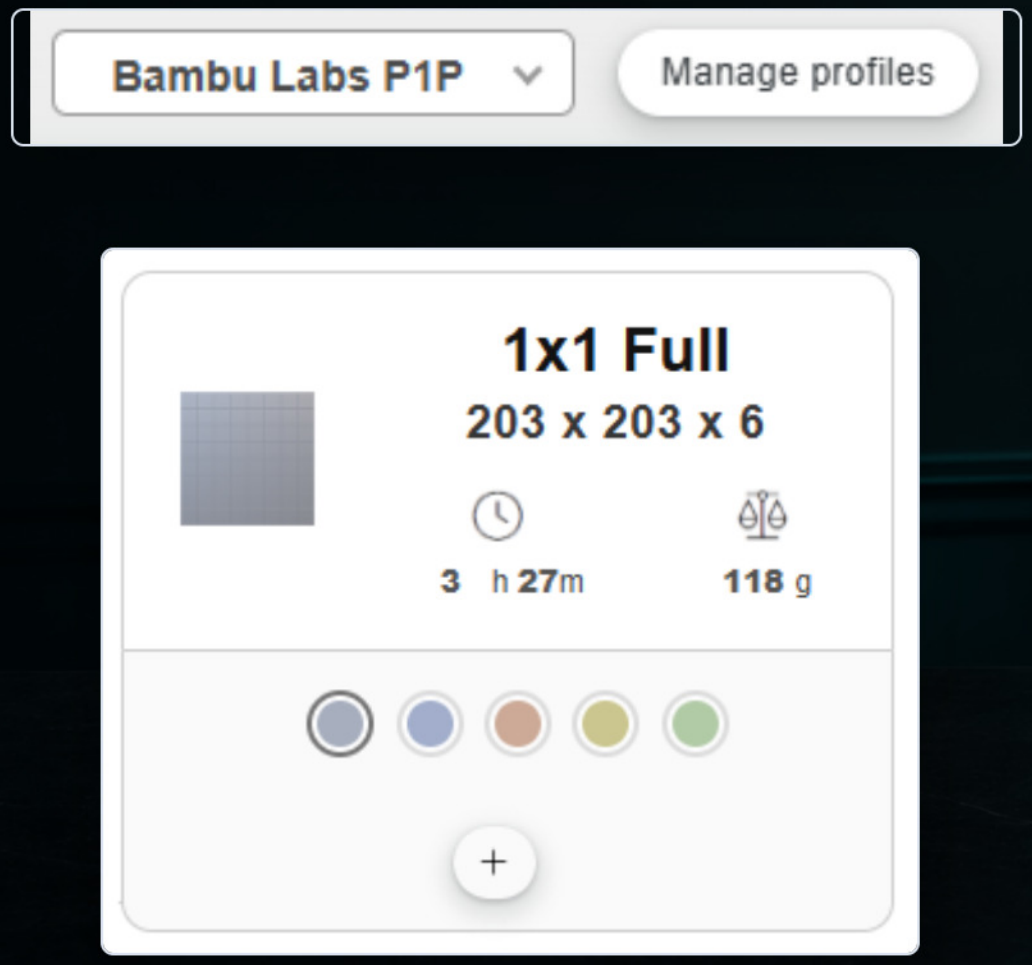
Five color options

Changing a part's color updates every instance of that part type across the layout.

PRINTER PROFILES DRIVE THE ESTIMATES

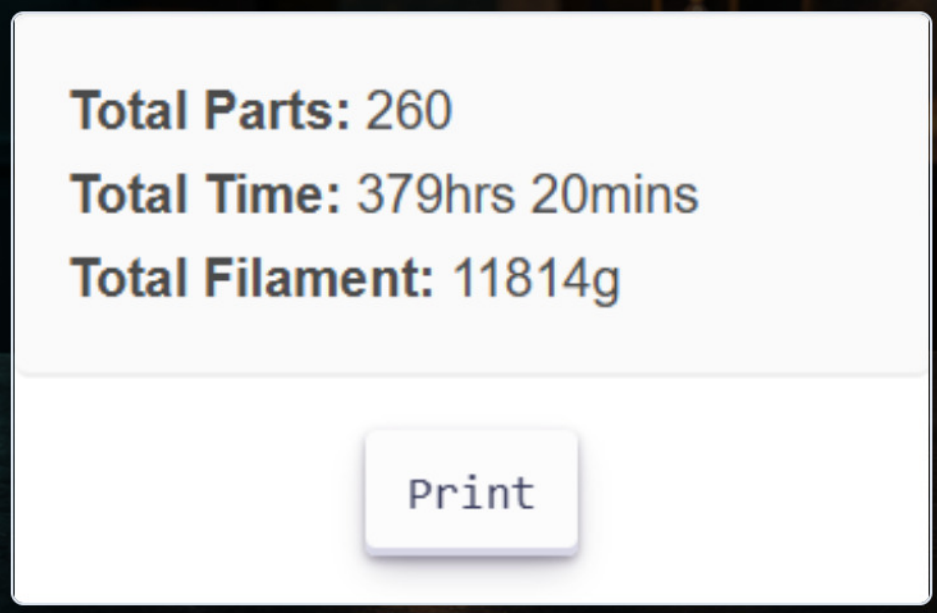
Four default profiles supply per-component time and filament values for the same configured layout.

SELECTED PRINTER PROFILE



The arrangement stays intact.
The estimate inputs change.

BAMBU LABS P1P ESTIMATE



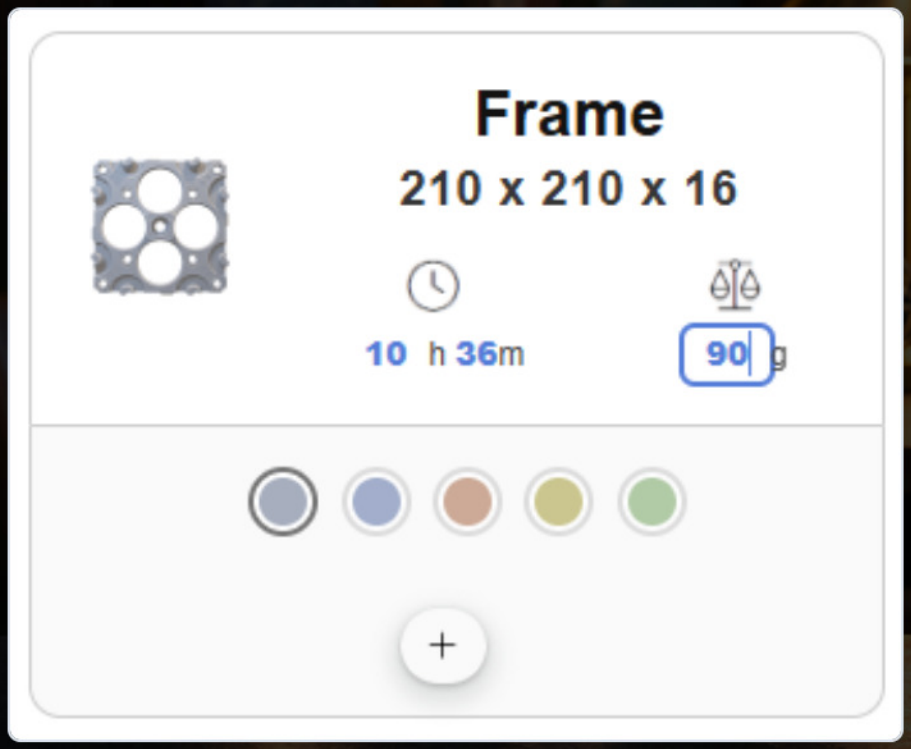
StageTop

PERSONAL PRINT PROFILES WITH PER-PART CONTROLS

Signed-in users manage custom profiles and adjust the time and filament values behind their estimates.



EDIT TIME AND FILAMENT



Custom values feed the same layout calculations.

StageTop

PRINT PLANNING

THE LAYOUT BECOMES A PRINTABLE PARTS PLAN

CUSTOM PROFILE CALCULATION

40 frames

PRINT TIME

40 × 10 h 36 m = 424 h

FILAMENT

40 × 90 g = 3,600 g

Grouped quantities and totals, ready for browser printing.

PRINT LIST AND TOTALS



Frame x 40

Print time: 424hrs 0mins

Filament required: 3600g

Total Parts: 260

Total Time: 1237hrs 44mins

Total Filament: 11614g

Print

StageTop

SYSTEM ARCHITECTURE

INTERACTIVE GEOMETRY WITH A MANAGED CLOUD BACKEND

Browser application — JavaScript / HTML / CSS

Catalog + profiles

Part definitions, images and per-component estimate inputs

→

Fabric.js canvas

Placement rules, views, colors and layout interaction

→

Print calculations

Grouped quantities, estimated time and filament, browser print

---

FIREBASE MANAGED SERVICES

Authentication

FirebaseUI sign-in

Cloud Firestore

Custom printer profiles

Hosting

Static application delivery

StageTop

PERFORMANCE ENGINEERING

LESS REPEATED WORK ON THE CANVAS

Two targeted implementation changes simplify the work performed during interactive assembly.

AUTOFILL REFRESHES

Per-insert updates

Refresh and recalculate repeatedly while adding attachments.

→

Batched final update

Defer explicit refreshes and calculations until the selected-part fill is complete.

CANVAS GRID

Grid-line objects

Grid lines inside the Fabric scene.

→

Repeating CSS background

The grid stays outside the object list.

StageTop

ENGINEERING OWNERSHIP

PRODUCT RULES
TURNED INTO USABLE SOFTWARE

End-to-End: UI/UX, Fabric.js canvas engineering / Firebase integrations / Print planning

Interactive product planning

Catalog navigation, grid alignment, eligible rotation, guided placement, autofill, color and view controls.

Print-planning logic

Quantities derived from the layout, custom estimate inputs and categorized browser-printable summaries.

Managed service integration

Firebase sign-in, custom printer-profile storage and static application hosting.

Senior Full-Stack Developer

2023