

Suddeco Product Requirements Document (PRD) April 2025

4 Week Feature Sprint

Blue: database mapping

Green: internal feature

Orange: artificial intelligence

Pink: existing features

1. Overview

2. User Groups

Professional Permission: Full access to ad margins for labour materials in settings

Default profit margins for labour and materials are already included within their options: example: 35% labour and 25% materials

Restricted Permission: Homeowners do not have access to the full software.

Their costs will be included within the profit margins as the above defaults. If the homeowner wants the cost, they will be included in the profit margins.

User Type	Profit Margins	Existing and Proposed Documents
Professionals & Service Providers (make profits)		Upload drawings or use Suddeco templates <ul style="list-style-type: none">● architect drawings● structural drawings● interior [designs]● surveyor reports● floor plans
Property Owner (get estimates including profits for service providers) Can find service providers from our platform or use their own.	Can share costs with their own service providers by downloading the SOW or inviting them to Suddeco. Suddeco will evaluate or quote from our service providers. The	Upload drawings or Suddeco templates (above)

	service provider will register within our system and manage the provider ourselves with less costs.	
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3. User Dropdown for Documents or Drawings

"Do you want basic, standard, or high end material finishes for your project?"
([map to materials database](#))

"Do you have a range for your budget?" ([map to inventory cost](#))

**When a homeowner finds a template or uploads drawings, and gets estimations, or finds another service provider, it will suggest everything within that local provider.*

Show a list of service providers and professionals to be contacted. The budget will change in accordance to the chosen servicers.

"Here are some of our latest projects within this area (choose radius)" *find areas where extensions costed a certain range**

"Do you have a supplier in mind, we can suggest one" ([internal feature](#))

Document Drawings (architect drawings, structural drawings, above mentioned)

Returns report and/or description of the project and provides feedback in case of faults or errors

Chatbox where one can [add or remove elements](#) of the property being developed

User can ask AI to remember to add or remove elements based on chat history ([mapping to tasks database](#))

Use Case

"I want to build a three story house with a patio, swimming pool, two bathrooms, kitchen, et cetera"

AI: Don't you want to add windows?

(reinforcement learning can use previous examples to suggest projects)

Project Templates Workflow

After analyzing 300 projects, the AI suggests templates for how someone can build and construct each room or builds based off of previous uploads.

Choose elements of uploaded projects to build upon other projects.

New Build (shell or structural)	Home Extensions	Renovation	Remodelling
Internal Floors			
Rooms and areas			
Roofing (pitched or flat)			
Basement			
Patio			
Garden			

Property types:

Detached property, semi detached, multi floor property

Residential and commercial

4. Agentic LLM Feedback

Description and Measurements
<ul style="list-style-type: none">● Provide a summarized description of what type of project has been uploaded.● Provide what type of materials.● Provide client intentions.<ul style="list-style-type: none">○ Chatbot will remember what has been specified to remove or add elements. The proposal can be modified based on the agent's memory.● Provide measurements for floors (width, length, and height), rooms (width, length, and height).● Provide the scale of the architectural drawing.<ul style="list-style-type: none">○ What are the external wall and roof measurements?● Based on the uploaded floor plans and measurements, identify potential non-compliance with basic architectural standards (e.g., minimum ceiling height, corridor width, door clearance), and flag areas for further review.● Analyze the spatial layout and suggest improvements for optimizing circulation, functional zoning, and space utilization, especially in terms of furniture fit, accessibility, and daylight.● Review the uploaded architectural drawings and identify any inconsistencies, missing measurements, or labeling issues that could impact construction, material take-offs, or approvals.● Review each drawing and highlight any rooms, areas, or layers that lack complete material or installation information, such as missing floor type, insulation details, or wall finish.● Highlight the names and rooms as per the architect drawings.

Stages

Refer to Kevin for [JSON schema](#) information

AI can also suggest more stages or name them differently. Icons can be included.

For each room, there are different stages that define the steps needed to follow from start to the end of the project.

"Generate a logical construction staging sequence for assembling an external wall system, from foundation to finished interior."

Tasks/Labels

[Prompt Document](#)

[Tasks CSV IDS](#)

Examples below:

Stages are on the drawings. New steel beams - windows, doors, flooring.

"Given a ground floor slab with layered construction, break down and quantify each material layer, including hardcore, sand binding, DPM, concrete slab, insulation, screed, and final flooring."

"From the specified roof or dormer design, calculate the materials needed for timber framing, insulation, breathable membranes, internal finishes, and roofing materials."

"For any internal partition walls, determine the staging components such as stud framing, insulation, plasterboard, and paint finish, and estimate quantities per room."

There are over 3,200 tasks however the AI can also add more.

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Materials and Quantities
Materials CSV, refer to Kevin
After the tasks have been identified on the drawings, i.e. steel beams, doors, windows, flooring, materials,
because if there are steel beams as tasks, we need to find what type of steel beams there are for the specific task.
For each task, we need to find the correct materials the correspond with the architectural drawings, project specifications, and labels found.
For certain tasks, there are specific types of materials, Ground floor concrete materials are:
A393 mesh at top 150mm thick concrete slab Insulation as per architect details DPM as per architect details 150mm (min) sand blinded hardcore
When materials are connected to the tasks, we need to find the quantities for each of the materials above. If a task is 4m by 5m concrete floors, this would equal to 25 square meters.
A393 mesh at top 25sq meter 150mm thick concrete slab Insulation as per 25sq meter 150mm (min) sand cubic meters blinded hardcore 200mm thickness concrete cubic meters/?
Pricing for the materials are connected to the Suddeco software.

Supplier Agents

When the supplier sends us something, the materials need to be sent with the right tasks.

Project Management & Compliance

*Search Box Functionality***

On the construction projects, there are service providers, professionals, and homeowners involved.

Here they are:

architect, structural engineer, surveyor, building control, health and safety, suppliers, electrician, plumbers, joiners, bricklayers, gas engineers, decorators, and homeowners, there may be more depending on the project.

The main contractor and homeowner are in contact with the above on a day to day basis. Communication is key, they are all working together to define and manage the project.

Example: when the foundation, structural works is being done

as per structural or architectural drawings, there might be errors or questions for clarification of issues that are raised.

This has to be communicated with them first to make sure the building's regulations standards are met.

In the end, building control is the party that will investigate & confirm that the work has been done as per architectural drawings and as per building regulations.

We need project management for all contractors, other people, might need help with advice or questions on how to do things. This includes what stage they are at and what materials they might need for that particular stage and what they need to plan ahead for other stages.

Ensure the steel is ordered and fitted with padstones at the proper timing, ensuring demolition is done properly, et cetera

Project management also helps to support project building and valuations. This is used to identify variations and send reports to clients. I should be able to supply which materials are needed at the moment (in a prepared spreadsheet) and which suppliers are relevant.