



BuildFlow

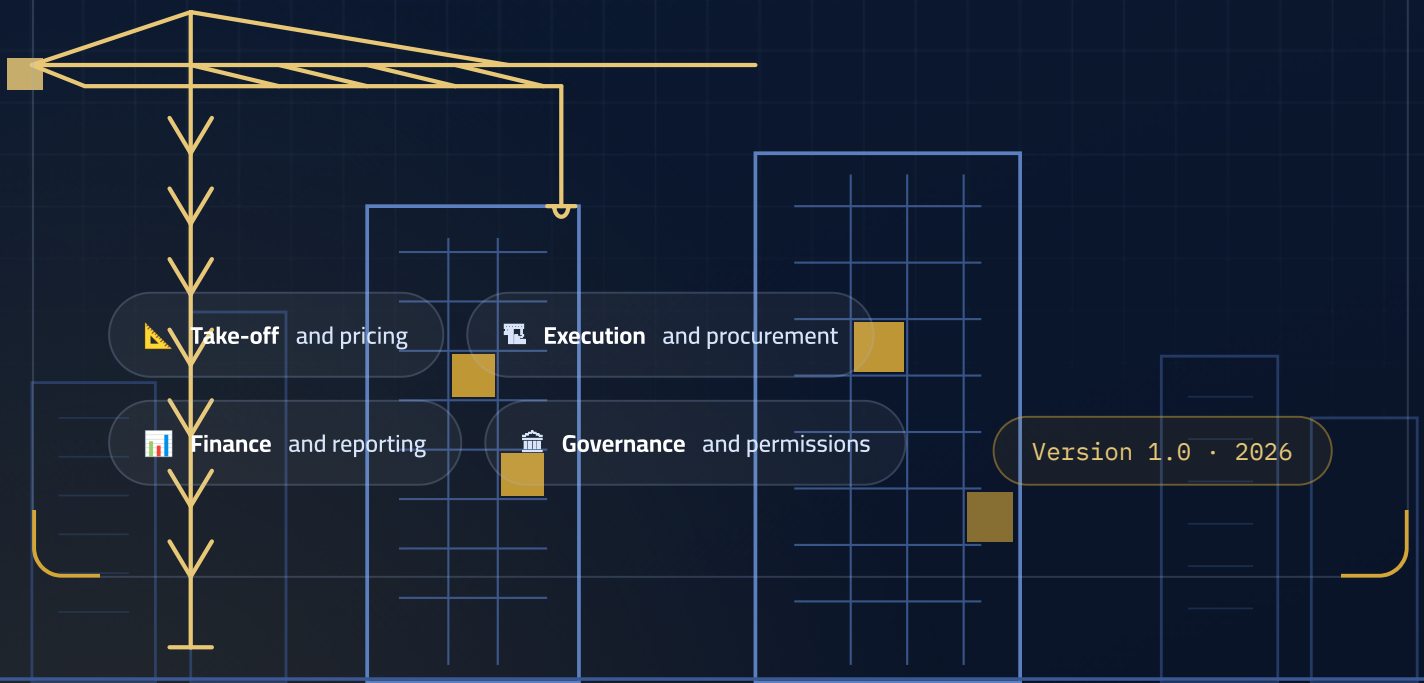
CONSTRUCTION ERP

● THE OFFICIAL USER MANUAL

The Complete User Guide

An integrated platform for managing the resources of **construction and building** firms — from tendering, quantity take-off and pricing, through execution, procurement and warehousing, to finance, human resources and governance.

The ERP That Truly Understands Engineering & Construction



Version 1.0 · 2026

The complete **BuildFlow** manual from your first project to governance

Ten chapters take you across the whole system in the user's language, not the developer's: you set up your company and project, price and execute it, track its money and keep its books, manage its spending, team and assets — and govern it with permissions that guard everything. Each chapter is a standalone page with illustrated figures.

The complete BuildFlow user manual — ten illustrated chapters

10 chapters

 Contracting management system

 English - LTR

 Illustrated figures in every chapter

PART ONE Setup and the project

01



BuildFlow manual

The start: an introduction to the system, setting up your company and team, and your first steps inside the platform.

[Open the chapter](#) →

02



Create your project

The reference library, then your first project, its bill of quantities, its take-off and pricing all the way to the "tender form".

[Open the chapter](#) →

03



Execute your project

Tasks generated from the bill of quantities, a Kanban board, the schedule, monitoring, and site reports.

[Open the chapter](#) →

PART TWO Money

04



Financial monitoring

Client payment certificates and their collection, and tracking the project's value financially, step by step.

[Open the chapter](#) →

05



Finance

The accounting engine: the general ledger, auto-posting of operational events, and closing the books.

[Open the chapter](#) →

PART THREE Spending and operations

06



Spending

Procurement, warehouses and contracts: from the purchase request to disbursement and receipt and control of subcontracts.

[Open the chapter](#) →

07



Technical office

Document control, technical submittals and quality (NCR/RFI), and the gates that protect the money.

[Open the chapter](#) →

PART FOUR Resources, assets and governance

08



HR and payroll

Employee files and contracts, payroll runs and accounting posting, advances and leave.

[Open the chapter](#) →

09



Rentals

Leased-property contracts (apartments and warehouses), their signed inspections, their deposits and settlement.

[Open the chapter](#) →

10



Governance and permissions

Organizations and roles, the gates, the two protection layers (the interface and RLS), and auditing and approvals.

[Open the chapter](#) →

REFERENCE Reference documents and appendices

§



Standards reference register

On what foundation BuildFlow was designed — the standards, laws, authorities and security frameworks, classified by compliance level and file path, with a statement of what is not present.

[Open the register](#) →

§



Marketing brochure appendix

A two-page BuildFlow brochure in five languages: the pain points of the construction industry in Egypt and the Gulf and their solutions, full customization, and direct contact channels. Choose your language:

العربية

English

Français

Español

Italiano

Chapter One — BuildFlow User Manual

The enterprise resource management system that understands engineering and construction — from opening your account to launching your project.

The ERP That Truly Understands Engineering & Construction



Website

<https://app.engimindai.com>



Starting role **Candidate**



Arabic · English · Español · Français · Italiano

01 BuildFlow on the web

You can reach the platform directly from your browser at the following link:

<https://app.engimindai.com/>



Always start by choosing your language from the **language switcher** at the top of the screen — the platform supports Arabic, English, Spanish, French and Italian.

02 Installing the app on your device

BuildFlow is a web app (PWA) that you open straight from your browser — **no download from any store**. You can also “install” it on your device so it appears as a standalone app icon that opens full-screen and faster.



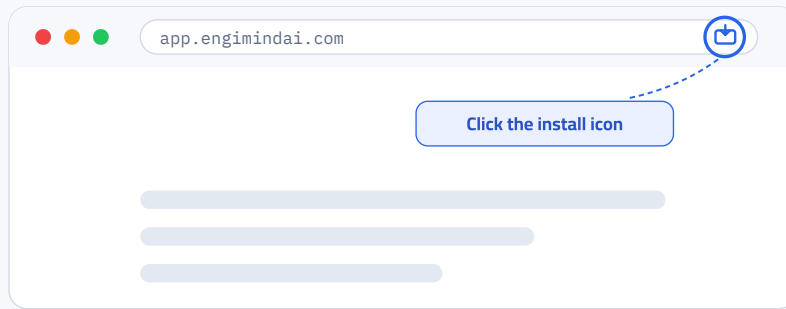
Installing is **optional** — the app works fully from the browser without it. Installing gives you an icon on the device, a faster launch, and an experience closer to a native app.

On Windows (Chrome or Edge)

1 In <https://app.engimindai.com/> in **Chrome** or **Edge**.

2 At the end of the **address bar**, click the **install icon** (a small screen with an arrow) — or from the **:** menu choose **Install BuildFlow**.

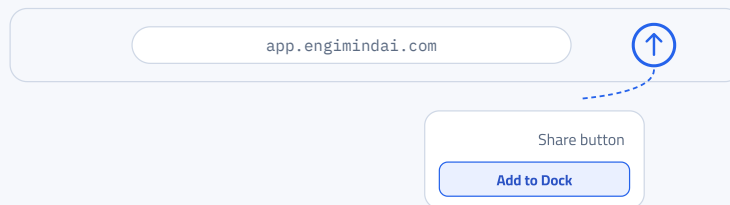
3 Confirm by clicking **Install** — an icon appears on the desktop and in the Start menu.



Windows/Mac — the install icon in the address bar (Chrome / Edge)

On Mac (Chrome or Safari)

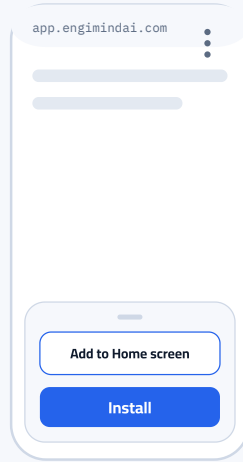
- 1 **Chrome:** same steps as Windows — the icon in the address bar, or the  menu ← **Install app** .
- 2 **Safari:** click the **Share** button (a square with an up arrow) in the toolbar, then choose **Add to Dock** .



Mac - Safari — Share button ← Add to Dock

On Android (Chrome)

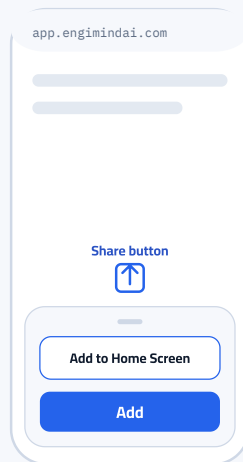
- 1 In the link in **Chrome** .
- 2 **Add to Home screen** banner may appear at the bottom — or from the  menu choose **Install app** .
- 3 firm — a **BuildFlow** icon appears among your apps.



Android – Chrome — Add to Home screen

On iPhone and iPad (Safari)

- 1 In the link in [Safari](#) specifically (installing won't work from Chrome on iOS).
- 2 the [Share](#) button (a square with an up arrow) at the bottom.
- 3 All and choose [Add to Home Screen](#), then [Add](#).



iPhone/iPad – Safari — Share – Add to Home Screen

03 Creating a new account on BuildFlow

You have two ways to create your account — by email, or via a Google account.

Method one **By email**

- 1 Choose your language from the `language switcher`.
- 2 Click `Create an Account`.
- 3 Enter **your email**.
- 4 Enter **your password** (at least 8 characters).
- 5 Click `Create Account`.

Method two **Via Google**

- 1 Choose your language from the `language switcher`.
- 2 Click `Continue with Google`.
- 3 Follow Google's instructions as they appear.

Figure 1 — The account creation screen on BuildFlow

04 Signing in to an existing account

After choosing your language, sign in with one of the two methods.

Method one **By email**

- 1 Enter **your email**.
- 2 Enter **your password**.
- 3 Click `Sign In`.

Method two **Via Google**

- 1 Click `Continue with Google`.
- 2 Follow Google's instructions as they appear.

Figure 2 — The sign-in screen with the language menu open

? Forgot your password? Use `Forgot password?` below the password field.

05 After signing in: getting to know the interface

As soon as you sign in, BuildFlow grants you the `Candidate` role automatically. The interface consists of a top bar and a side menu.

The top bar

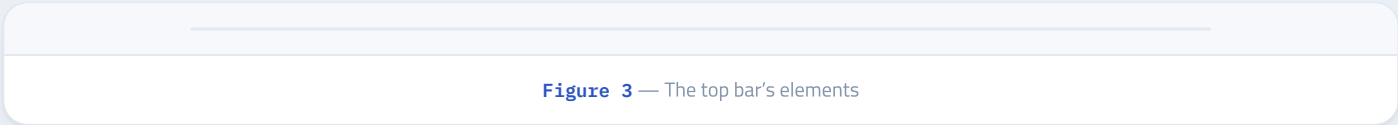


Figure 3 — The top bar's elements

It consists of the following:

Side-menu icon	To expand or collapse the side menu.
The Candidate role	The role BuildFlow grants the user automatically upon signing in.
Language switcher	Choose the interface language.
Theme switcher	Switch between light and dark mode.
Create a Company	A button for the user to create a company on BuildFlow.
User identity	The email you signed in with (or your name if you registered it) along with the first letter of your name or your photo.
Logout	To log out of BuildFlow.

The side menu – your profile

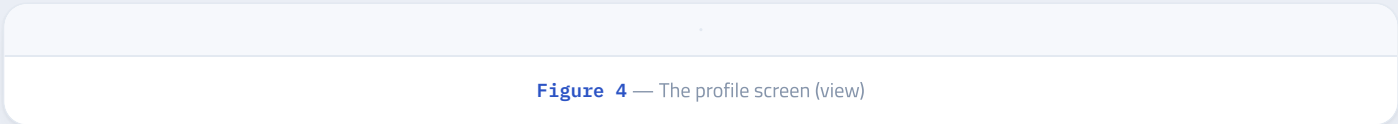


Figure 4 — The profile screen (view)

Click **Edit** to edit your profile, then:

- 1 Click **Change Photo** to choose a photo of yourself.
- 2 Enter your full name in the **Full Name** field.
- 3 Enter a landline or mobile number, taking care to include the country code.
- 4 Turn off **I'm Open to Work** if you don't want recruiters to find you on BuildFlow.
- 5 Choose all the countries where you can work, if you want recruiters there to find you.

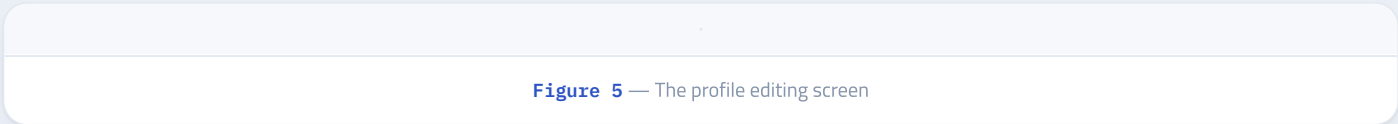


Figure 5 — The profile editing screen

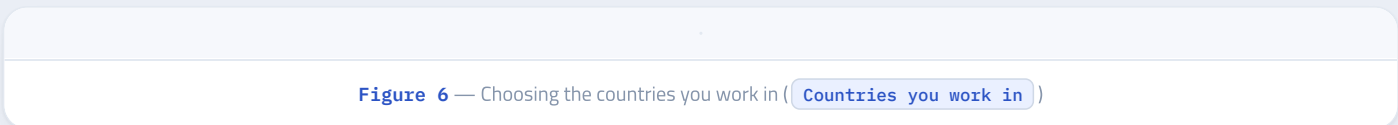


Figure 6 — Choosing the countries you work in (**Countries you work in**)

Present all your experience through [Experience](#)

Click [Add](#) to add an experience, then fill in the following fields:

Org Unit	Choose the org unit, department, or engineering discipline you excel at.
Desired Position	The job title you have held and hope to hold in the future.
Years of Experience	The number of years of experience in this job title.
Upload Certificates	Upload documents evidencing that experience.
Bio	A short summary of you and your experience.
Upload CV	Upload a copy of your CV (PDF).
Copy	Copy your unique link on the platform to share it via social media so people can find you through it.
LinkedIn URL	Paste your LinkedIn link so recruiters can find you there.

[+](#) Click [Add](#) again to repeat the experience steps if your background is varied.

Figure 7 — Adding an experience and choosing the job title

Register your unique e-signature

Click [Register your Signature](#) to open the signature registration form:

Electronic (draw)	Signing with a digital pen on your computer or phone screen.
Paper – Upload Image	Uploading an image of your signature; BuildFlow sharpens it and removes visual noise.
Clear	Remove your e-signature.
Save my Signature	Save your signature in BuildFlow.
Save Changes	Save all profile entries.

Figure 8 — The e-signature registration form



Your signature is **private** — no one else sees it, and it is used only when you sign forms yourself.



Content seal for the signature (Level A): when you sign a **governance form** or a **generated contract**, BuildFlow binds your signature to the document's content at that moment with a **SHA-256** fingerprint (computed inside the database). When the verification page is opened via the **QR** code, the fingerprint is recomputed and compared: if it matches, the signature shows as **"sealed"**, and if a single character in the document changed after signing it shows **"seal broken"** — so the page reveals any tampering. This is a *tamper-evident* seal, not a substitute for a PKI-certified digital signature or a certified timestamp.

06 Browsing the company directory

A user with the **Candidate** role can browse the company directory in one of two ways:

- **Direct browsing** to look through companies one by one.
- **Filtered search** via **Search Filters**, to filter companies by name, activity, specialty, country, a specific region within a country, or any combination of these filters.

In all cases you can **follow a company**, view its products and services, and follow some or all of them — and then a link to your profile is sent to it automatically, so the two of you can get in touch at any time.

Figure 9 — The company directory (**Marketplace**) with the filtered search bar

07 Receiving invitations to join companies

One of BuildFlow's greatest benefits is the seamless way it introduces users to companies and vice versa. After filling in your profile, browsing the directory, and reviewing each company's products, you can follow the companies whose work interests you and follow their products — and then the companies get to know you, visit your page, and reach you via WhatsApp, email, and phone, and can send you job offers either to collaborate on a specific project or for permanent hiring.

When an invitation reaches you it appears on this page, where you review it and match the job offer against what was agreed during your conversation, then:



Accept the invitation

You join the company electronically as a **"Viewer"** initially, then the company owner or admin raises your role to suit your job (see section 09, "Roles and permissions").



Decline the invitation

The electronic contact between you ends, while you both remain on BuildFlow until a new collaboration opportunity arises.

Figure 10 — The join invitations page (**Invitations to Join**)

08 Creating a company on BuildFlow

A user with the **Candidate** role can promote themselves to a **company owner (Owner)** and register their company on BuildFlow in a single step. The form is split into four cards — we go through them card by card.

How do you reach the page?

Click the [Create a Company](#) button in the top bar (or from the company switcher if you aren't a member of any company, or from the welcome banner in the [Marketplace](#)). The [Create my Company](#) page opens — “register your company on BuildFlow in a single step.”

Card one · Basic data and classification

Upload Logo

Square image, less than 2 MB (optional)

Company Name *

e.g. Skyline Engineering

Business Type *

Select one or more types... ▼

Pick one or more types. Can't find one? Request it from the list.

Org Units

Select org units... ▼

Countries of Operation

Select countries... ▼

Figure 11 — The basic data and classification card

Upload Logo (optional)	Upload the company logo — a square image under 2 MB. If you don't upload a logo, the first letter of the company name appears as a temporary icon.
Company Name *	The company name — a required field.
Business Type *	Choose one or more business types (required). Can't find your type? Request it added from within the same list via Request it , and your request is sent to the platform for review.
Org Units	The org units / engineering disciplines your company works in.
Countries of Operation	The countries where the company operates.

Card two · Contact details

Phone

+20...

Official Email

info@company.com

Website

https://company.com

Address

City, Country

Figure 12 — The contact details card

Phone	The company's phone number with the country code.
Official Email	The company's official email.
Website	The company's website.
Address	The address (city, country).

Card three · Legal identity (optional)

Legal Identity (optional)

Filling Tax ID / Commercial Register may trigger a verification request that the platform reviews.

Tax ID

e.g. 100-200-300

Commercial Register

CR number

We operate as

Select...

Figure 13 — The legal identity card

Tax ID	The tax number.
Commercial Register	The commercial register number.
We operate as	The legal entity type — required only if you enable publishing to the directory.

! Filling in Tax ID or Commercial Register may trigger a **verification request** that the platform reviews.

Company Profile (PDF)

 **Upload Company Profile**

PDF only, under 10 MB (optional)

 **Publish to directory**

When on, your company appears in the public Marketplace.



Figure 14 — The company profile and directory publishing card

Company Profile (PDF)

Upload the company profile — a PDF under 10 MB.

Publish to directory

When enabled, your company appears in the public **Marketplace** for everyone to find.

Payment and creation

Payment is **currently waived** during the trial launch period. Finally, click **Create my Company** (the button is enabled as soon as you enter the name and choose at least one business type), or **Cancel** to cancel.



After creation: you become the **Owner** of the company and leave the pool of job seekers, and the system automatically directs you to the **company qualification profile** to complete it (section 10). Everything above can be edited later from **Company Settings** .

09 Roles and permissions: from Owner to Viewer

As soon as you create your company you become its **Owner** — the highest role in it. This section explains what each role means, how others join your company and gain their roles, and how you appoint an **Admin** to share management with you.

Roles within the company

 Owner Owner	The company's creator. Holds all admin permissions plus more: legal identity, deleting the company, and permanent notes about employees. A permanent role : it isn't transferred, revoked, or granted to another member, and the owner cannot resign — the only way out is to delete the company.
 Admin Admin	Runs the company day to day: the team and roles, HR and payroll, sensitive finance, company settings, and deletion in the library and projects. Does not send recruitment invitations and does not touch what is the owner's alone.
 Manager Manager	Works on the data: adds and edits in the library, projects, tasks, and parties — no deletion and no management of the team or HR.
 Recruiter Recruiter	A specialized role outside project data: searches for candidates, sends invitations, and tracks them only (along with the owner).
 Viewer Viewer	Browses all company data without editing — and it is the role every new member starts with when accepting an invitation. They see a  View only – you don't have edit permission banner.
 Candidate Candidate	Not a role within a company: it is every user who hasn't yet joined any company . They own their profile, browse the directory, receive invitations, and can create their own company.

i The **platform administrator** is a permission entirely separate from company roles, restricted to the BuildFlow owner (`ahmad@engimindai.com`): they manage requests, verifications, additions, and shared reference lists, and it is not granted from within the app.

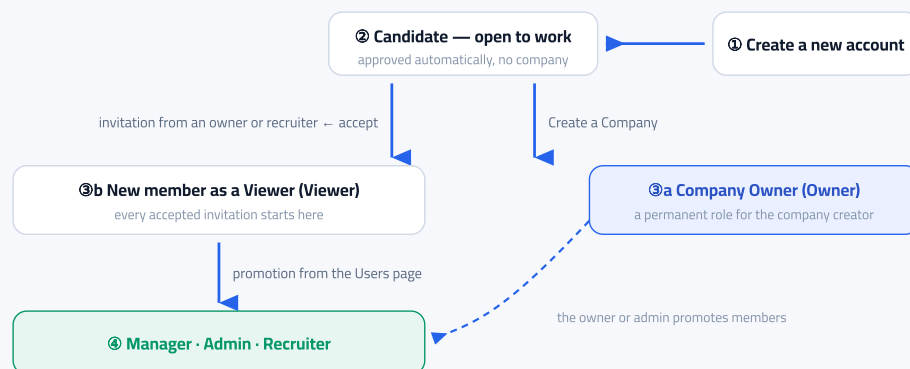


Figure 15 — The role path: every new account is a Candidate; creating a company makes you an Owner, and accepting an invitation makes you a Viewer who is then promoted

How do you become an Owner?

- 1 In your account and confirm your email (section 03). You enter directly as a **Candidate** — **no one's approval needed**.
- 2  **Create a Company** and fill in the company form (section 08).

3 Soon as you click [Create my Company](#), the system registers you as the company's **Owner** and makes it your active company, then directs you to its qualification profile.

! **Ownership is permanent:** the "Owner" role cannot be granted to another member, transferred, or revoked, and the owner cannot resign or terminate their service. If you want to end your relationship with the company, the only path is to delete it from [Company Settings](#) (after downloading a backup and typing the company name to confirm).

How do others join your company?

There are no email invitations or join links. Joining happens **inside BuildFlow** through three steps:

- 1 **person opens their own account** (section 03). They become an "open to work" Candidate who appears in search.
- 2 **search for them and invite them:** from [HR](#) ← [Find Candidates](#) (or the link [/find-candidates](#)) open their card and click [Invite](#), then specify the **offered position**, the **salary and its currency**, and the **response deadline** (3, 7, 14, or 30 days). You track your invitations from [Sent Invitations](#) and can withdraw them while they're still pending.
- 3 **they accept the invitation** from their [Invitations](#) page (section 07) and join immediately as a **Viewer**, and your company becomes their active company.

i **Who can invite?** The owner and the **Recruiter** only. The Admin does not send invitations — but they promote members after they join. So if you want to delegate recruiting, assign a member the "Recruiter" role.

Appointing the Admin and changing members' roles

- 1 In [HR](#) ← the [Users](#) tab (or the link [/users](#)).
- 2 On the member's card, from the [Role](#) menu choose the new role: **Admin**, **Manager**, **Recruiter**, or **Viewer**.
- 3 The change is saved immediately and takes effect from the member's next sign-in.

✓ Approved

Mona Adel
mona@example.com

Role

Terminate Revoke access ▼ Admin

Saved on selection - you can't change your own account

Figure 16 — A member card on the [Users](#) page: choosing the role from the menu, and the revoke-access and terminate buttons

Who changes roles?	The owner and the admin. The admin can promote a member up to “Admin” like themselves. Your own card is always locked (you can't change your own account), and the “Owner” role is granted to no one.
Pausing a member temporarily	Revoke access removes the member from the system immediately and they see a “your access has been temporarily suspended” screen until you click Reactivate .
Terminating service	Terminate removes their membership permanently and their tasks move to a replacement you choose (or to the owner). An admin cannot terminate another admin, and the owner is never terminated.
Resigning	Any member (except the owner) can leave the company from the My Companies page ← Resign ; their tasks move to the owner.

The permissions matrix

Capability	Owner	Admin	Manager	Recruiter	Viewer
Browse company data (read)	✓	✓	✓	✓	✓
Library, projects, tasks, and parties — add and edit	✓	✓	✓	✗	✗
Deletion in the library, projects, and tasks	✓	✓	✗	✗	✗
HR: employees, payroll, leave, and assessments	✓	✓	✗	✗	✗
Sensitive finance and e-invoicing	✓	✓	✗	✗	✗
Company settings	✓	✓	✗	✗	✗
Team: changing roles, revoking/restoring access, terminating service	✓	✓	✗	✗	✗
Searching for candidates and sending and withdrawing invitations	✓	✗	✗	✓	✗
Governance and rentals — create and edit	✓	✓	•	•	•
Legal identity · deleting the company · permanent notes about employees	✓	✗	✗	✗	✗

✓ available · ✗ not available · • available only if the owner or admin has included them among the “authorized” in governance or rentals (even if their general role is “Viewer”).

i The **Recruiter** sees a condensed interface (searching for candidates, companies, invitations, their own profile) and does not access project data at all.

A member of more than one company?

A single user can be a member of several companies **with a different role in each**. From the company switcher in the top bar ([your companies](#)) they see their role under each company name and switch between them at any time — and only the role of the **active company** applies to them. From the bottom of the same list they can always [+ Create a new company](#) to become its owner.

10 The company qualification profile (Company Qualification Profile)

After you create your company, the system opens this profile automatically to complete it. You always find it from the **company switcher** ← **Company Qualification Profile** (reachable by the owner and their assistants), or from a card in **My Company Settings**. It is a **comprehensive self-description** of your company (your own data) as a **17-step wizard** with **auto-save**, then **approval** and **signatures** sections, and an official **PDF** export.

i This profile is a **single record per company** (filled in by its owners). **Governance** remains the place to assess *vendors* in the future (a separate system under development).

✓ Everything is **saved automatically** as a draft after each change (**Saved** appears at the top), so you can continue later. There is no mandatory “Save” button.

The forms list

When you open the tab you see your list of forms. Click **New form** to create a new form, or **Open** to continue an existing one. Each form has a reference number (#), the entity name, the project and date, a **PDF** button to export, and a trash bin to delete.

Entity evaluation

Full entity qualification form — saved automatically to continue later.

+ New form

#1 Skyline Engineering
Project: Riverside Tower · 02 September 2026

Open →

PDF



#2 Al-Madaen Contracting
No project · 28 August 2026

Open →

PDF



Figure 17 — The entity assessment forms list

Anatomy of the editor

The editor consists of a top **steps bar** (clickable to move freely between the 17 steps), the save indicator (**Saving** / **Saved**), and a **PDF** button. Green = a completed step, blue = the current step.



Entity evaluation #1 — Skyline Engineering

▲ Saved

PDF

1 Notes

2 Basic data

3 Organizational structure

4 Financial statements

5 Consortium

6 Resources: human 1

7 Resources: human 2

8 Resources: equipment

9 Resources: other

10 Experience: geographic

11 Completed projects

12 Ongoing (similar)

13 Other ongoing

14 Quality

15 HSE

16 Additional

17 Bank declaration

Figure 18 — The editor header and the 17-step bar

The 17 steps, step by step

Step 1 · Notes

A mandatory instructions page: it shows 5 important notes (most importantly: *all data is written in Arabic*, and a copy of the answers and attachments is sent to the email of the company creator). You cannot continue until you enable

[I understand and accept this](#) .

Notes

Step 1 of 17

1. Although some questions are not mandatory, leaving them blank may negatively affect the quality of the entity's evaluation.

2. All data must be written in Arabic.

3. A copy of all answers and uploaded files is sent to the email of the user who creates the company.

4. If the entity is a consortium, every company must complete a full copy of the form with all attachments.

5. All financial information is provided in the currency used in the submitted financial statements.

☒ I understand and accept this

Previous

Next →

Figure 19 — The Notes step and the acceptance condition

Step 2 · Basic data

Owner name	Your name — prefilled from your profile, and editable (you can type it if it isn't set in your profile).
Entity name	The entity name — prefilled with your company name, and editable .
Date	Today's date (automatic, not changeable).

Step 3 · Organizational structure

Approved legal postal address	The approved legal postal address.
Phone / Fax / Email	Contact details with the international code (with instant format validation).
Authorized signatory	The name and title of the person legally authorized to sign on behalf of the company.
Company disciplines	The company's disciplines (multi-select from the org units).
Years of experience	In the country of origin and worldwide.
The two contractor certificates (for contractors only)	The registration certificate and the classification certificate from the local federation — they appear only if the company's classification includes "contractor".

i This step also contains a card for **assigning members to functional bodies** and an **Org Chart** builder.

Step 4 · Financial statements

Capital figures (authorized/issued/paid), a table of the value of works executed, and the value of ongoing contracts — then a **financial matrix of 27 items across 3 years** (sales, net income, assets, working capital, equity... etc.), and the names of reference banks.

Financial statements

Step 4 of 17

Authorized capital	Issued capital	Paid-up capital	
50,000,000	30,000,000	30,000,000	

Financial data × three years

Item	2023	2024	2025
Annual sales value	120,000,000	145,000,000	160,000,000
Net income (before tax)	14,000,000	17,500,000	19,000,000
Total value of assets	210,000,000	240,000,000	265,000,000
Working capital	35,000,000	41,000,000	48,000,000
Equity	90,000,000	105,000,000	120,000,000

⬆ 27 financial rows in total — scroll to fill each row across the three years.

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Figure 20 — The financial matrix (27 items × 3 years)

Step 5 · Consortium — Form

Filled in only if the company intends to enter a consortium: the names and addresses of the consortium companies, the lead company, the consortium banks, and a copy of the consortium agreement. Otherwise write “not applicable”.

Step 6 · Resources: human 1

Employee counts

The number of technical staff and the number of administrative staff at the company.

Current executive managers

A table of current executive managers (name, position, years of experience).

Step 7 · Resources: human 2 (proposed project team)

A table of the proposed project team’s data: name, position, experience with the company/in execution, key works, and language ability.

Step 8 · Resources: equipment

A table of the main equipment and machinery required for the project: item, quantity, and status (owned / to be purchased / to be rented). Use Add row to add rows.

Resources: equipment

Step 8 of 17

Main equipment and machinery required for the project

Equipment / machine	Count	Status	
Tower crane	3	Owned ▼	
Concrete pump	2	To be rented ▼	

+ Add row

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Figure 21 — The dynamic tables pattern (example: equipment)

Step 9 · Resources: other

Proposed subcontractors, and data on industrial facilities (their description, location, capacity, annual output).

Step 10 · Experience: geographic

The countries where a similar project was executed, and a summary of the company’s experience in the project’s country and neighboring countries.

11 · Completed similar projects	Over the last 6 years (owner, work description, consultant, contract value, percentage, adherence to schedule).
12 · Ongoing similar projects	Including the actual completion percentage and the expected finish date.
13 · Other ongoing projects	The remaining ongoing, non-similar projects.

Step 14 · Quality (quality requirements)

Three questions (yes/no): applying a quality assurance system, its conformance with ISO 9001, and its registration with an accredited body — with a notes/documents field.

Quality requirements

Step 14 of 17

Does your company apply a quality-assurance system?

Yes

No

Is the system compatible with ISO 9001:2000?

Yes

No

Is the system registered and certified by an accredited body per ISO 9000?

Yes

No

Notes / attached documents (quality manual, procedures, quality plan...)

Quality manual rev. 3 attached; procedures under ISO 9001 scope.

Previous

Next →

Figure 22 — The yes/no questions pattern (example: quality)

Step 15 · HSE (health, safety, and environment)

The index of the company's health, safety, and environment manual.

Step 16 · Additional information

Any other information affecting the company's assessment (or "not applicable").

Step 17 · Bank transactions declaration — Appendix

A declaration authorizing the banks to disclose the company's transactions for qualification purposes: the company name, the authorized party, the project, the declaration's validity period and expiry date, and the list of banks.

Approval routing

Governance editors (Owner/Admin or the **Governance editor**) have an **Approval routing** card directly above the approval section — from it you assign **each approval step to a specific employee**. Click **Edit routing** , choose the members for each step, then **Save** .

An assigned step	Only those assigned to it can approve it (enforced by the database) — and the approve button appears disabled for everyone else.
An empty step	Approved by any governance editor .

i This setting is **company-wide** — it applies to all entity assessment forms.

 **Approval routing**

[Edit routing](#)

Choose who may approve each step. Leave a step empty and any governance editor can approve it. Applies to all entity-evaluation forms in the company.

1

Evaluation preparer

Ahmed Adel Khalifa

2

Technical review

Mona Adel

3

Final approval

Any governance editor

Figure 23 — The approval routing card (assigning each step to an employee)

Approval

Three approval parties in order: **Evaluation preparer** ← **Technical review** ← **Final approval** . Each member approves their step, and only its owner can un-approve it (enforced by the database). Next to each step the name of the person assigned to it appears (if any).

Approval

Each member approves their own step; only the approver can revoke (enforced in the database).

1 Evaluation preparer

✓ Approved · Ahmed Essayed

2 Technical review

✓ Approved · Mona Adel

3 Final approval

Awaiting approval

Figure 24 — The three approval steps

Signatures

Add one or more signatures — each signature has a **Title** and a **Signatory name** — in three ways:

My saved signatures

If you registered your signature in your profile, it appears here — **click it to apply it in one tap** (in your name, electronically). The fastest way.

Electronic (draw)

Signing with the digital pen, and it is **in your name only**. Enable **Save to my signatures** so it is saved and reused in any other form.

Paper (upload image)

Uploading a signature image — used to sign on behalf of another person.



The **profile** signature (registered once) is reusable on any form; whereas the **form** signature is the documented act on this specific document (attributed and dated).

Signatures

 Electronic (draw)

 Paper (upload image)

Title

e.g. Authorized entity representative

Signatory name

Ahmed Essayed

Sign inside the frame...

✓ Save signature

×

Figure 25 — Adding a signature (my saved signatures / electronic / paper)



PDF export: the [PDF](#) button produces an official document with all sections, followed by the **approvals and signatures page**, with a document code and a **verification QR** to confirm the form's validity.

11 Vendor Assessment

Here you assess the **vendors** you intend to deal with — unlike the previous section (your self-description of your company). You find it from [Governance](#) ← the **Projects** group ← the [Vendor assessment](#) tab.



The tab has **two views** you can switch between at the top: [My vendor assessments](#) (you as the client assessing vendors) and [Assessments of my company](#) (assessments your clients made of your company as a vendor — read-only).

How do you create an assessment? (the “My vendor assessments” view)

1

[New assessment](#) .

2

vendor: choose a company from the directory suggestions, or type any vendor name.

3

criteria: for each of the 7 criteria, enter the **score (0–10)**, and adjust the **weight (%)** to suit your circumstances.

4

overall result (0–100) and the **rating (A/B/C/D)** appear instantly.

5

notes if you like, then click [Save](#) .



Automatic score suggestion: when you choose a vendor registered on the platform, a [automatically suggested scores](#) card appears that computes preliminary scores for the criteria the directory can substantiate (**legal, experience, quality**) from the vendor's structured data — stating the **basis** and the **confidence level**. Click [Apply suggestions](#) to fill them in, then adjust them freely. The other criteria (financial/human/equipment/safety) remain manual. The suggestion is only an aid and isn't saved automatically.



AI extraction from PDF files: in the [Extract scores from PDF files](#) card, upload the vendor's documents (profile, financial statements, commercial register, ISO certificates, org chart, equipment lists, safety records) and click [Extract with AI](#) . Claude reads them and suggests a score for each criterion with a **text citation** and a confidence level, so you apply and adjust them. The documents are **not stored** — only what you save is saved. Next to each score its source appears ([manual](#) / [directory](#) / [AI](#)) in the vendor view to ensure transparency.

Enabling this feature requires the platform administrator to set the ANTHROPIC_API_KEY secret for the server function; before that a “not enabled” message appears.

The seven criteria

Financial strength · experience and track record · human resources · legal compliance · equipment and facilities · quality · health, safety, and environment.

The weights

Standardized as a starting point, but **adjustable by you** in each assessment according to your priorities.

The rating

A (+85) · **B** (+70) · **C** (+50) · **D** (below).

The “Assessments of my company” view (as a vendor)

Switch to this view to see how your **clients** rated you when they dealt with you as a vendor. The view is **read-only**:

- Each assessment appears as a card carrying the **rating, result, and date** and the name of the **assessing client**.
- Click the card to expand it and see the **breakdown of each criterion** (weight and score) and the client’s **notes**.
- Next to the view name, the number of assessments received about your company appears.

When does it appear to you?

When the client chooses you from the Marketplace directory and your company was **listed on the platform** (is_listed), the assessment is linked to your company automatically so you see it here. Assessments of off-platform vendors remain with their assessor only.

 The assessment result is **private** — it appears only to the assessor and the vendor, and is not aggregated as a public average anywhere.

12 Individual Assessment

The counterpart to vendor assessment, but for a person: your company — via **HR** — assesses a candidate or a freelancer you’re considering dealing with. You find it from **HR** ← the **Individual assessment** tab (available to the owner/admin/manager).

How do you create an assessment?

1  **New assessment** .

2 **individual:** choose a candidate from the open-to-work directory, or type any name.

3 Enter the **score (0–10)** for each criterion, and adjust the **weight (%)** according to your priorities — with the two helper cards below.

4 **result (0–100)** and the **rating (A/B/C/D)** appear instantly; add notes then **Save** .

The seven criteria

Qualifications and certificates · experience and professional record · skills and competence · references and reputation · accreditation and right to work · discipline and reliability · safety awareness.

The weights and rating

Standardized weights adjustable by you; the rating is **A** (85+) · **B** (70+) · **C** (50+) · **D** (below).



Automatic suggestion: when you choose a registered candidate, preliminary scores are suggested for **experience and qualifications** from their public profile (years of experience and certificates) — you apply and adjust them.



AI extraction from the CV: upload the candidate’s CV and certificates, and click **Extract with AI** , and Claude suggests a score for each criterion with a text citation and a confidence level. The documents are not stored. (Same enabling key as vendor assessment.)



The individual sees their assessments on their **profile page** under an “Assessments about me” section (read-only), with the source of each score (manual/profile/AI). The assessment appears only to the assessing company and the individual.

13 Self-assessment: your strengths and improvement opportunities

Unlike vendor and individual assessment (sections 11 and 12) with which you assess **other parties**, **self-assessment** assesses **your own profile** and **your company's profile automatically** from the data you entered — showing your score, your strengths, and what should be completed to raise your score.

Where you find it	For the user: on the My profile page — the “profile self-assessment” card. For the company: in the company qualification profile — the “company profile self-assessment” card.
How it works	It reads the data you actually entered, computes a score for each criterion , then an overall score (0–100) and an A/B/C/D rating , and automatically classifies the criteria into strengths (the high ones) and improvement opportunities (the low ones) with advice for each opportunity.
Profile criteria	Identity and contact · specialty · experience · professional bio · CV · certificates · countries of work · public visibility.
Company criteria	Company identity · legal identity (tax number/commercial register) · online presence and listing · disciplines · business types · geographic coverage · project record · financial data · team and staff · quality and safety.
PDF report	The Export PDF button exports an elegant report with the rating, criteria score bars, and the two lists of strengths and improvement opportunities with the advice — suitable for printing or sending.
A standard, adjustable system	The standard weights are ready by default, and the owner/admin can set the weight of each criterion from Company Settings ← “assessment criteria and their weights” (the profile rubric and the company rubric) — and it is reflected on the scores immediately.

✓ **The purpose:** to encourage you to **complete your profile and your company's profile** — the more data you complete, the higher your score rises and the more you stand out in the company directory and qualification profiles. The rating is **A (85+)** · **B (70+)** · **C (50+)** · **D (below)**.

Chapter Two — Creating Your Project on BuildFlow

You’ve set up your company and team — now we build your project: **your reference data library** migrated from your spreadsheets, then **your first project** and its bill of quantities, take-off, and pricing all the way to the “tender form”.

Chapter 2 — Library, your first project, and pricing it: from spreadsheets to a tender form

Website

https://app.engimindai.com

The Library module (Library)

From Excel/CSV to BuildFlow

The Commercial module: quantities and pricing

01 Before we start

In Chapter One you established your presence on the platform: **you opened your account, created your company, assigned your team, assessed the staff one by one, and filled in your company qualification profile and made it available for your clients to assess you.** Now we move on — in the same step-by-step style of Chapter One — to building **the foundation your projects rest on.**

i

Any precise project (bills of quantities, costs, documents) needs organized **reference data**: units of measure, activities, work items, disciplines, countries and regions... etc. This is the **Library** — your data banks that feed the rest of the system.

And instead of starting from scratch, we’ll show you how to migrate **what you already have in Excel spreadsheets** into BuildFlow in minutes — a self-service digital transformation you do yourself.

02 The Library: your reference data banks

The Library is an **essential** module you always find in the sidebar as

Library

 (the book icon) — or directly at the link

/library

. Its title in the app: “Library — managing the reference data used across the system.”

Who sees it and who edits it?	Every approved user can browse it. Adding, editing, and deleting are for the manager/admin in your company across all tabs — each tab is a copy owned by your company. The only exception: Countries is a general read-only reference list (a shared key for the marketplace and service regions), and public regions are managed by the platform administrator while your company’s own regions are freely editable.
How is it organized?	A horizontal bar with 19 tabs , each tab a single table of reference data — you search, sort, and add rows. There is no separate “master data screen”: you open the Library and start straight from the first tab (which you find prefilled, not empty).



Your library comes prefilled automatically: when you create your new company, the Library tabs are filled automatically with a ready set of reference data from the platform's base — **without prices** (you set your own prices) — so you don't find it empty. All these records are **yours and editable, deletable, and addable** freely.



You aren't obliged to stick with what's ready — edit or delete what doesn't suit you, and add your own records via [Upload CSV](#). Start with what serves your next project (usually: **units, activities, bill-of-quantities items**).



One exception to deletion: if a **bill-of-quantities item** is already used in one or more projects, you won't be able to delete it from the Library — instead of an error, a message tells you how many projects use it, protecting those projects' items and their quantity-survey data from loss. Remove the item from those projects first, then delete it from the Library.

03 From spreadsheets to BuildFlow

In each Library tab there are three buttons that move you from the world of spreadsheets to the world of BuildFlow — and let you benefit from **your current information banks** (if any) instead of re-entering manually.

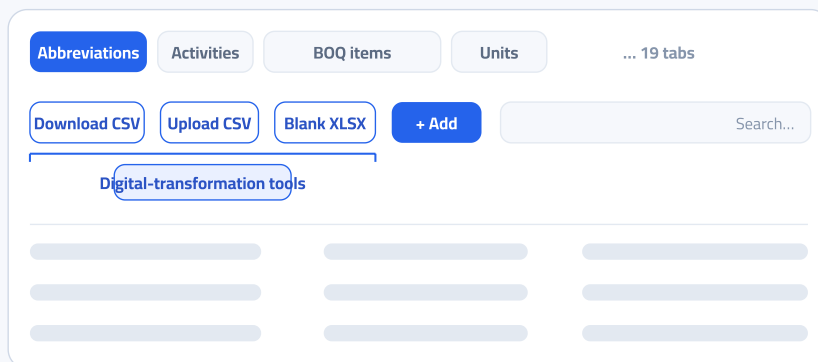


Figure 1 — The Library toolbar: the “Blank XLSX”, “Upload CSV”, and “Download CSV” buttons

[Blank XLSX](#)

— the
template

Downloads an Excel file that is **blank with the correct column headers** for the current tab. Fill it with your data (or paste from your old spreadsheet), keeping the column names as they are.

[Upload CSV](#)

— the
import

Upload your file (in CSV format). The system matches columns **by name**, and shows a preview before importing. Reference columns (like “Unit” or “Activity”) accept **names as text**, and any unknown name is **created automatically**. Duplicate rows are skipped safely (“already exists”) — they aren't duplicated and don't corrupt your data. You get a tally: [n imported](#) · [n already exist](#) · [n failed](#) (with the row number for any error).

[Download CSV](#)

—
the
export

Downloads the **full content of the current tab** in CSV format — **by names, not numbers** and with UTF-8 encoding (Arabic appears correctly in Excel). The file is **ready to re-upload**, so you get a convenient editing cycle.

The full self-service digital-transformation cycle

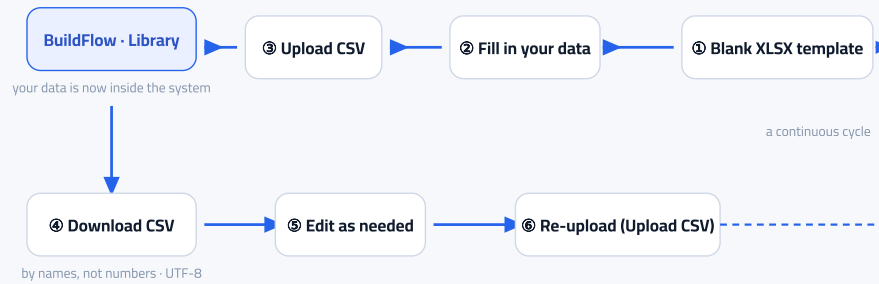


Figure 2 — Your data migration cycle: blank template ← fill in ← upload ← inside BuildFlow ← download ← edit ← re-upload

- 1 Download the **Blank XLSX** for the tab you want.
- 2 Fill it with your data or paste from your old spreadsheet, and save/export it as **CSV**.
- 3 Click **Upload CSV**, review the preview, then **Import**.
- 4 Or: **Download CSV** for the full content, edit what you want, and re-upload — a **continuous cycle** with no re-entry.

i Tip: always use the “Blank XLSX” button to get the correct headers — because column matching is done by exact name.

04 The Library tabs one by one

These are the Library’s 19 tabs in the order they appear in the app — each one a reference data bank that feeds the rest of the system. The tab marked **Shared across the platform** (Countries) is a general read-only reference managed by the platform administrator; everything else is your own copy.

1. Abbreviations	A dictionary of the abbreviations used in the system and their meanings — a copy specific to your company, copied from the platform list at setup, and free to edit. Columns: abbreviation · meaning
2. Activities	A bank of the work activity names on which the schedule is built. Columns: activity · org unit
3. BOQ structure	The tree structure of bill-of-quantities (BOQ) items: item → activity → task → products — a special tab. Each product carries a quantity factor (× BOQ quantity) or a fixed quantity used as-is; this template is the only source of pricing quantities (projects are seeded from it; the Catalog holds prices only). Columns: tree structure · quantity factor / fixed quantity per product
4. BOQ items	A bank of ready bill-of-quantities items for reuse in your projects. Columns: MasterFormat section · org unit · item title · quantity item · unit
5. Brands	A list of brands and trademarks. Columns: brand
6. Business activity types	Company activity classifications (used in defining companies and their directory) — a copy specific to your company, copied from the platform list at setup, and free to edit. Columns: activity type · translation
7. Catalog	Your company's item (SKU) master — a special tab. It feeds the pricing engine (cheapest vendor per item), procurement, warehouse, submittals and e-invoicing. Quantities are not managed here but in "BOQ Structure"; a pink row is an item a task needs that has not been priced yet. Columns: Task · Country of Origin · Item Type · Item · Vendor · Brand · Unit · Currency · Unit Price · Resource Type · Source
8. Components	Project components and buildings. Columns: component
9. Countries	Shared across the platform A list of countries. Columns: country · translation
10. Document types	Classifications of the documents used across the system. Columns: document type
11. Levels	The names of floors and vertical levels in the project. Columns: level
12. CSI MasterFormat	The MasterFormat coding system for classifying building and construction operations to a standard classification. Columns: division · section
13. Org units	Disciplines/org units (Org Units). Columns: org unit
14. Positions	Job titles. Columns: position

15. Regions	public + your own regions Regions within countries: public regions are managed by the platform administrator (read-only), and you add and edit your company's own regions freely. Columns: region · country · translation
16. Spaces	The names of spaces and areas. Columns: space
17. Governorates	Governorates/states. Columns: governorate
18. Tasks	A bank of the work task names on which the schedule is built and which are linked to work activities. Columns: task · activity · unit
19. Units	Units of measure. Columns: unit

i Two tabs have a broader interface: **BOQ structure** and **Catalog** — they work with the same import/export logic but with a custom view.

05 Projects: from the Library to reality

After you've prepared your library, **Projects** comes next — the heart of the work. You find it in the sidebar as **Projects** or directly at the link `/projects`. The page shows your projects as **cards**, and all creating and editing is done through **a single simple dialog** — no multiple steps and no sub-screens.

Who creates and edits?	The New project button and the edit and import buttons appear for the manager/admin only . Deletion is for the admin alone. As for the view-permission user , they see a View only – you don't have edit permission banner and browse without edit buttons.
What's on each card?	The project name and code, and two badges : a Stage badge (which you set: tender / execution / closed), and a Status badge (computed automatically from the project's tasks: no tasks / not started / in progress / completed), along with the total sell value and Edit and Delete buttons.



Figure 3 — A project card: the name and code, the stage badge and status badge, and the edit/delete buttons

i There is no separate “details screen” for a project in this version — the card is the interface, and progress and status change automatically whenever you add **tasks** to the project (from the Tasks module). A project with no tasks appears with the status **No tasks yet – add tasks to track progress**.

06 Creating a new project

From the Projects page click the **+ New project** button (top right of the page) and the **New project** dialog opens. Fill in the following fields in order — **only the project name is required**, and everything else is optional and can be added whenever you like.

The "New project" dialog box contains the following fields in order:

- Project name ***: Text input field with the value "Nile Administrative Tower".
- Description**: Text input field with the placeholder "Description (optional)".
- Stage**: Dropdown menu with the selected value "Tender / pricing".
- Base currency**: Dropdown menu with the selected value "EGP".
- Country**: Dropdown menu with the placeholder "Choose a country...".
- Project code (legacy)**: Text input field with the placeholder "e.g. PRJ-001 (optional)".
- Postal address**: Text input field.
- GPS coordinates**: Text input field with the value "30.0444, 31.2357".
- Employer (client / owner)**: Dropdown menu with a "+" icon and the selected value "— none —".
- Contractor**: Dropdown menu with a "+" icon and the selected value "— none —".

At the bottom of the dialog are two buttons: "Cancel" and "Save".

Figure 4 — The “New project” dialog and its fields in order (only the name is required *)

1. Project name required	The name shown on the card and everywhere. The project isn't saved without it.
2. Description	A free description of the project (optional).
3. Stage	A list of three options: Tender / pricing · Execution · Closed — the default is "Tender / pricing". This is the stage badge on the card.
4. Base currency	The project's main currency (default EGP). Used in pricing and costs.
5. Country	You choose it from the reference country list.
6. Project code (legacy)	A reference code from your previous system (like PRJ-001) — for migration and linking, and not auto-generated.
7. Postal address	The site address as text.
8. GPS coordinates	Paste them from Google Maps in the format lat, lng (e.g. 30.0444, 31.2357) — the latitude and longitude are stored automatically.
9. Employer	The client/owner — you choose it by searching your company's parties book, or type a new name and it is created immediately as a party of type "owner".
10. Contractor	The executing contractor — in the same way as the employer (search or immediate addition as a "contractor" party).



Avoid duplicating parties: in the "Employer" and "Contractor" fields, typing a new name and confirming it **creates a new party immediately** in the parties book. If the party already exists, choose it from the list instead of typing it again.



Exchange rates: you won't find their section during creation — the dialog's message says

Save the project first, then edit it to add exchange rates. (We cover it in the next section.)

The steps in brief

1

+ New project.

2

Enter the **project name** (required), then fill in what you need from the remaining fields.

3

Save.

4

project card appears immediately in the grid (you stay on the same page, with no navigation). Its status starts as

No tasks yet until you add tasks.

Importing several projects at once

Just like the Library, the head of the Projects page (for the manager/admin) provides Blank XLSX template, Upload CSV, and Download CSV buttons to create projects in bulk from a spreadsheet. Accepted columns: **project name** (required) · currency · project

code · address · GPS coordinates.

i Each imported project starts with the status **Pending** exactly like a manually created one — the same “self-service digital transformation” logic as in the Library.

07 Editing an existing project

To edit a project, click the **Edit** icon on its card and **the same dialog** opens with the title **Edit project** and its fields filled with the project’s data. You edit any of the previous ten fields exactly as in creation — and the only difference is that the **exchange rates** section now appears.

What can be edited?	All ten fields (name, description, stage, currency, country, legacy code, address, coordinates, employer, contractor) — plus exchange rates.
What isn't edited manually?	The status , the progress percentage, and the total sell value — all computed automatically from the project’s tasks, so they change on their own and aren’t edited from this dialog.

Exchange rates — with an indicative rate from the internet

In edit mode the **Exchange rates (one unit = ? of your base currency)** section appears. Add a currency from the list and the system fetches you a **suggested market rate** from the internet — you can accept it by clicking **Use** , or type your own rate instead, then add it with the **+** button.

Exchange rates (how much of your base currency per unit?)

+

Rate

▼

USD

Use

Suggested: 48.60

Figure 5 — Adding an exchange rate: choose the currency, and the system suggests a rate from the internet — “Use” or enter your own rate

Deleting a project

Deletion is available **to the admin alone** via the **Delete** icon on the card. A confirmation appears before deletion, and if the project has tasks it warns you of their count and deletes them with it. **Deletion is permanent** with no undo.

✓ In summary: creating and editing are done from a single easy dialog — a required name and the rest of the fields as needed. The real value shows when you build on this foundation: you add tasks and bills of quantities and the status and progress move on their own.

08 The “Commercial” module: a roadmap

Your project now exists, in the **“Tender / pricing”** stage. Here the real work begins: the **Commercial** module in the sidebar — its title in the app is **“cost build-up, cost control, supply chain, and tenders across the project”**. This section is a quick map of it before we go into its tabs one by one.

Don't see "Commercial" in the sidebar? The module is an **add-on** (its name in the add-ons panel is **Commercial**) that the platform administrator enables for your company. When it is enabled, a second item appears with it in the sidebar: **Smart take-off**. And don't look for it at a direct link — as long as it's disabled the app quietly returns you to the projects page.

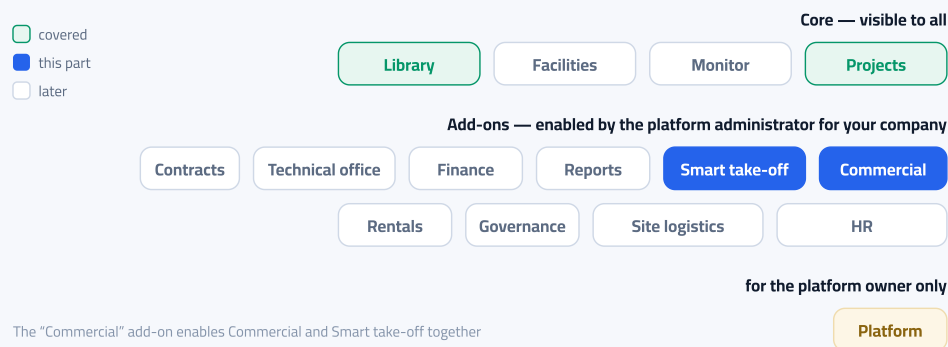


Figure 6 — A map of the sidebar in its actual order: the core for everyone, and the add-ons according to what the platform administrator enables for your company

Its fifteen tabs in order

Some tabs carry a title inside that differs slightly from their name in the sidebar — we mention both when they differ.

1. Dashboard	"Project financial dashboard": contract value, completion percentage, cost performance index, profit margin, the S-curve, and cost alerts — a single glance at a single project.
2. Quantity take-off	Measuring each item's quantities from dimensions (count × L × W × H), with recording site progress, approving quantities, and locking them. It only shows the bill-of-quantities items — so it logically comes after.
3. Functions	Grouping the project's spaces into "operational functions" (finance department, reception...) by drag and drop, for operational readiness.
4. Project bill of quantities	The starting point: you pull the items from your library, set the overhead and profit percentages, and link each item to its activities and tasks — and from it you export the "tender form".
5. Preliminaries	"Site setup": the bill of general site expenses that don't belong to a specific item, and the pricing settings (its distribution method and the risk percentage).
6. Variations	"Change orders": a record of approved change orders that modify the contract value against the locked baseline.
7. Billing and work in progress	"Payment certificates": client payment certificates, revenue recognition by completion percentage, and e-invoicing.
8–10. Component / level / space bills of quantities	Three read-only reports that break down the sell price by component, level, or space — and are built automatically from the tags you place on take-off measurements.
11. Cost control	"Cost monitoring": budgeted vs actual for each product, and earned-value indicators (CPI, EAC).
12. Resource costs	A direct-cost report distributed: materials · labor · equipment · subcontractor.
13. Supply chain	Purchase requests ← quotations ← purchase orders, approved vendors, and budget control.
14. Warehouses	"Warehouse": multi-warehouse receipt with consultant inspection, transfers, and issuing to projects.
15. Tenders	"Tender register": bid opportunities and their outcomes, with a "convert to project" button for the winning one.

! Two habits you should know from the start: (1) The module opens by default on "Quantity take-off" — but your journey starts from "Project bill of quantities". (2) **Each tab picks its own project:** your project choice in one tab doesn't carry over to the next tab, and is forgotten when you refresh the page — so choose the project in every tab you enter.

How is the price built? (Read it once and you'll understand the whole module)

In BuildFlow you don't type the "unit price" by hand. The price is **derived** from your library and catalog through a fixed chain (per CIOB/RICS practices) — and every tab in the module touches one link of it:

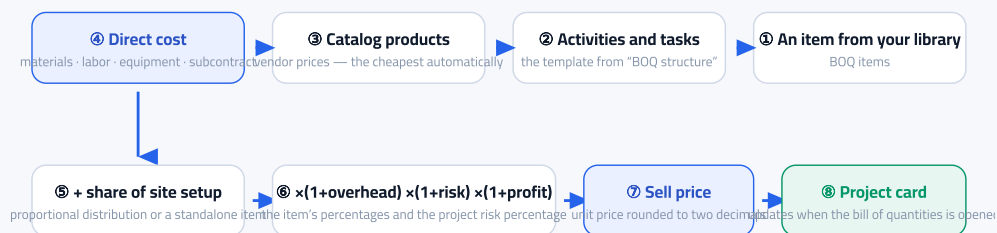


Figure 7 — The price build-up chain for each item: from your library to the “sell price” on the project card

Direct cost	The sum of the product quantities (materials/labor/equipment/subcontractor) linked to the item’s tasks × their prices in the catalog — the system chooses the cheapest vendor automatically unless you pin a specific vendor. Foreign currencies are converted at the project’s exchange rates.
+ share of site setup	The total of the “Preliminaries” is distributed over the items in proportion to their direct cost, or appears as a standalone item — depending on the project setting.
$\times (1 + \text{overhead}) \times (1 + \text{risk}) \times (1 + \text{profit})$	The overhead and profit percentages are per item (prefilled from your company settings), and the risk percentage is for the whole project .
= sell price	The unit price is rounded to two decimals, then multiplied by the quantity. And the sum of the items is the green number on the project card.

i Permissions within the module: the owner and admin add, edit, and delete; the manager adds and edits without deleting; and the viewer reads only — they see a [View only](#) banner at the top of the module and the action buttons disappear.

✓ What changed on the project card? Nothing yet. The green number (total sell) appears once the items are priced — **and it updates only when the “Project bill of quantities” tab is opened** for that project; editing the preliminaries or the risk percentage alone does not update it.

09 Project bill of quantities

Its title in the app: **“Add bill-of-quantities items to a project with quantities, overheads, and profit”**. This is the tab that turns your library into a priced project — which is what we prepared for in sections 02 through 04.

Adding items from your library

- 1 Use the project from the search field at the top of the tab (type part of its name).
- 2 [Add item](#). In the **bill-of-quantities item** field type to search — by number or word, like “20” or “concrete” — and your **library** items (bill-of-quantities items) appear with the MasterFormat section for each. Previously added items disappear from the results automatically.
- 3 **Quantity** is optional: leave it empty if you’ll take it off from the dimensions in the next tab, and it’s computed automatically.

4 **Overhead %** and **profit %** come prefilled from your company settings — adjust them for this item if you like — then Add .

10

12

Leave empty — computed from take-off

Type to search (e.g. 20, concrete)...

Profit %

Overhead %

Quantity (optional)

Bill-of-quantities item — from your library

	Sell price	Direct cost	Profit	Overhead	Unit sell price	Unit	Quantity	Item
 	1,348,200	2,600	10%	12%	3,210	m³	420	Reinforced concrete for foundations
 	851,000	373	10%	12%	460	m²	1,850	Brick masonry
	4,094,500	2,973,000						Project total

Overhead and profit are entered as percentages and applied to each item in this project.

Figure 8 — The “Project bill of quantities” tab: the form for adding an item from your library, and the items table with the price columns and the project total

The table columns	Item (section / title / item) · Quantity · Unit · Unit sell price · Overhead · Profit · Direct cost · Overhead value · Profit value · Sell price, and a Project total row at the bottom.
What is edited manually?	With the pen  : the quantity and the overhead and profit percentages only. All the money columns are computed. Hover over “sell price” to see its composition: direct + preliminaries + overhead + risk + profit.
Why is there no “unit price” field?	Because the price is derived from the catalog products linked to the item’s tasks (section 08). An item with no priced tasks appears with a dash “—” in the “tender form”.

Linking the item to its activities and tasks — and from it the execution tasks are born

Click the branch icon  (Activities and tasks) on the item’s row and a two-pane screen opens:

The right · “The template — all possibilities”	All the activities and tasks you defined for this item in the library ← BOQ structure , and under each task its catalog products with a (cheapest) marker. The Select all button adds them in one go.
The left · “This project — the selected tasks”	What you actually chose. Each product has a factor (item quantity × factor) or a fixed quantity , and you can pin a specific vendor instead of the cheapest. Quantities are seeded from the “BOQ Structure” template (the single source) and edited here for this project only.
The effect outside this screen	Every task you add here creates an execution task automatically that appears in the Kanban board and Gantt chart — and removing it removes the execution task with its dates, completion percentage, and owner. This is the bridge to Chapter Three.

 Got “No template defined for this item”? Define its activities and tasks first in the library ← **BOQ structure** (tab number 3 in section 04).

The lifecycle bar: from tender to project

Above the table is a bar with three stages. Moving between them is the only way to freeze a “baseline version” of the project (there is no standalone button for that):

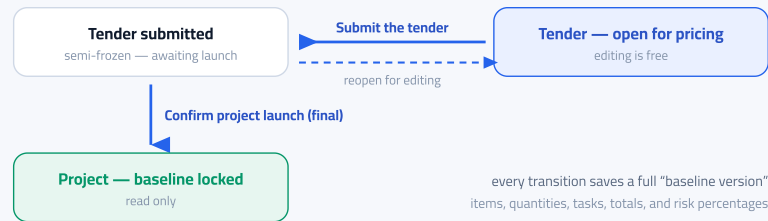


Figure 9 — The project lifecycle bar above the bill of quantities: “Submit the tender” then “Confirm launch”, each of which freezes a baseline version

1 Submit the tender : you enter the submission date and an optional reason — the data becomes semi-frozen, with the option to **reopen for editing** for exceptional edits.

2 Confirm project launch : final and locks the baseline — don’t click it until the owner approves starting the actual work. And from here change orders and payment certificates are measured. The form has two optional fields: **contract completion date** or **time for completion in days** — stored in the contract-terms register — and kickoff also freezes the **schedule baseline** (the tasks’ planned dates) that the “Schedule Adherence” report measures against (Chapter 3).

3 Baseline log shows all the saved versions with their dates and totals.

Export: the tender form

The **Tender form PDF** button exports a client-facing summary with sell prices: the section, item, quantity, unit, unit price, and value, then the subtotal, VAT (at your company’s rate), and the total including tax — with a separate line for “Preliminaries and general requirements” if you chose that in its settings.

i There is no CSV import in this tab: your items come in from the **Library** (where the bulk import is in section 03) and are then pulled in here by searching.

✓ **What changed on the project card?** As soon as the items’ pricing is complete (linked tasks + products with prices in the catalog + quantities), the **total sell** appears in green on the project card — and it updates whenever you open this tab.

10 Quantity take-off — and smart take-off and functions

Its title in the app: “**Traditional dimension take-off — compute each item’s quantity from the measurements**”. Here you fill in the “quantity” box you left empty in the bill of quantities: you measure each item from its dimensions, and its quantity updates automatically.

The items list then the take-off screen

After choosing the project, the tab shows the **bill-of-quantities items** (item · quantity · unit) and a purple **Take-off** button in front of each item, and a lock  in front of an approved item. You can’t create an item from here — if you see “No items in this project”, go back to section 09. The **Download CSV** button at the top of the list exports a summary of all items’ quantities.

- 1 Click **Take-off** on the item and its screen opens, with the **unit**, the **total quantity**, and the **actual** with its percentage at the top.
- 2 Click **Add measurement** and a green row appears: enter the **count**, the dimensions (**L · W · H** in meters), and the **factor** (default 1), and mark **deduction** for openings and voids so the row is counted as negative.
- 3 Choose the **component**, the **level**, and the **space** from your library lists — or type a new name and it is created immediately in the library.
- 4 See: the rows are summed and written into the item's quantity in the bill of quantities automatically.

Upload CSV

Approve and lock

Add measurement

Actual: 71 (30%)

Total quantity: 237.7

Unit: m³

Space	Level	Component	Quantity	Deduction	Factor	H (m)	W (m)	L (m)	Count
Hall	Ground	Building A	144.0	—	1	0.8	2.5	6.0	12
Hall	Ground	Building A	-2.3	✓	1	0.8	1.2	1.2	2
Offices	First	Building A	96.0	—	1	0.8	3.0	4.0	10
237.7									Total

Volume unit: quantity = count × L × W × H × factor — deduction rows count as negative

Figure 10 — A single-item take-off screen: each measurement row with its dimensions, factor, and tags (component/level/space), and a negative deduction row for openings

The formula per unit	Length unit (m): count × L × factor · area unit (m²): count × L × W × factor · volume unit (m³): count × L × W × H × factor · any other unit: count × the entered dimensions × factor (empty dimensions are ignored — like reinforcing steel in kg: count × length × kg/m factor). The app shows you only the dimension fields relevant to the item's unit.
The factor	A free multiplier: kg/m, density, wastage... default 1.
Why are the tags important?	The component/level/space on each row are what the component, level, and space bills of quantities (section 12) are built from, along with cost distribution by space and the “Functions” tab. Tag every row you take off.

Site progress: actual vs planned

The green ↗ icon on the row opens the **Site progress log**: **planned / actual (cumulative) / progress** cards, and a **Log a site visit** button with which you enter the date, the **added quantity** (negative for a correction), and a note. The log is cumulative and not edited — and it is the source of “earned value” in the dashboard and the completion percentage in cost control. You won't use it during the tender stage, but its place is here.

Approving the quantity and locking it

Approve and lock asks for an optional note, then saves a **version** (v1, v2...) and locks the take-off: no editing or deletion until **Unlock**, while logging site progress remains available. The **Versions (n)** button shows a table of the approved versions (quantity, difference from the previous, by, date, note).

Importing and exporting measurements

The same logic as the Library (section 03) but at the single-item level: [Blank XLSX](#) gives you the template with its headers (Number, X, Y, Z, Factor, Deduction, Component, Level, Space, Comments), [Upload CSV](#) adds measurement rows in bulk — unknown component/level/space names are created automatically, and the deduction column accepts yes, 1, or ddt — [Download CSV](#) exports the item's rows, and [Dimension sheet PDF](#) prints the item's dimension sheet.

Smart take-off: from the drawing to the take-off sheet

The sidebar item [Smart take-off](#) (which appears with the Commercial add-on) reads a scanned drawing (PDF or image), you measure on it what you can, then link each measurement to one of the project's items and click [Pour into take-off](#) — and the measurement turns into a take-off row tagged with its source and confidence level, and the item's quantity updates. And like traditional take-off, it needs existing items first.

The "Functions" tab

Its title: **"Group spaces by operational readiness — a space can belong to more than one function"**. The right pane is the tree of your project's locations (component ← level ← space) extracted from the take-off tags; and the left pane is "functions" you create (example: finance department) and drag spaces into. It doesn't affect the bill of quantities or the price — it is a grouping for operational readiness, and you'll see it empty until you assign spaces in the take-off.



What changed on the project card? The quantities filled in, so each priced item now has a "sell price" = unit price × quantity. Open the bill of quantities tab to see the project total — and after that the number on the card updates.

11 Preliminaries, pricing settings, and cost control

Three tabs complete the price after the quantities: **Preliminaries** (its title in the app "Site setup") where the general site expenses and pricing settings are, then **Cost control** and **Resource costs** which read what you built.

Site setup

"The bill of general site expenses — actual project costs that don't belong to a specific item in the bill of quantities". Click [Add item](#) and choose the **category** (site management, temporary works, temporary service utilities, general equipment, transport and accommodation, guarantees and insurances, quality and safety, handover and demobilization, or other), then the **description**, **quantity**, **months**, and **price**. The line total = quantity × months × price, and the categories are summed into the "total site setup".

Pricing settings
how the site setup reaches the client price

☒ **Standalone item**
appears as a line in the tender form

☐ **Proportional distribution over items**
in proportion to each item's direct cost

applied to each item: $x(1+\text{risk})$ after overhead

Risk / contingency %

the price chain per item: direct cost + share of site setup
— $x(1+\text{overhead})$ — $x(1+\text{risk})$ — $x(1+\text{profit})$ = sell

[Save settings](#)

Figure 11 — The "Pricing settings" card in the Preliminaries tab: how the site setup reaches the price, and the project-level risk percentage

Proportional distribution over items	The default: the total site setup is distributed over the bill items in proportion to their direct cost, so it enters each unit price.
Standalone item	The site setup appears as a standalone line in the “tender form” with a “lump sum” unit, priced with your company’s default percentages.
Risk / contingency %	A single percentage for the whole project applied to each item after overhead. Entered as a percentage.
Don't forget	Click Save settings . And this page doesn't update the card number by itself — open the bill of quantities afterward.

Cost control (“Cost monitoring”)

“**Budgeted vs actual cost for each product — recorded as the work is completed**”. A row for each product linked to a task: **task – product · progress · quantity (B/A) · unit price (B/A) · vendor (B/A) · cost (B/A) · variance** (B = budgeted, A = actual), with [All / recorded / over budget / not recorded](#) filters, a [Record actual](#) button, and Excel and PDF export. Above the table is an **earned value** panel: budget (BAC), earned value, actual cost (AC), CPI, forecast (EAC), and VAC. Its “budgeted” side is the direct cost you just built; and its “actual” side fills in during execution from vendor invoices, warehouse issuing, and what you record manually.

i The completion percentage for each item comes from the **site progress log** in the quantity take-off (actual ÷ planned), and EAC = BAC ÷ CPI per the PMI standard — as the page itself explains.

Resource costs

A read-only report: “**Direct cost distributed by resource type (materials / labor / equipment / subcontractor) at the project level, in the project currency**” — five cards (with “unclassified”) and a “by bill item” matrix, and Excel and PDF export. If “No priced distribution yet” appears, it means your items have no priced products in the catalog.

✓ What changed on the project card? The site setup and risk percentage entered each item’s price — the “total sell” rose by their amount after opening the bill of quantities.

12 The dashboard and the sub-schedules — and the bridge to Chapter Three

The last three stops in the module: a dashboard that gathers all the above into a single glance, three schedules that break down the price by location, then the transition from “tender” to “execution”.

The dashboard (“Project financial dashboard”)

“**The S-curve, earned-value indicators, and cost alerts — a single project at a glance**”. Four cards: **contract value (adjusted)** (baseline or computed price + approved change orders), **completion percentage (cost/cost)**, **cost performance index** (green ≥ 1), and **profit margin to date**. Then the **cumulative S-curve** with three lines — earned value from the site progress log, actual cost from the **general ledger** (posted expense entries tagged to the project: materials on issue, subcontractors, payroll, equipment — so a vendor invoice and the store issue of the same materials are never counted twice; projects without entries yet fall back to vendor invoices, warehouse issuing and recorded actuals), and billed from the payment certificates — and an **alerts** card (missing prices or quantities, over budget, missing billing, low CPI).



Figure 12 — The “Project financial dashboard”: the four indicator cards and the cumulative S-curve (earned value, actual cost, billed)

i During the tender stage you’ll find the dashboard nearly empty — its message: “Not enough dated activity yet.” It fills in during execution (Chapter Three). Rest easy when you see **Everything is fine – no cost alerts for this project** ✓.

Component, level, and space bills of quantities

Three read-only reports in one shape: a blue bar with the **total sell price**, then a collapsible card for each component (or level or space) with its item count and price, and inside it the items with their quantities and prices. The “space” here is the specific room (space type + component + level), not the general space name in the library. An orange warning tells you the items excluded for missing quantity or price. And if “No assignments” appears, go back to the take-off tags (section 10).

The tabs awaiting execution

Variations (“Change orders”)	A record of change orders (proposed / approved / rejected) that modify the “adjusted contract value” against the baseline — they don’t work before a baseline is frozen from the lifecycle bar. Each order has an EOT days field; approving an order that carries an extension re-baselines the schedule automatically (a new, non-final baseline version) and extends the contractual completion date in the reports.
Billing and work in progress (“Payment certificates”)	Client payment certificates and revenue recognition by completion percentage (Egyptian standard 48 / IFRS 15), and sending to e-invoicing.
Supply chain · warehouses	Purchase requests ← quotations ← purchase orders, approved vendors, then receipt with consultant inspection and issuing to the project — and this is what feeds the “actual” in cost control.
Tenders (“Tender register”)	Bid opportunities and their outcomes; the winning one converts with a Convert to project button into an execution-stage project, and the others with a Start estimate button into a tender project that opens the same module for you.

The bridge: from tender to execution

- 1 Submit your bid with the **Tender form PDF** and click **Submit the tender** in the lifecycle bar (section 09) — a baseline version freezes.
- 2 Award, click **Confirm project launch** (final), then change the **stage** on the project card to “Execution” from the edit

button (section 07).

3 execution tasks born from the bill-of-quantities items are waiting for you in [Tasks](#) and the Kanban board and Gantt chart — and from here the project's **status** moves on its card. This is the subject of **Chapter Three: Executing your project**.

✓ **What you accomplished in this chapter:** a library prefilled and migrated from your spreadsheets, a project created and edited, a bill of quantities pulled from your library and linked to its activities and tasks, quantities taken off from dimensions, site setup and a risk percentage, a ready tender form, and a frozen baseline version. And on the project card a green number that attests to it.

Chapter 3 — Executing your project on BuildFlow

You priced your project and froze its baseline — now we execute it: the **tasks** generated from the Bill of Quantities, the **Kanban** board, the **timeline**, **Monitor**, and site reports — until your project's status on its card moves to “Completed.”

Chapter 3 — Executing your project: tasks, Kanban, timeline, monitoring and site reports

 Website

<https://app.engimindai.com>

 **Tasks** and Kanban

 **Timeline** (Gantt)

 **Monitor** and site reports

01 Before we start

In Chapter 2 you built your library, created your project, pulled its Bill of Quantities items from the library and linked each item to its activities and tasks, took off the quantities and priced them, and froze a baseline version. Now we move on to **execution**: monitoring tasks, scheduling them, and recording progress — until your project's status on its card moves from “Not started” to “Completed.”

i **Three facts that frame this chapter:** (1) The three execution screens — the dashboard, the Kanban board, and the Gantt chart — live inside the **Monitor** module, which is the app's **home page** after you log in. (2) **Execution tasks are generated from the Bill of Quantities** (every task you added to an item in Section 09 of Chapter 2) — there is no “New task” button in Kanban. (3) **A task's status is not typed in**; it is derived automatically from its completion percentage.

And remember that the “stage” on the project card (Tender / Execution / Closed) is an **identifying badge** that you change from the project's edit button — or that the system sets to “Execution” automatically upon “Confirm project kickoff” — and it neither locks nor unlocks any screen.

02 Monitor: the execution hub

Its heading in the app: “**Track project progress via the dashboard, Kanban, and Gantt — using a single shared filter.**” Three tabs and one filter bar above them, and the app remembers your tab and filter as you navigate.

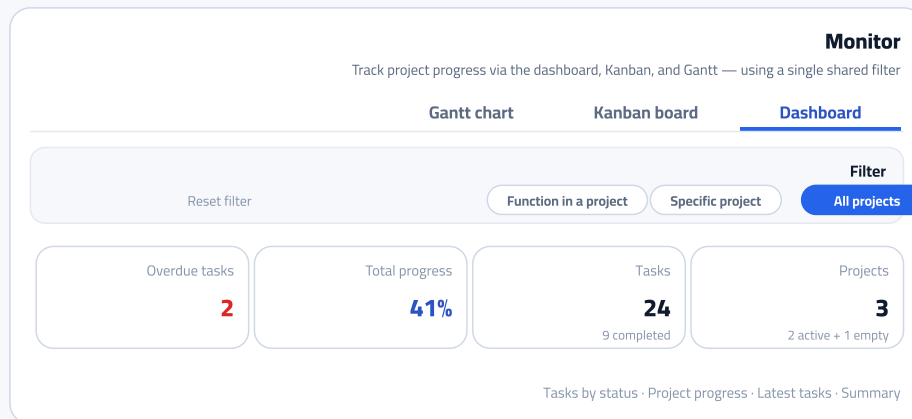


Figure 1 — The “Monitor” module: the three tabs, the shared filter bar, and the dashboard cards

Filter bar	Scope: All projects , Specific project , or Function in a project (the functions you grouped in Chapter 2), then an optional tree Component → Level → Space derived from the take-off tags — so you see the tasks of specific spaces. The Reset filter button restores everything. The filter applies to the dashboard and the Gantt chart.
Dashboard	“A live view of your projects and tasks”: four cards — Projects (active + empty), Tasks (and how many are completed), Total progress (the average of all task percentages), Overdue tasks — then the “Tasks by status” donut, the “Project progress” bars, “Latest tasks,” and “Summary.” It updates in real time with any change to the tasks.
Kanban board · Gantt chart	The next two sections.

03 Kanban board: your tasks in three columns

Its heading: “**Task board — organize and track your tasks:**” Three fixed columns: **Pending** · **In progress** · **Done** , with a counter on each column, and a card for each task.

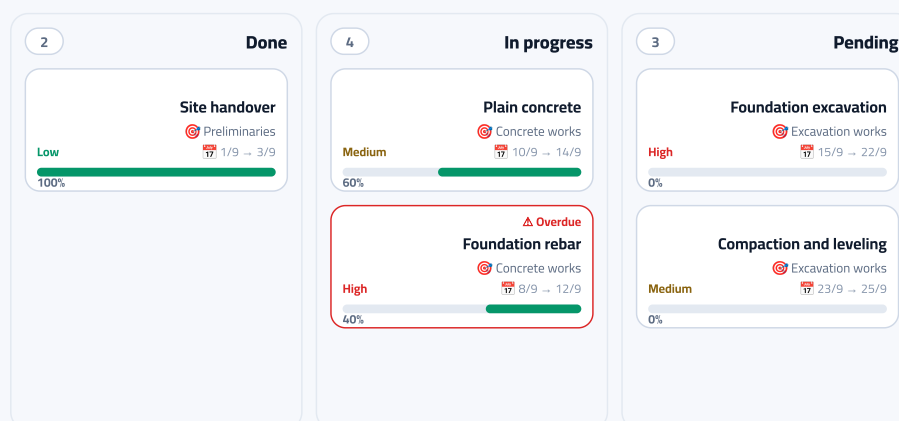


Figure 2 — The Kanban board: three columns determined automatically from the completion percentage, and an overdue card with a red border

What's on the card?	The title (the task name from your library), 🎯 the activity, 📏 the quantity and its unit, 💰 the assumed cost and 📅 the actual, 📅 ¹⁷ the start and due dates, the priority in its color, and the completion-percentage bar. A bold red zero means “not entered yet.” A ⚠️ Overdue badge and a red border for a task that has passed its due date without completion — it appears the moment the deadline passes , with no need to save anything.
Selecting the project	A search field at the top of the board, or All projects , which shows above the columns a summary card for each project (status · number of tasks · percentage).
Filtering	🔍 Search in titles, a priority list (High/Medium/Low), an ⚠️ Overdue only button — and × Clear .
Status is derived, not dragged	No drag-and-drop between columns. The fixed rule: 0% → Pending · between 0 and 100 → In progress · 100 → Done. Change the percentage and the card moves on its own.

Editing a task

Click the pencil icon on the card and the **Edit task** dialog opens, with the reminder beneath it: “The status is set automatically based on the completion percentage %.”

×

Edit task

The status is set automatically based on the completion percentage %

Task (from the library)

Project

▼ Foundation rebar

▼ Nile Administrative Tower

Priority

▼ High

Activity (cost center) — from the task

Concrete works

Start date

2026-09-08

Unit

▼ Ton

Completion percentage %

40

Due date

2026-09-12

Cancel

Save

Figure 3 — The “Edit task” dialog from the pencil icon on the card — no status field: it is derived from the completion percentage

Fields	Project · Task (from the library) — choosing a different task replaces the title, priority, unit, and activity · Activity (read-only, comes from the task) · Priority · Unit · Start date · Due date · Completion percentage % — for tasks linked to the take-off it is shown read-only (calculated automatically from the executed take-off quantities), and remains writable for standalone tasks. There is no assignee field here — it is assigned from the Gantt chart.
Deleting	The trash-bin icon (for Owner and Admin) deletes the execution task after a confirmation message , and the task's link to the Bill of Quantities item remains without an execution task. It is safer to remove it from the item's “Activities and tasks” screen (Chapter 2, Section 09) so it is removed from both sides.
A new task?	Two ways: (1) The + New task button at the top of the board (for Owner, Admin, and Manager) opens the dialog blank to create a standalone task whose percentage you type in manually. (2) From the Bill of Quantities: open the item → “Activities and tasks” → add a task from the template — this one is linked to the take-off , so its percentage is calculated automatically (see Section 06), and it appears with “Medium” priority and no dates.

04 Gantt chart: dates and assignees

Its heading: “Timeline — a Gantt view with editable dates and assignees.” Two panes that move together: a table you type into, and a chart that draws what you typed — one day per column.

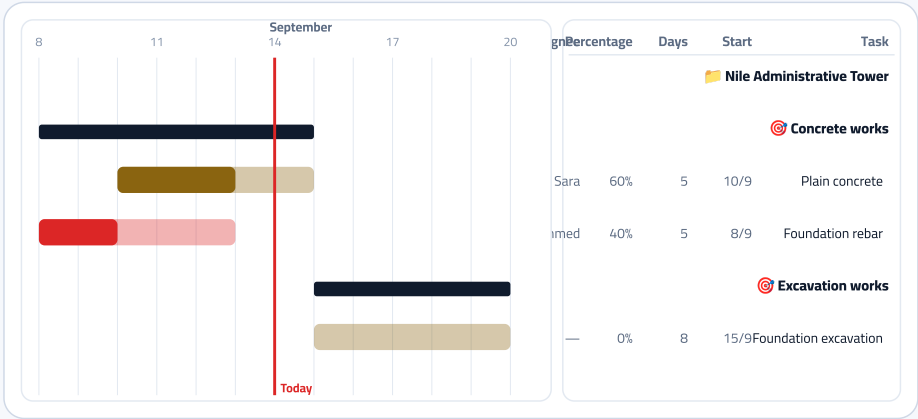


Figure 4 — Gantt chart: the editable table (Start, Days, Percentage, Assignee) and the chart with black activity bars, colored tasks, and the red “Today” line

Start from “Tasks without dates”

The tasks generated from the Bill of Quantities without dates are found at the bottom of the page in the [Tasks without dates](#) section, with columns: Task · Activity · Start · Due · Days · Assignee. The page’s own hint: “Enter the start first, then the due date (or the days). As soon as the two dates are valid, the task appears in the Gantt chart above.”

The table	Columns: Task · Start · Due · Days · Percentage % · Actual start · Actual finish · Assignee . The rows are grouped: Project → Activity → Tasks. Changing the start preserves the duration and shifts the due date; changing the days recalculates the due date; the percentage by clicking the cell; the assignee from your company's employee list. The Actual start and Actual finish columns are filled automatically from the percentage; typing in them is a manual override (see Section 05).
The chart	A bar for each task from start to due, filled to its completion percentage: amber in progress, green done (100%), red overdue. A thin black bar for each activity summarizes its tasks (from the earliest start to the latest due, at a duration-weighted percentage). A vertical red line marks “Today.”
What it does not have	No dragging of bars, no dependency links between tasks, no weekly/monthly zoom, while the baseline-vs-actual comparison lives in the “Schedule Adherence” report (Section 05). All scheduling is done by typing in the table.
Export	Export to Excel : Project · Activity · Task · Start · Due · Days · Percentage · Assignee — with “(activity summary)” rows.

On narrow screens a single pane is shown, and a vertical [Show table](#) / [Show chart](#) button toggles between them.

05 **Schedule adherence: planned vs actual**

A report under “Reports” titled “**Schedule Adherence**” answers two questions: is every task — and every responsible person — keeping to the programme frozen at project kickoff? And when will the project really finish compared with the contractual completion date? Pick the project, set the evaluation date (**As of**), and everything is recomputed at once.

Where the numbers come from

Schedule baseline	Every baseline version freezes the planned dates of each execution task. Confirm Project Kickoff sets the “current” version; after that it only changes when an approved variation order carries EOT days — the system then creates a new schedule baseline automatically. Before kickoff the report compares against the current planned dates and says so in a warning strip.
Actual dates	Filled automatically from the progress percentage: the start on the first progress, the finish at 100%, and cleared again if the percentage drops. For a manual override the Gantt has two columns, Actual start and Actual finish — a highlighted cell means a manual date, and clearing both returns the task to automatic. Backfilled dates of older tasks (before this feature) are estimates.
Contractual completion	From the contract completion date or the time for completion in days entered in the kickoff form (stored in the contract-terms register), plus the EOT days of approved variation orders.
Cost	Each task's assumed cost from “Cost Control” (its linked BOQ task) — used for the cash-flow impact of the deviation.

What it shows

Cards	Baseline finish · Forecast finish (± days vs baseline) · Contractual completion (original + extensions) · Forecast vs contract (red when overrun) · Schedule performance index SPI (duration-weighted actual ÷ weighted planned) · Late tasks ; then badges with the task count per status.
Comparative Gantt	Two bars per task: a thin grey one = baseline, and a coloured one = actual or forecast by status (green done on time, orange done late, blue on track, amber behind, red late start, grey not started). Three vertical lines: as of (blue), baseline finish (dashed grey), contract (dashed red). A late only / all tasks toggle — large projects open on late only.
By responsible person	Per person: tasks, done, late, SPI, late days (the sum of days their tasks overrun the planned finish), and their share of deviation = their late days ÷ all late days in the project.
By task	Responsible · subcontractor · planned (start → finish) · actual · planned % · actual % · forecast finish · start Δ · finish Δ · attributed (flag) · status. The 📅 mark next to the actual dates means a manual date.
Cash-flow impact	Each task's cost is spread evenly over the days of its baseline window, then over its actual/forecast window; the table shows, per month, planned and forecast outflow, the difference (positive = spending pushed into that month) and the cumulative difference.
Attribution of the deviation (delay events)	The computation above says <i>how much</i> we are late; this part says <i>why and who</i> . Each task in the task table has a flag that opens the Delay events window: pick the task's executing subcontractor , then record per event the date, the delay days , the cause from a fixed list of codes that carry their contractual liability (employer: owner instruction, late drawings, site access, late payment · neutral: authorities, weather, force majeure · contractor: subcontractor performance, material delivery, labour, equipment, rework, planning), the party it is attributed to (subcontractor / supplier / owner / consultant / own team) with its name from the parties register, the responsible person , description and evidence (IR, NCR, letter...), the recovery action and its due date, the status (open / mitigated / closed), and a link to a variation order when an extension is claimed. The report then shows recorded delay cards split into contractor risk (LD exposure), employer risk (supports an EOT) and neutral, plus two tables: by party with each party's share of the days, and by cause with its liability — next to the responsible-person share computed from the dates.
Contract terms (time and damages)	A collapsible panel under the cards: the contract completion date or time for completion, the delay-damages basis (% of contract value per day, or a fixed amount per day), the cap (% or amount), and an override of the contract value when it differs from (priced baseline + approved VOs). Import from FIDIC contract reads the time for completion [1.1.85] and the delay damages [8.8] from the project's generated contract.
Time variance and financial impact	Per FIDIC 8.8: forecast overrun = forecast finish – revised contractual completion; damages per day; gross exposure (capped); claimable relief = employer-risk and neutral days recorded in the events but not yet covered by an approved extension; net exposure ; then the back-to-back charge to subcontractors : each one's attributed days × the LD rate of its agreement, capped, so only the residual stays with the company.
What each causer must do	A table per late task: the causer (subcontractor or responsible person and the main cause), days behind, remaining %, days left to the planned finish, the required rate compared with the current one, and the action: accelerate ×N to the planned finish, start now and compress by N days , or cannot recover on this task (its finish has passed) — the same party recovers the days on its following tasks or through a formal recovery programme.

Dependencies and the critical path

The [link](#) icon next to each task name opens the **Task planning** window: its predecessors (finish-to-start FS, start-to-start SS, finish-to-finish FF, start-to-finish SF, with a lag in days), its successors, and its own **acceleration override** (the shortest possible duration and the extra cost to reach it — a subcontractor's acceleration quote, say). With dependencies in place the report computes the critical path on the remaining durations (a task in progress keeps its actual start) and marks critical tasks with a [CP](#) badge and a red outline in the Gantt; without them, the latest-finishing tasks count as critical.

Schedule compression

When the owner asks for early completion: enter the **target completion** and the system proposes acceleration on the critical path by time–cost trade-off — one day at a time from the **cheapest critical task**, recomputing the path after every step — until the target is reached or nothing more can be cut. Per task: the party, the dominant resource type (labour / equipment / subcontract / material), the acceleration method (overtime, extra plant, subcontractor acceleration, expedited delivery), the days cut, the extra cost and the new window. Cost per saved day = the task's daily assumed cost × the resource type's **premium**, and the maximum cut is its percentage — from your company's [Crash settings](#) (editable) unless the task overrides them with its own quote. The [Fast-track](#) option turns critical FS links into SS links with half the predecessor's duration as lag, at no cost (with rework risk). Cards: current finish, target, achievable, days saved, extra cost, and **delay damages avoided with the net benefit**; then the **resulting cash flow** by month (remaining work + acceleration cost) against the current forecast.

Export

[Excel](#) exports the task table. [PDF](#) exports the full report: the summary cards, then the colored Gantt chart as shown on screen, then the task table across pages — with the company header and the evaluation date.

i **How is the forecast computed?** A task in progress is extrapolated at its actual rate to date (elapsed ÷ its percentage); one not yet started whose start has passed begins “tomorrow” with its planned duration; a finished one reads its actual finish. Project forecast = the latest task (no critical path yet). “Planned %” is linear over the baseline duration, and every Δ is in calendar days, positive meaning late.

! **Limits of the tool:** the critical path is only as accurate as the dependencies you enter; acceleration cost is an estimate from the company premiums unless a task carries its own quote; and fast-tracking carries a rework risk that should be assessed by engineering before it is adopted.

06 The progress loop: how does the project card move?

This is the most important section in the chapter. Previously the progress channels were separate; now they meet on **a single axis: the project's take-off item**. The executed take-off quantities move the task's completion percentage **automatically**, and site reports are linked to the task/item — so there is no conflict between three different progress figures.

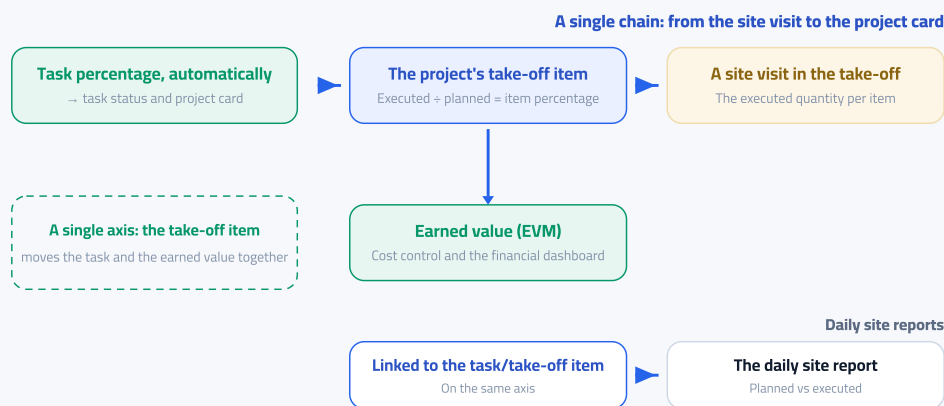


Figure 5 — A single axis: the site visit enters the executed quantity onto the take-off item, the system computes the item percentage that moves the task percentage and the earned value together, and the site report is linked to the task/item

(a) Task completion percentage

For tasks generated from the take-off it is calculated **automatically** = the executed quantity ÷ the item's planned quantity (so the percentage field in Kanban is read-only, with the note "calculated from the take-off"). Tasks created manually with the **+ New task** button keep a manual percentage. From it are derived the task status, the "Overdue" badge (a passed due date and a percentage below 100 — **it appears in real time** the moment the deadline passes), then **project progress** = the average of its tasks' percentages, and the **project status**: no tasks → "No tasks," all at 100 → "Completed," any percentage above zero → "In progress," otherwise "Not started."

(b) Earned value

The same executed take-off quantities feed the **earned value** and the CPI/EAC indicators in "Cost control" and the S-curve in the financial dashboard. A single source for the executed quantity (the take-off) moves progress and money together — with no double-counting.

(c) Daily site reports

They are now **linked to the task/take-off item** (you choose the task from a list) instead of free text — a daily record attributed to the task (Section 07). It remains for documentation and does not feed the take-off quantity, to avoid duplication.

✓ **The practical rule:** after each site visit, record the executed quantity in the take-off (Chapter 2, Section 10) — it alone moves the task percentage, the project card, and the earned value all at once. As for **standalone** tasks (not linked to the take-off), update their percentage manually in Kanban or Gantt.

07 Daily site reports

From the **Reports** module (an add-on activated by the platform administrator) → the **Site reports** tab. Its heading: "Record the daily progress for each activity: the planned quantity vs the executed, and the value of the work completed."

1 **+ New report** — available **to all company members** (the site engineer, for example), while editing and deleting are for editors.

2 **n: Project** (optional), then the **Task** — you choose it from the project's take-off-linked task list (and if the project has no take-off tasks yet, a text **Activity** field appears instead), the **Date** (today by default), the **Planned quantity**, the **Executed**

quantity, the Unit price, and Notes — then Save report.

3 appears in the table: the activity (with the project beneath it) · Date · Planned · Executed · **Value** (= executed × unit price, automatically). Later editing is for the executed quantity only, and deletion is by confirmation.

i The report is now **linked to the task/take-off item** on the same axis (instead of free text), so it is attributed to a specific task. It remains a daily record for documentation and does not feed the take-off quantity, to avoid accounting duplication.

08 Site logistics, inspection, and non-conformance

Two modules that serve execution from outside the task screens.

Site logistics	Owner and Admin only	Five tabs: Housing (owned or rented units, their capacity, rent, cost center, and occupants), Movements (a housing or site move, an internal transfer — planned/executed/canceled), daily on-site Attendance (generate for a day, present/absent/leave/rest/in transit), Zones (code, name, and location), and the monthly financial posting (accrual, then settlement to the cost centers).
Inspection requests and non-conformance		In the Technical office module (an add-on): the Inspection requests tab, “inspection requests for works and materials (IR/WIR) with result and status” — a request can be assigned to a BOQ item — and the Non-conformance (NCR) tab. Neither affects completion percentages, but an open NCR holds the value of the relevant works in the payment certificates until it is closed.

09 Permissions on the execution screens — and the summary

Screen	Owner	Admin	Manager	Viewer
Kanban — editing the task (percentage, dates, priority)	✓	✓	✓	✗
Kanban — deleting a task	✓	✓	✗	✗
Gantt — dates, days, percentage, and assignee	✓	✓	✓	✗
Site reports — adding a report	✓	✓	✓	✓
Site reports — editing/deleting	✓	✓	✓	✗
Site logistics	✓	✓	✗	✗

In Kanban the Viewer sees a View only – you don't have edit permissions banner, and in Gantt a line beneath the guide “View only — editing requires Manager or Supervisor permission,” with the table fields disabled. These permissions are now enforced at the database level too, not the interface alone.

✓ Summary of Chapter 3: your tasks were generated from the Bill of Quantities, you scheduled them with dates and assignees in Gantt, you track them in Kanban and the dashboard, and you record progress on two channels: the task percentage (for the schedule and the card) and site visits (for the money), and you document the day in site reports. When all tasks reach 100% the project card says **“Completed”** — and you move on to billing, payment certificates, and project closeout in a later chapter.



Chapter 4 — Financial monitoring of your project on BuildFlow

You executed and recorded progress — now we turn the work completed into money and manage profitability: the **financial project dashboard**, **cost control** (earned value), **variations**, and **payment certificates** and retention — all in the “Commercial” module.

Chapter 4 — The money side: cost control (EVM), variations, IPCs, retention



Dashboard for the project's finances



Cost control (EVM)



Variations



Payment certificates and retention

01 Before we start

In Chapter 3 you executed your tasks and recorded their daily progress and take-off quantities. Now we close the loop: we turn the **work completed** into **money** — we monitor profitability, bill the client with payment certificates, and hold back guarantees — and we see all of it in a single financial dashboard for the project.



All the screens in this chapter are **tabs inside the “Commercial” module** (at `/boqs`, a “Commercial” add-on activated by the platform administrator) — the same module where you priced your project in Chapter 2. The four new financial tabs: **Dashboard** · **Cost control** · **Variations** · **Billing and work in progress**.



Three engines read from Chapters 2 and 3: baseline pricing (Ch. 2) gives the **budget and sale price**; the executed take-off (Ch. 3) gives the **completion percentage**; and the actual costs (procurement, warehouses, and invoices, or manual entry) give the **actual cost**. From these three, the earned value, the payment certificate, and the financial dashboard are built.

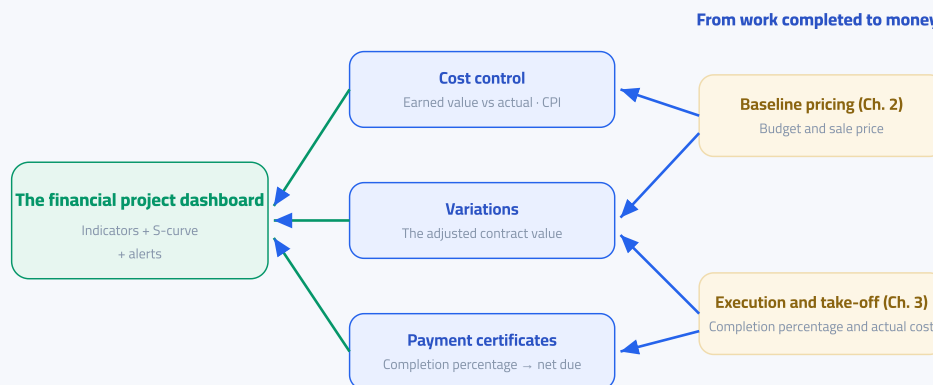


Figure 1 — The priced baseline and execution feed three engines (cost control, variations, payment certificates), all of which pour into the financial project dashboard

02 The financial project dashboard

The first tab in “Commercial” is **Dashboard**, whose heading in the app is “**The financial project dashboard**” — a **read-only** executive view of a single project: large indicators, an S-curve, and alerts. Choose the project from the top of the module and the dashboard updates.

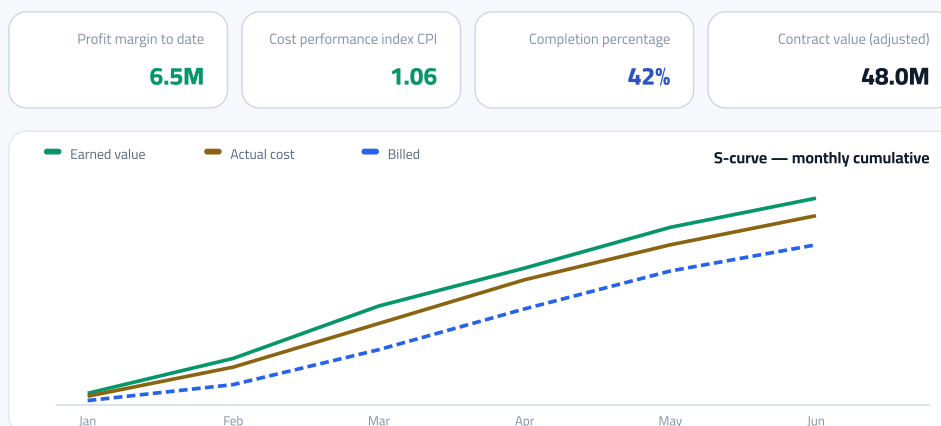


Figure 2 — The financial project dashboard: the indicator cards and an S-curve comparing earned value, actual cost, and billed amounts cumulatively

The four indicators	Contract value (adjusted) = baseline sale price + approved variations · completion percentage by the cost/cost method · CPI (above 1 profit, below 1 overrun) · profit margin to date (recognized revenue – cost).
S-curve	Three monthly cumulative lines: earned value (from the executed take-off), actual cost (invoices + warehouse issues + manual entry), billed (cumulative payment certificates). The billed line diverging below the earned line = under-billing.
Alerts	Low CPI and an expected overrun · under-billing · missing catalog prices · missing quantities · items that have exceeded their budget. Address their causes in the other tabs.

 This dashboard is a **read-only aggregate**; actual editing takes place in the following tabs.

03 Cost control: earned value

The **Cost control** tab (its heading “Cost monitoring” — “the assumed cost vs the actual for each product, recorded as the work is completed”). Here is the heart of financial monitoring: the earned value (EVM) cards, a cost table for each product, and the screen for recording the actuals.



Figure 3 — The six earned-value cards: the budget, the earned value (and its percentage), the actual, CPI, the forecast, and the variance at completion

How are they calculated?	BAC = the sum of the items' budgets (from Ch. 2 pricing). Item percentage = the executed quantity ÷ the planned (from Ch. 3 take-off). EV = $\sum$ (item percentage × its budget). AC = a single source per item (manual entry → warehouse issue → supplier invoice) with no double-counting. CPI = $EV \div AC$. EAC = $BAC \div CPI$. VAC = $BAC - EAC$ (positive = expected savings, negative = overrun).
A table per item	Opened from the earned-value card: BOQ item · budget · % complete · earned · actual · variance ($EV - AC$).
The products table	A row for each product under its task, each value assumed (A) above actual (B) : a Progress column (from the execution task), the quantity, the unit price, the supplier, and the cost, then the variance. A red border = over budget, green = within it. Expanding the row reveals: committed (purchase orders) · billed · warehouse issue · the quantity, price, and duration variances.
Recording the actual	for editors The pencil icon on the product opens a dialog: the actual quantity, the unit price and its currency (a warning when the currency differs from the project's currency), the supplier, the country of origin, the actual start and end dates, and notes. Table filters: All / Recorded / Over budget / Not recorded, and export to Excel and PDF.

 Because the completion percentage comes from the executed take-off (Ch. 3), recording your visits in the take-off updates the earned value here automatically — and your job remains to record the **actual cost** for each product.

04 Variations (change orders)

The **Variations** tab (its heading “Change orders”). Any change in the contract scope — an addition or a deletion — is recorded here as a change order, and only an approved one adjusts the **contract value** on which the payment certificates and the completion percentage are computed.

The top cards	Baseline sale price (from the baseline version frozen in Ch. 2) · the current computed sale price · approved change orders · adjusted contract value = the baseline sale price + the total sale price of the approved orders.
Change-order fields	An automatic sequential number per project · the title · the description · Δ cost · Δ sale price (a negative value means a deletion/reduction and appears in red) · the status · notes · who decided and when.
The cycle	Proposed → Approved or Rejected (and it can be reopened to “Proposed”). Only the approved enters the adjusted contract value.
Permissions	Adding, editing, approving, and rejecting are for editors (Owner/Admin/Manager); deletion is for Owner and Admin. There is no separate “approver role” — whoever has edit rights approves.

! **Important:** the adjusted contract value is the basis of the **completion percentage and the recognized revenue** in the payment certificates (the next section). Approving a change order raises the ceiling of what can be billed — so approve only after auditing the value.

05 Payment certificates and work in progress

The **Billing and work in progress** tab (its heading “Payment certificates and work in progress”). Here you bill the client for the value of what has been completed — by the percentage of completion (Egyptian Standard 48 / IFRS 15) — and you track work in progress and retentions.



Figure 4 — Calculating the payment certificate: the cumulative minus the previously approved = the current, then adding VAT and deducting the retention, taxes, and advance = the net due

Creating a payment certificate	Up to a period · the cumulative (pre-filled with the recognized revenue) · the retention rate (5% by default) · the advance payment deduction · VAT 14% · WHT (withholding tax) 1% · other deductions · notes.
The quality gate	The value of open non-conformances (NCRs) and blocking RFIs (from the technical office, Ch. 3) is excluded from the approvable amount, and an alert banner appears on the draft — so you don't bill work that is on hold for a quality defect.
Work in progress (WIP)	By Standard 48: recognized revenue = the adjusted contract value × (cost to date ÷ the total estimated cost). From it: over-/under-billing (billed – recognized), the margin (recognized – cost), and the retentions held by the client .
The cycle and closing	Draft → Submitted → Approved → Paid , with automatic accounting posting at approval (revenue) and payment (revenue + collection). The monthly period close freezes the figures, and the approved/paid is exported to the e-invoice (ETA) .

06 Retention and guarantees

Every payment certificate holds back a percentage (5% by default) as a guarantee of good performance. The system tracks these retentions in the **retentions register** (a tab inside the “Finance” module).

Two sides	Retention held by the client (a receivable/asset for you) from your payment certificates, and retention held from subcontractors (a liability on you) from their certificates — both from the automatically posted journal entries.
Aging and release	The register is shown by aging buckets (up to 90 / 180 / 365 / more) to highlight what's overdue. When a release falls due, a release transaction is recorded with an amount, a date, and a memo, and a reversing entry is posted. Remaining = retained – released .
Where do you see it?	On each payment certificate (the retention and net lines), in the work-in-progress summary (“retentions held by the client”), and in the retentions register in Finance.

07 Subcontractor payment certificates

The flip side of payment certificates: just as you bill the client, your **subcontractors** bill you with their certificates. You find them in the **Contracts** module (a Subcontracts add-on activated by the platform administrator) → open the subcontract agreement → the contractor's certificates section.

Fields	An automatic number · the date · the claimed amount · the retention · the claimed completion percentage. The net = claimed – retained. The agreement carries the retention rate, the late penalty and its cap, and the contracted value.
The cycle	Submitted → Audited → Approved → Paid / Rejected , with an accounting cost posting at approval and a payment at settlement.
The quality gate	Approval or payment is blocked when there is an open non-conformance or a blocking RFI against that contractor — the same link with the technical office.

 The accounting mirror: the client's certificate is **revenue**, and the subcontractor's certificate is **cost** — and both are posted automatically to the “Finance” ledgers.

08

Permissions on the financial screens — and the summary

Action	Owner	Admin	Manager	Viewer
Viewing the financial tabs (dashboard/control/variations/billing)	✓	✓	✓	✓
Cost control — recording the actual	✓	✓	✓	✗
Variations — add/edit/approve/reject	✓	✓	✓	✗
Variations — delete	✓	✓	✗	✗
Payment certificates — create/approve/pay/send ETA	✓	✓	✓	✗
Payment certificates — delete draft	✓	✓	✗	✗

The general rule: **editing** is for editors (Owner/Admin/Manager), and **deletion** is for Owner and Admin. The retentions register and the subcontractor certificates live in the “Finance” and “Contracts” modules; and approving/paying a subcontractor certificate is blocked by quality (a non-conformance or a blocking request).

 **Summary of Chapter 4:** the work completed (Ch. 3) raises the earned value in **cost control**, and **change** orders adjust the contract value, from which the **payment certificates** are issued to the client with the guarantee retention — and the **financial dashboard** gathers all of it into indicators and a single curve. The next step: closing the periods and the project, and full accounting in the “Finance” module — in a later chapter.

Chapter 5 — Finance: the accounting engine and closing the books

Everything you did in the previous chapters — payment certificates, supplier invoices, warehouse movements, payroll — is **posted here automatically** as double-entry journals. The “Finance” module is the general ledger, the reports, and the closing — you rarely enter a journal by hand.

Chapter 5 — Finance: the accounting engine, reports, periods & closeout

⚙️ The ledger is fed automatically

🌳 Chart of accounts and journals

📊 Financial reports

🔒 Periods and closing

01 Before we start

The **Finance** module is the **accounting engine** in BuildFlow: the general ledger, the journals, the reports, and the closing. You find it in the menu as “Finance” (the wallet icon) or at `/finance` — it is an **add-on** activated by the platform administrator.

✓ **The big idea:** the ledger is **fed automatically**. Everything you did in the previous chapters — a client payment certificate, a supplier invoice, a warehouse receipt and issue, a subcontractor certificate, payroll, rent — is posted here as a **double entry** with no intervention. Your role is mostly **setup, review, and closing**, not entering journals by hand.

How many tabs?

24 tabs in a horizontal bar, the default being **Payables**. They progress from setup (chart of accounts, opening balances) to operations (payables/receivables, journals) to reports and closing.

Who uses it?

A **management-oriented** module: Owner and Admin for everything, Manager for operations (invoices, journals, operational approvals). The policy and sensitive-data tabs (opening balances, bank reconciliation, provisions, audit...) are **for Owner and Admin only** (Section 08).

i Two accounting rules govern the module: (1) **a posted journal is not edited** — it is corrected with a **reversing** entry. (2) Every event is posted **once** and is reversed automatically when its document is reopened — so there is no duplication or repetition.

02 First-time accounting setup

Before automatic posting works smoothly, the accountant sets up the basics once — and most of it is ready or optional.

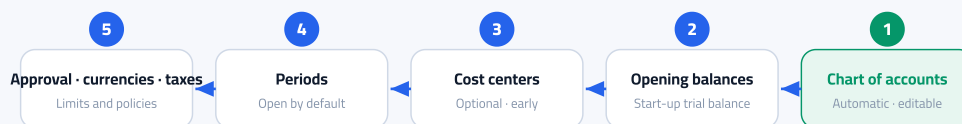


Figure 1 — The order of accounting setup: the chart (automatic) → opening balances → cost centers → periods → approval, currencies, and taxes

Chart of accounts		It is created automatically in the Egyptian format the first time you open the tab, and is fully editable (code · name · type · parent account). The accounts that carry a “ system key ” are the ones that receive the automatic postings — don't delete them; disable them when needed. An account that has movement cannot be deleted (only disabled).
Opening balances	for Owner and Admin	Enter the opening trial balance at the start-up date, and it is posted as a single journal; any difference goes to “opening-balances equity.” Re-entering reverses the old and posts the new.
Cost centers	for Owner and Admin	Define them early (code · name) to tag the journal and payroll lines with them, so the revenue/cost/net report appears for each center.
Periods and the rest of the policies		Periods are open by default and you close them month by month (Section 07). And configure the approval limits (journals and payments), the currency rates , the taxes , and the e-invoice as you need.

03 Automatic posting: the heart of the module

This is the most important concept in the chapter. Operational events in the other modules produce double-entry journals in the general ledger **automatically** — and from the ledger all the reports are built.

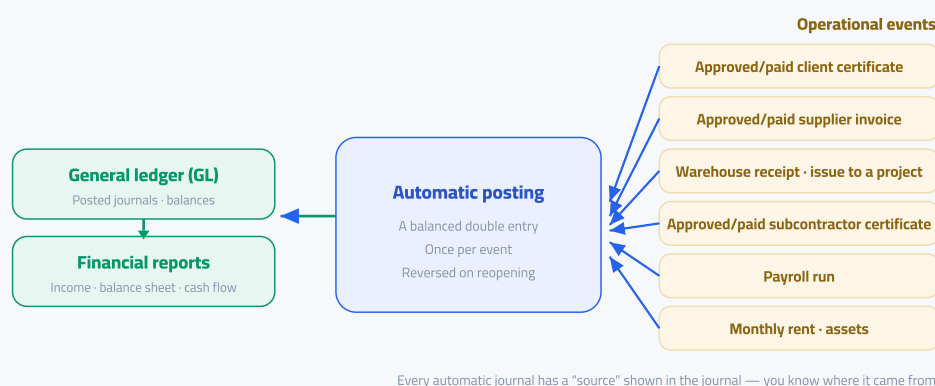


Figure 2 — Operational events pour into the automatic-posting engine, becoming journals in the general ledger from which all reports are built

The client certificate	At approval : contract revenue + receivables + retention debit + VAT payable. At payment : bank collection against the receivables.
The supplier invoice	At payment approval (after the three-way match): payables + input VAT. At payment : bank against the payables (with exchange differences if any).
The warehouse	Receipt (GRN): inventory against a receipt clearing account. Issue to a project : project material cost against inventory — and here the material cost enters the income statement, tagged with the project.
The subcontractor certificate · payroll · rent	An approved subcontractor certificate: subcontract cost + subcontract retention; and when paid: bank. Payroll: a payroll expense distributed across cost centers and projects against liabilities (social insurance/taxes/net). And the monthly rent and asset movements are posted likewise.

i Because every automatic journal carries its **source**, from “journal entries” you can trace any figure in the reports back to the event that created it.

04 Payables and receivables

Two daily operational tabs: **Payables** (what you owe suppliers) and **Receivables** (what clients owe you).

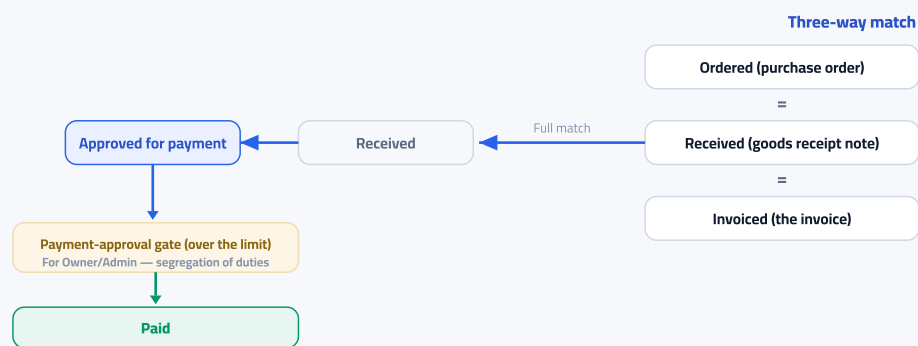


Figure 3 — The supplier invoice: no approval without a full three-way match (ordered = received = invoiced), then the payment-approval gate for Owner/Admin over the limit, then settlement

Payables	Invoices are created from purchase orders (procurement): choose the order, and its lines come in. Approval for payment requires a full three-way match , so the journal is posted and it becomes “approved for payment.” Columns: the invoice · the supplier · the purchase order · the date · the total · the status (received/approved/paid/canceled).
The payment-approval gate	When an invoice exceeds a defined limit , a “payment approval” action appears for Owner and Admin only ; others see “awaiting payment approval” — a segregation of duties that protects disbursement. The rule prevents payment before approval.
Receivables	Client claims from the approved payment certificates : “outstanding” = approved and not yet collected. The tab shows the billed, the collected, the outstanding, and the retention held by clients, with debt aging , a collection log , and an account statement — most of it read-only except recording collection actions.

05 Journals, accounts, and audit

Even with automatic posting, manual journals remain available for exceptional cases — governed by controls that protect the integrity of the books.

Journal entries	A double entry (debit = credit), and the rule enforces balance at posting. A posted entry is not editable — it is corrected with a reversing entry. The automatic journals also appear here, each with a badge of its source .
Approval and segregation of duties	Manual journals above a certain limit become drafts awaiting the approval of Owner/Admin before posting; others see “awaiting the approver.” (Like the payment-approval gate in Payables.)
Chart of accounts	Editing it is for editors: add/rename/enable. Don't delete a “system-key” account or an account with movement — just disable it.
Audit log	for Owner and Admin An immutable trail of the most important changes (journals, chart of accounts, supplier invoices): when · who · the record · the action · the change.

06 Financial reports

All the reports are built from the **posted journals only**. From the **Financial reports** tab you print the **income statement** and the **balance sheet** (with a check of the balance-sheet equation); the rest of the statements are in their own tabs.

Statement / report	Where to find it
Income statement and balance sheet	The “Financial reports” tab
Trial balance	The “Trial balance” tab
Cash flow statement · changes in equity	Exported from the reports tab
Cash-flow forecast (monthly 6 months · weekly 13 weeks · company or single project · with chart)	The “Cash-flow forecast” tab
Budget vs actual	The “Budget vs actual” tab
Project costing (estimate at completion · margin)	The “Project costing” tab
Project profitability from the ledger	Exported from the reports tab
VAT return and the tax register	The Taxes / e-invoice tabs

i Most of these reports are exported to **Excel and PDF**. And “Project costing” and “Budget vs actual” link the books to your projects: the actual cost of each project against its budget.

07 Periods and closing

The **Periods** tab closes the books and runs the monthly rent posting. And closing is at two levels — don't confuse them.

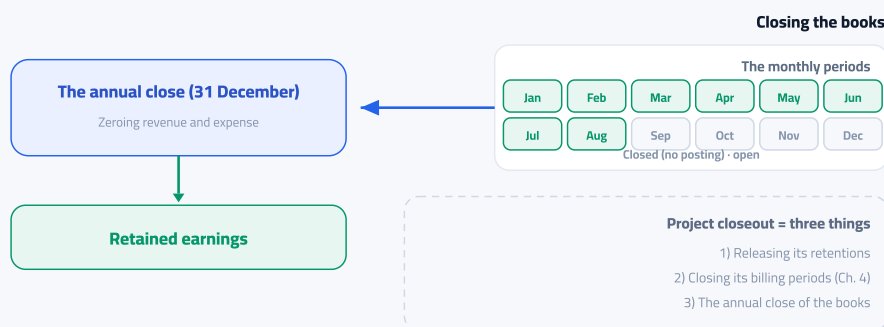


Figure 4 — Closing the months prevents posting in them, and the annual close zeroes revenue and expense to retained earnings; and project closeout is achieved by releasing the retentions and closing the billing periods

Closing the months	A twelve-month grid per year; closing a month makes the rule prevent any posting in it (and reopening is available to editors). From the same tab, the monthly rent posting for each active contract (and what's already posted is skipped).
The annual close	A journal dated 31 December zeroes the revenue and expense accounts to retained earnings , then all the months are closed. Undoing is by reversing the closing entry.
Two different levels of closing	Closing the accounting period (here) closes the books at the company level. Whereas closing the billing period (at the project level, from the billing module — Ch. 4) freezes the “work in progress” snapshot for that period. Don't confuse them.
Project closeout	There is no single “close project” button; it is achieved in practice by three: (1) releasing the project's retentions, (2) closing its billing periods, (3) the annual close of the books.

08 Permissions — and the summary

Action	Owner	Admin	Manager	Viewer
Viewing payables/receivables, journals, and reports (read)	✓	✓	✓	✓
Supplier invoices — create/approve/pay	✓	✓	✓	✗
Manual journals — create/post	✓	✓	✓	✗
Chart of accounts · periods · assets	✓	✓	✓	✗
Payment/journal approval over the limit · releasing retentions	✓	✓	✗	✗
The sensitive tabs (opening · bank · provisions · audit · custody · periodic · cost centers)	✓	✓	✗	✗

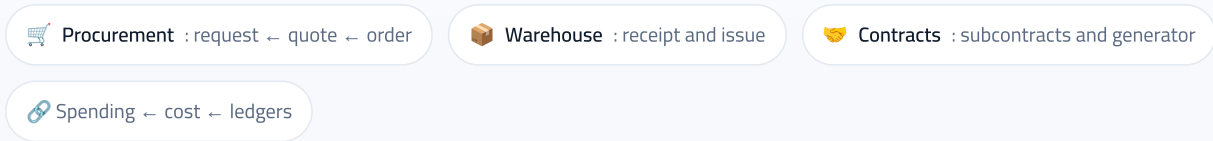
The rule: **operations** (invoices, journals, accounts, periods) are for editors (Owner/Admin/Manager); and the **sensitive approvals** (payment approval, journal approval, releasing retentions) and the **policy tabs** are for Owner and Admin only — a segregation of duties to protect the money and the books.

 **Summary of the book so far:** from **registration and the company** (Ch. 1), to **the library and pricing** (Ch. 2), to **execution and monitoring** (Ch. 3), to **money and payment certificates** (Ch. 4), to **the books and closing** (Ch. 5) — a full project cycle from the bid to closeout. The spending and support modules (procurement, warehouses, contracts, HR...) remain for later chapters.

Chapter Six — Spending: Procurement, Warehouse & Subcontracts

These are the modules that **spend** the money and produce the figures we saw in "Cost Control" and "Finance": you buy with purchase orders, receive and issue from the warehouse, and award works to subcontractors — all tied into a single loop.

Chapter 6 — Spending: procurement, warehouse & subcontracts



01 Before we start

In Chapters 4 and 5 we saw the cost and ledger figures. Here we see **where they come from**: three operational modules that **spend** the money — Procurement, Warehouse, and Contracts — all of which feed into "Cost Control" (Ch.4) and "Finance" (Ch.5).

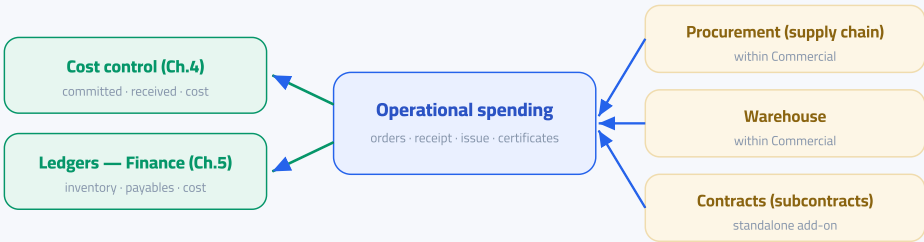


Figure 1 — The three spending modules: Procurement and Warehouse (within "Commercial") and Contracts (a standalone add-on), all feeding cost control and finance

i

Where do you find them? Procurement and Warehouse are **two tabs inside the "Commercial" module** ([Supply chain](#) and [Warehouse](#)) — the platform administrator enables them by turning on "Commercial". **Contracts**, however, is a standalone module (add-on) in the sidebar.

02 Procurement: the purchase cycle

The module is titled "Supply chain". The cycle begins with a purchase request, then a request for quotes, comparison and award, then a purchase order, then receipt.

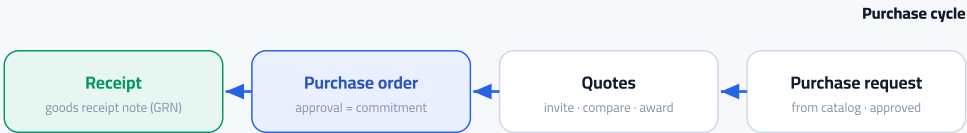


Figure 2 — The purchase cycle: purchase request ← quotes (compare and award) ← purchase order (approval = commitment) ← receipt

Module tabs	Nine tabs: Analytics · Purchase requests · Sourcing (quotes) · Purchase orders · Vendors (AVL) · Budget control · Supply tracking · Returns · Advance payments .
Purchase request (PR)	Request items from the catalog for a project and a need date; the system compares what's requested against the plan in the project and flags any overrun. After it is approved it can be converted into a purchase order. States: draft · approved · converted to purchase order · cancelled.
Inventory-aware purchase request (net required)	When raising the request, choose a Stock source warehouse (with the project) and enable Cover from stock on save ; the system then shows three figures for each item: available in the warehouse, issued from stock , and to be purchased . On save, the available portion is issued from stock automatically (with a financial entry) and the purchase request is created for the shortfall only — and if stock covers the full quantity, no purchase request is created at all. Example: 600 required and 400 available ← 400 issued and 200 purchased; 40 required and 60 available ← 40 issued with no purchase.
Quotes (RFQ)	Invite several vendors (approved ones on the list are highlighted), enter their offers, and compare the bids side by side (the lowest price per item is highlighted), then award — the award creates one purchase order per vendor at the offered prices. States: draft · sent · pricing in progress · awarded.

! **The sample gate (technical office):** you cannot award an RFQ or save a purchase order for materials that have no **approved sample** (review code A/B) in the technical office — message: "Approve its sample in the technical office first". (Services are exempt.)

03 The purchase order and three-way match

The purchase order is your commitment toward the vendor. From its page you track the "three-way match" that governs approval and invoicing.

Creation and approval	From scratch or by converting an approved request (or from a technical change): the vendor, currency, line items (item/quantity/price). The order is created in the Pending approval state; and approval records a commitment in "Budget control" (and cancellation releases it). States: pending approval · approved · partially received · received · cancelled.
Three-way match	On the order page, for each line item: ordered (from the order) · received (from the warehouse) · invoiced (from finance). The badge is "✓ matched / partial / pending". The vendor invoice is not approved for payment (Ch.5) except on a full match.
Price check and landed cost	A price indicator "✓ within ±5%" or a variance alert when the invoice differs from the order. And the landed cost (customs/freight/clearance) is added to the received unit cost later (per the inventory standard) — so the true cost appears.

i This is the same three-way match you saw in "Payables" in Chapter 5 — but here from the angle of the **purchase order**: Procurement produces the "ordered", the Warehouse produces the "received", and Finance produces the "invoiced".

04 Vendors and budget control

Two tabs govern the quality of spending: an approved vendor list, and a register that links purchase orders to the project budget.

Vendors (AVL)	Qualify vendors and maintain an approved vendor list and evaluate their performance (ISO 9001 style). For each vendor: a qualification grade, commercial data (registration/tax card/certificates/bank account), the committed spend against them, and exportable performance evaluations. Approval states: under review · approved · conditionally approved · suspended · rejected.
Budget control (commitments)	This is the bridge to "Cost control": for each project — budget · committed · received · invoiced · open commitment · uninvoiced (GR-IR) · available . The rule: committed = approved purchase orders; open commitment = committed – received; uninvoiced = received – invoiced; available = budget – committed.
Supply tracking · returns · advance payments	Supply tracking : expected vs received for each open order (overdue/on time). Returns : a return to the vendor (debit note) that reduces stock. Advance payments : an advance to the vendor settled later from its dues — and both post to finance automatically.

05 Warehouse: receipt and issue

The "Warehouse" module is a single page with four sections: the warehouses, orders awaiting receipt, the balance and inventory value, and the log of receipts and consultant inspection.

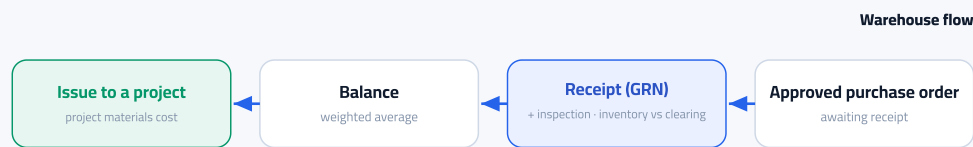


Figure 3 — Warehouse flow: approved order ← receipt (GRN and inspection) ← the balance (at weighted average) ← issue to a project (materials cost)

Receipt (goods receipt note / GRN)	From "Orders awaiting receipt" press "Receive": choose the receiving warehouse and the quantities of each item (not exceeding the remainder). A goods receipt note is created, and the stock enters at unit cost + landed cost. Consultant inspection: pending/approved/rejected — and rejected stock is excluded from inventory . Accounting-wise: inventory against a receipt clearing account.
Issue to a project	From the balance row choose "Issue to a project" and a quantity — so the actual cost (at weighted average) is charged to the project. Accounting-wise: project materials cost against inventory — and here is where the materials cost actually enters the project.
Transfer and valuation	Transfer between warehouses moves the quantity with no accounting impact. And valuation is by the weighted average method (average cost). Warehouses are of two kinds: central and site warehouse (linked to a project).
Reorder level and alerts	Each item has a minimum (reorder point) set from the editable Reorder level column in the balance table. When the balance falls to the level or below, the item appears in the Reorder alerts section with the amount of the shortfall and a Low badge. Issuing is always allowed (never blocked), but it highlights the item to replenish via a purchase request — and it integrates with the "inventory-aware request" above.

i Quantities change through receipt, issue, transfer (and returns). There is not yet a standalone **stocktake** tab, but each item now has a **reorder level** with **alerts** when the balance drops (above).

06 Contracts: subcontracts and the generator

The **Contracts** module (a standalone add-on) has two tabs: **Subcontractor agreements** and **Owner and main-contractor contracts** (the contract generator).

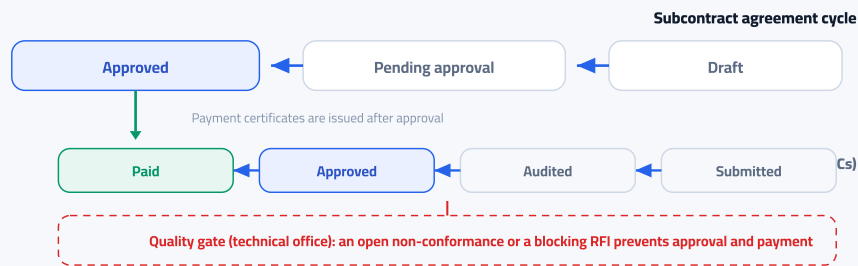


Figure 4 — The subcontract agreement: draft ← pending approval ← approved, then the payment certificates are issued (submitted ← audited ← approved ← paid) — with approval/payment blocked by the quality gate

Subcontractor agreement	Create an agreement: the contractor (a party from your ledger), the project, currency, scope of work, the offered amount and the budget, the retention percentage , and the delay penalty %/day and its cap . The cycle: draft · pending approval · approved · cancelled.
Payment certificates and the quality gate	From the agreement page you issue contractor payment certificates (their calculation is in Chapter 4). Their cycle: submitted · audited · approved · paid · rejected. And approval or payment is blocked by an open non-conformance (NCR) or a blocking request for information (RFI) against the contractor. Approval posts the subcontract cost and retention to the ledgers automatically (Ch.5).
Contract generator owner and admin only	"Owner and main-contractor contracts": fill in the contract variables once (FIDIC 2017 style), choose the embedded documents and signatures, and a bilingual sealed PDF file is issued with a verification page. Document generation only — not tied to cost or the ledgers.

07 The spending ← cost ← ledgers loop

Every operational spending action produces a figure in "Cost control" (Ch.4) and an entry in "Finance" (Ch.5). This table ties the whole loop together.

Action (Chapter 6)	In cost control (Ch.4)	In the ledgers (Ch.5)
Approving the purchase order	Records the "committed"	Commitment register (no entry)
Receipt (GRN)	Fills the "received" · open commitment = committed – received	Inventory against receipt clearing
Issue to a project	Actual materials cost on the project	Project materials cost against inventory
Vendor invoice (three-way matched)	Fills the "invoiced" · GR-IR = received – invoiced	Payables + input VAT
Subcontract certificate (approved)	Subcontract cost on the project	Subcontract cost + retention + payables

✓ In short: **Procurement** produces the commitment, the **Warehouse** turns it into inventory then project cost, and **invoices and subcontract certificates** turn it into payables and cost — all tied together by a **three-way match** (ordered = received = invoiced) and a ±5% price check. So this chapter is the **source** of the figures you read in Chapters 4 and 5.

08 Permissions — and the summary

Action	Owner	Admin	Manager	Viewer
View procurement/warehouse/contracts (read)	✓	✓	✓	✓
Purchase requests/orders · award · vendors	✓	✓	✓	✗
Receipt, issue and transfer in the warehouse	✓	✓	✓	✗
Subcontract agreements · approving their certificates	✓	✓	✓	✗
Contract generator (owner/main contractor)	✓	✓	✗	✗

The rule: **operations** (purchasing, receiving, issuing, agreements) are for editors (owner/admin/manager), and the viewer only reads. And the **contract generator** is for the owner and admin alone. And remember the two quality gates: **approved samples** are a condition for the purchase order, and **non-conformances/blocking requests** prevent payment of a subcontract certificate.

✓ **Chapter Six summary:** we have now seen the **source** of spending: Procurement (request ← quote ← order), the Warehouse (receipt ← balance ← issue), and Contracts (agreement ← certificate). And together with the five preceding chapters, the project cycle is complete — from registration, pricing and execution to money, ledgers and spending. The support modules (HR & payroll, technical office, rentals, governance) remain for later chapters.

Chapter Seven — The Technical Office: Document Control, Quality and the Gates

The technical office controls your **engineering documents** (ISO 19650) and **execution quality** — and it is the engine behind the "gates" you met in Chapters 4 and 6: the approved sample opens purchasing, and a non-conformance holds back the payment certificate.

Chapter 7 — Technical Office: document control, quality & the gates

 Document control (ISO 19650)

 Submittals and inspection

 Non-conformance (NCR)

 Quality gates over the money

01 Before we start

The **Technical office** module is responsible for two things: **controlling engineering documents** (on the ISO 19650 standard) and **execution quality**. And it is the engine behind the "gates" you met earlier — the approved sample is a condition for purchasing (Ch.6), and a non-conformance holds back the payment certificate (Ch.4).

 An **add-on** enabled by the platform administrator (the link `/technical-office`, the "Technical office" menu). It has **11 registers** (tabs), the default being "Overview". Editing is for editors (owner/admin/manager), and the viewer only reads.

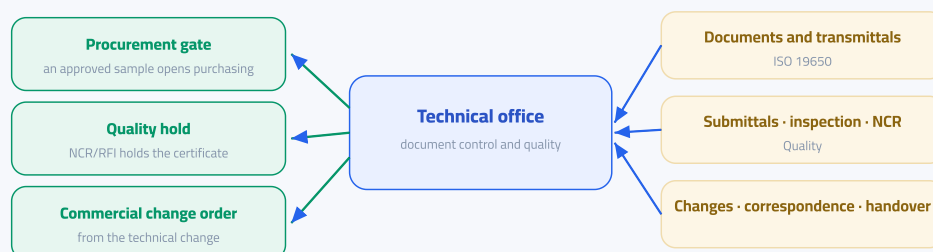


Figure 1 — The technical office registers (documents, quality and changes) feed into three gates: opening procurement, holding quality on payment certificates, and generating the change order

 Each register is attributed to a project (optionally) and may be linked to a document or a **catalog material** or a **subcontractor** — and it is precisely these links that drive the gates (Section 6).

02 The document register and transmittals

The foundation of the module: a document library controlled by its revisions, and a numbered distribution register that links them to whom they were sent.

Document register	The drawings and documents under control, with their revisions. For each document: number · title · discipline · type (drawing/specification/calculations/report/BIM model...) · suitability code (ISO 19650: from S0 "work in progress" to A1 "approved-published") · CDE status (work in progress / shared / published / archived) · review status. The New revision button creates a new current copy, serialises it above the previous one, and archives the old one automatically. And the Current revisions only toggle hides the superseded ones.
Transmittals	Numbered issue/distribution records (TR-...) that link document revisions to one another: the subject, the recipient, the purpose (for approval/for review/for information/for construction/for records), the method, and the status (draft/issued/receipt confirmed) — with a PDF cover sheet ready to send.

03 Technical submittals

The **Technical submittals** tab: material submittals and shop drawings with the consultant's review cycle and return codes — and it is the core on which the procurement gate depends.

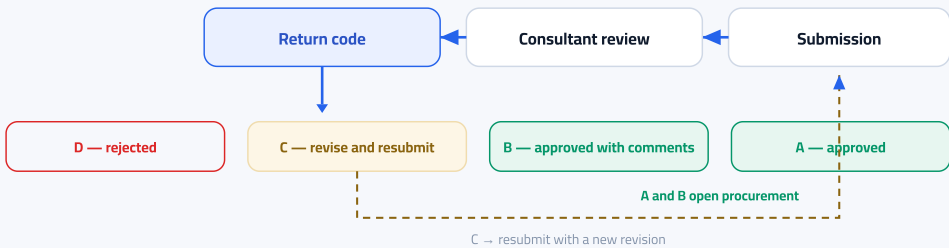


Figure 2 — The submittal cycle: submission ← consultant review ← return code; A/B approved (opens procurement), C revise and resubmit, D rejected

Types and fields	Types: material submittal / shop drawing / sample / method statement / prototype. Each submittal has an automatic number (SUB-...), a specification item, a linked document, a linked catalog material , the contractor and consultant, submission/required/return dates, and the return code.
Return codes	A approved · B approved with comments · C revise and resubmit · D rejected · (under review). Only A and B count as "approved" and open the purchasing of that material (Section 6). The Resubmit button opens a new revision and closes the previous one.
The critical link	Linking the submittal to the catalog material is the key by which procurement recognises "does this material have an approved sample?". Without the link, the gate does not open.

04 Requests for information and inspection

Two daily registers: technical queries directed to design/the consultant, and inspection requests for works and materials.

Requests for information (RFI)	A technical query with an automatic number (RFI-...), a priority and a cost/time impact. The cycle: Open → Answered → Closed (and void). The "stops work / holds the payment" option reveals the subcontractor and held amount fields — so the value of the works concerned is held in the client's payment certificate and payment of the subcontract certificate is prevented, and the hold is lifted as soon as it is answered/closed (Section 6).
Inspection requests (IR/WIR)	A request to inspect works or materials with an automatic number (IR-...): the type, the location, the work reference / bill of quantities item (text), the inspector/consultant, and the result (approved / approved with comments / rejected / pending), and the status (requested/scheduled/inspected/closed). A non-conformance report can be linked to an inspection.

i The bill-of-quantities item reference in the inspection request is **free text** (no structural link to the item) — for attribution and documentation.

05 Non-conformance (NCR)

The **Non-conformance** tab: NCR reports on the ISO 9001 style to record deviations, determine the disposition and close them — and they are the quality gate with the strongest impact on the money.

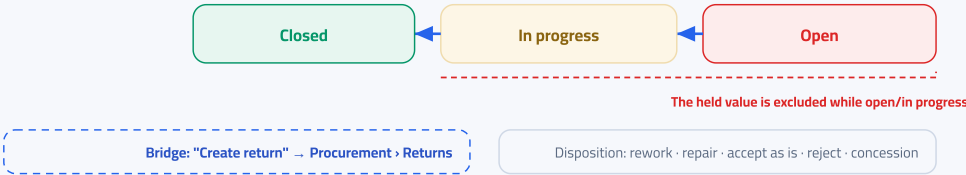


Figure 3 — The NCR cycle: open → in progress → closed; the held value is excluded until closure, the disposition is documented, and a material return is created toward procurement

Fields and cycle	An automatic number (NCR-...), a severity (minor/major/critical), a source (inspection/audit/the client/internal), a description, the disposition (rework/repair/accept as is/reject/concession), a root cause and a corrective/preventive action, and a responsible party and a due date. The cycle: Open → In progress → Closed .
The held value	The subcontractor and held value fields: as long as the NCR is open or in progress, this value is excluded from the client's payment certificate and payment of the subcontract certificate is prevented (Section 6).
The material return bridge	A "Material return" section: you specify the source purchase order, the material and the rejected quantity, and the Create return button creates a vendor return (draft) that you post from Procurement > Returns (Ch.6).

06 The gates: how the technical office protects the money

Here is the module's great value: its registers are not documentation only, but **binding controls** over procurement and payment certificates.

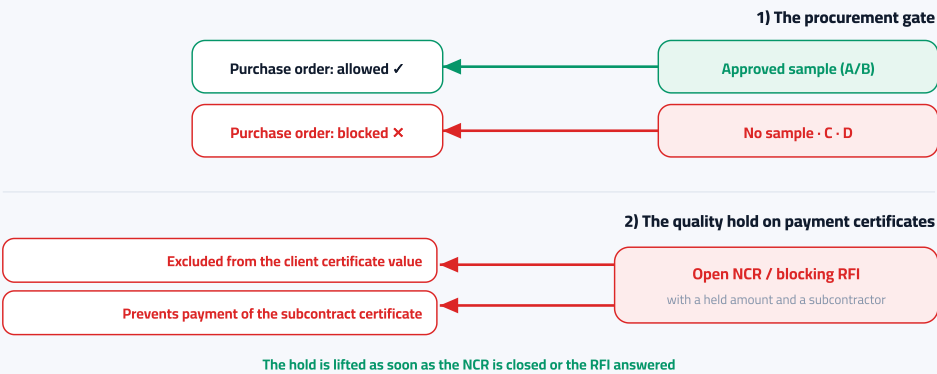


Figure 4 — Two gates: the approved sample (A/B) is a condition for the purchase order, and a non-conformance/blocking request holds a value from the client's payment certificate and prevents payment of the subcontract certificate until closure/answer

The procurement gate	When awarding a request for quotes or saving a purchase order, material line items that do not have an approved sample (code A or B) linked to the catalog material are not accepted — and hints appear on the line item: ✓ Sample approved (code ...) or ⚠ No approved sample . Services and items without a catalog are exempt.
The quality hold on payment certificates	The value of any open NCR or blocking RFI (with a held amount) is excluded from the approved amount in the client's payment certificate — with a "quality hold" tag — and approval/payment of the subcontract certificate against that contractor is prevented. And the hold is lifted automatically as soon as the NCR is closed or the RFI is answered/closed.

07 Technical changes, correspondence and handover

Three registers complete the project cycle: the engineering change that feeds the commercial side, correspondence tracking, and the final handover file.

Technical changes	An engineering change (design/site instruction/value engineering...) with a cost, sale and time impact. The Create commercial change order button generates a variation order (VO) in the commercial module and links it — so after its approval the adjusted contract value and revenue enter (Ch.4). (Requires specifying a project.)
Correspondence	Incoming/outgoing with an automatic number (LTR-...), with tracking of "whose court the ball is in" (us/them/closed) and reply dates — to manage your claims and notices with the parties.
Method statements and handover	Method statements: work procedures with a risk level and approval. And handover: the project closeout list (As-built drawings, operation and maintenance manuals, warranties, certificates) with a status and completion percentage and a PDF file.

08

Permissions — and the summary

Action	Owner	Admin	Manager	Viewer
View the eleven registers (read)	✓	✓	✓	✓
Documents and transmittals — create/new revision	✓	✓	✓	✗
Submittals/RFI/inspection/NCR — create, review and close	✓	✓	✓	✗
The bridges — change order · material return	✓	✓	✓	✗

All registers are **for editors** (owner/admin/manager) in creation, review and closure, and the viewer only reads. Note: "the consultant/inspector" in the forms is a **text field**, not a binding role within the system — so the return code, the inspection result and the closure of the NCR are set by any editor.

✓

Chapter Seven summary: the technical office links **quality to the money**: the approved sample opens purchasing, a non-conformance/blocking request holds the payment certificate until closure, and the technical change generates the commercial order — on top of full document control (ISO 19650) and a handover file that closes the project. The support modules (HR & payroll, rentals, governance) remain for later chapters.

Chapter Eight — HR & Payroll: from Employee to Payslip to Journal Entry

The **Human Resources** module manages the full employee lifecycle: from opening their file and contract, through their leave and advances, all the way to the monthly **payroll run** that posts automatically to the general ledger and distributes labour cost across your projects — with the same logic you saw in Finance (Ch.5) and cost tracking (Ch.4).

Chapter 8 — Human Resources & Payroll: from employee to payslip to journal



Two models of employee data



Payroll runs



Automatic posting to the general ledger



Leave and advances

01 Before we start

The **Human Resources** module manages the employee lifecycle: opening their file and contract, then their leave and advances, all the way to the monthly **payroll run** that turns wages into **accounting entries** in the general ledger and distributes their cost across your projects.



An **add-on** enabled by the platform administrator (the link `/hr-hub`, the "Human Resources" menu). The hub has multiple tabs, and **Payroll, Leave and HR analytics** appear **for the owner and admin only**; whereas the simplified directory is seen by everyone.

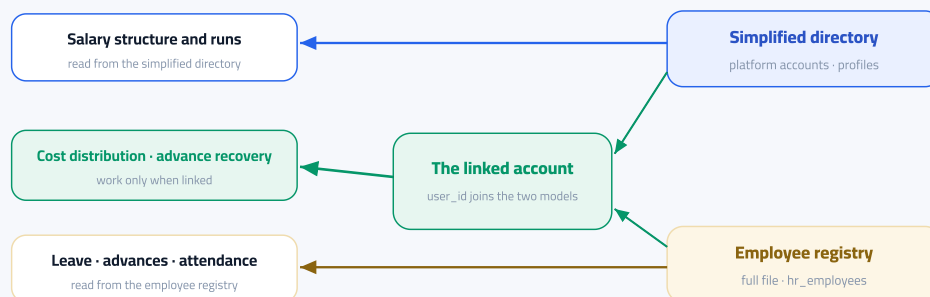


Figure 1 — The two employee data models: the simplified directory (feeds payroll) and the employee registry (feeds leave, advances and attendance), and they meet only through "the linked account"



The most important thing to know from the start: "the employee" in BuildFlow is stored in **two separate places** (Section 2). Adding a person in one of them does **not** automatically include them in the other.

02

Employees: two data models

Before any action, understand that "the employee" is stored in two different places for two different purposes — and this explains why the person you entered here does not appear there.

Simplified directory <code>profiles</code> Built on platform accounts (organization members). Its fields: name · mobile · job title · photo · an "employee" flag. The salary structures and runs are built on it. Access: the "Human Resources" menu ← the <code>Employees</code> tab.	Employee registry <code>hr_employees</code> A full HR file (identity · contract · bank · insurance · department...). The leave, advances and attendance and cost distribution are built on it. Access: the <code>My profile</code> page ← the <code>Employees</code> tab (for owner/admin).
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! **The critical bridge:** the two models meet only when you set, in the employee registry, the **"linked account" (user_id)** field. Only then does it work: **distributing their salary cost across projects**, and **automatically deducting their advance** from the run. Without linking: the advance is recovered manually, and their salary cost goes to a general overhead.

03

Employee files and contracts

The `Employee registry` tab (the "My profile" page ← Employees) is the employee's full file, with sub-tabs: Profile · Employment · Distribution · Contracts · Documents · Evaluation.

Employee registry	The only mandatory field is the full name . It includes: employee number, national ID, nationality and its type (citizen/expatriate) , date of birth and marital status, contact and emergency contact, hire date, department/job title/specialty/ cost center /direct manager, employment type (full-time/part-time/temporary/contractor), contract type (permanent/fixed-term/seasonal), status (active / on leave / suspended / terminated), jurisdiction (Egypt/Saudi Arabia/UAE/Qatar/Oman), bank details (name/account/IBAN), and insurance. A "link member" button fills the fields from an existing platform account.
Contracts	Reference, type, start/end/probation period, basic salary, allowances and annual leave days , working hours, notice period, status, signing date, and a PDF file.
Documents	National ID/contract/certificate/work permit/medical/other, issue and expiry dates, and uploading a file or pasting a link. And the "Compliance and alerts" tab tracks documents nearing expiry.
Departments	A department tree (code/name/parent department/cost center) in the <code>Departments</code> tab — it organizes employees and links their cost to its centers.

! **The contract salary is separate from the salary-structure salary.** The leave provision is calculated from the **contract** salary, whereas the run is calculated from the **salary structure** (Section 4). There is no consistency check between them — so make sure the two figures agree.

04 Payroll: the structure and the runs

The **Payroll** tab (confidential — for owner/admin). Four sub-tabs: **salary structure** · **monthly runs** · **advances and loans** · **settings**.



Figure 2 — The run cycle: preview ← draft ← posted (accrual in the ledger) ← paid; and the per-employee calculation engine, differing between Egypt and the Gulf

Salary structure	For each member: a monthly basic salary + allowances + (optional) an insurance salary. It is built on the simplified directory (platform members).
Monthly runs	One run per month (YYYY-MM format, non-repeating). Its cycle: Preview ← Create draft ← Post to the general ledger (posted) ← Post net pay (paid). Only the draft can be deleted. The run lines are a snapshot at the time of creation — changing the structure afterward does not update an existing draft.
The calculation engine	Gross = basic + allowances. Egypt (default): social insurance (with a minimum/maximum) for the employee's and employer's shares, and a progressive income tax after the personal exemption. The Gulf: social insurance (GOSI) by nationality type and no income tax .
Slips and settings	A payroll PDF report for the whole run, and a PDF payslip for each employee. And the Settings tab determines the jurisdiction ("load a ready preset"), the insurance rates and their limits, the personal exemption, and the tax brackets.

! The run **does not calculate attendance**: it is a fixed monthly salary engine — **no** hourly/daily wage, no overtime, no bonuses or penalties, and no manual adjustment of the lines. The only variable deduction is the advance instalment.

! The default statutory rates are **provisional** — review them in "Settings" before the first run. And after **posting**, the run cannot be **reversed** from the screen (only the draft can be deleted); any later correction is done from the finance module.

05 Advances and loans

The **Advances and loans** tab: granting an advance to the employee and recovering it in automatic monthly instalments from the run — provided the link exists.

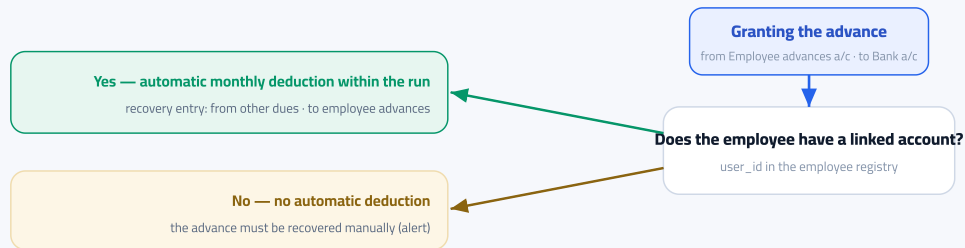


Figure 3 — The advance cycle: the grant is entered from "employee advances" to "the bank", then recovery is automatic monthly **when a linked account exists** — otherwise manually

Granting the advance	The advance amount and the number of instalments. The entry: from employee advances a/c, to the bank a/c. Status: Outstanding / Settled / Cancelled .
The monthly deduction	The advance instalment is added automatically within "other deductions" in the employee's run, and upon posting a recovery entry is recorded: from other dues a/c, to employee advances a/c.
The linking condition	Automatic deduction works only if the employee record has a linked account. Otherwise the advance is recovered manually and the system alerts to this (Section 2).

06 Time and leave

The **Time and leave** tab (confidential — for owner/admin). Four tabs: **leave requests** · **balances** · **leave types** · **leave provision**.

Leave types	A code and name and an annual quota and paid/unpaid and "affects the provision" and a color. Ready-made: annual (21) · sick · casual (7) · unpaid · maternity.
Requests	The employee and the type and the duration and automatic day count (editable) and the reason and the status (pending / approved / rejected / cancelled), with an approval/rejection that records who approved and when .
Balances	The quota minus the approved days for each employee/type/year. And in the Gulf, annual leave increases with length of service .
Leave provision	It calculates the provision due for unused leave (IAS-19 style) at a daily wage (basic ÷ 30) and posts it to the ledger: from leave expense a/c, to leave provision a/c.

i The request is **entered by the admin on behalf** — and the default status is "approved"; there is no self-service submission path from the employee. And the day count includes holidays and weekends (approximate).

07 Attendance and labour cost distribution

Two things complete the picture: **attendance** — which sits outside the payroll module — and **labour cost distribution** across your projects.

Attendance	It sits under Site logistics (the link <code>/site-logistics</code> ← the attendance tab), not under payroll. A daily row for each employee (date · project · zone · in/out · status · hours · notes), with bulk generation for site employees. It has no financial impact and does not feed the run — an operational record only.
Labour cost distribution	In the employee file, the Distribution tab: you set the distribution percentages of their salary across projects, so the payroll expense is split upon posting across cost centers and projects (and the remainder is a general overhead). This is what shows labour cost in the project reports (Ch.4).

! Cost distribution (and recovery) requires the employee to have a **linked account**; otherwise their salary goes to a general overhead without distribution across projects.

i Site logistics also posts **housing rent** and **transport/mobilization** (distributed across cost centers) — but attendance is never posted.

08 Posting — and permissions — and the summary

How does the employee reach an accounting entry? Upon posting the run the accrual entry is created, and upon disbursing the payment the payment entry is created — both automatic and non-repeating.

The payment entry (upon disbursement)		The accrual entry (upon posting)	
debit	Salaries payable	debit	Payroll expense (gross + employer insurance)
credit	The bank (net)	credit	Insurance payable
		credit	Payroll tax payable
		credit	Salaries payable (net)
		credit	Other dues (advance instalment)
One entry per run · non-reversible from the screen Correction from the finance module when needed		Payroll expense distributed across cost centers and projects	

Figure 4 — The two automatic payroll entries: the accrual (distributed across the centers and projects) upon posting, and the payment from the bank upon disbursing the net

Action	Owner	Admin	Manager	Viewer
Simplified directory (employees) — view	✓	✓	✓	✓
Simplified directory — edit/remove	✓	✓	✗	✗
Employee registry · contracts · documents	✓	✓	✗	✗
Payroll (structure · runs · advances · settings)	✓	✓	✗	✗
Time and leave	✓	✓	✗	✗

Payroll, the employee registry and leave are **confidential** — for the owner and admin only; the manager and viewer do not see them. The simplified directory is seen by everyone and edited by the owner/admin. And the whole module requires enabling the "Human Resources" add-on. There is no standalone role called "HR employee" — the permission is via the general owner/admin roles.



Chapter Eight summary: Human Resources runs from the **employee** (two models joined by "the linked account") to the **contract**, then **leave and advances**, all the way to the **payroll run** that posts automatically to the general ledger distributed across your projects. Remember the limits: the run is a fixed monthly one that does not read attendance, the rates are provisional and reviewed, and the posting is not reversed from the screen. The two support modules (rentals, and governance) remain for later chapters.



User manual of **BuildFlow 1.0**

Bilingual (Arabic/English) · RTL & LTR · dark mode

Chapter Nine - Rentals: property and equipment contracts, their inspections, deposits and billing

The **Rentals** module manages the properties your organization **leases** — apartments to house staff and warehouses to store materials — from the landlord contract and deposit, through the signed inspections, all the way to the monthly rent that is posted from **Finance** (Ch. 5). It is **not** the "labor housing" in site logistics.

Chapter 9 — Rentals: leased-property contracts, inspections & deposits

property lease contracts

signed inspections

deposits and their settlement

monthly rent from Finance

01 Before we start

The **Rentals** module is dedicated to the properties your organization **leases** from landlords (the organization is the "tenant") — usually **apartments to house staff** and **warehouses to store materials**. It manages the contract, the landlord, the deposit and the inspections, and it feeds the monthly rent posting in Finance.

i An **add-on** enabled by the platform administrator for each organization separately (the link `/rentals`, the "Rentals" menu). It has **8 tabs**: Dashboard · Lease contracts · **Equipment** · Inspections · Purchase orders · Reports and outputs · Alerts · Master data.

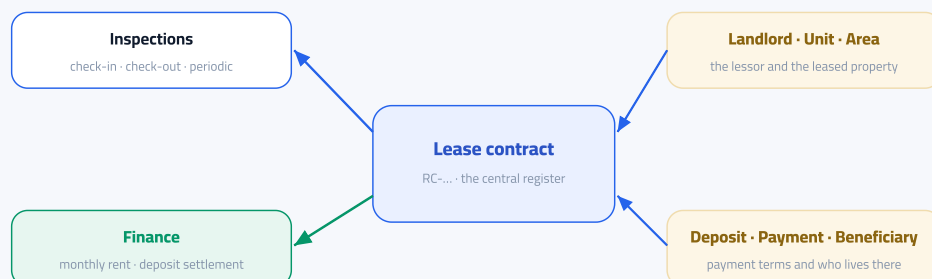


Figure 1 — The lease contract at the heart: it receives the landlord, the unit and the deposit, and it feeds the inspections and the monthly-rent posting / deposit settlement in Finance

! **Two important notes:** (1) The module manages **properties and equipment**; property rental here is **leasing in** (the organization is the tenant), whereas **equipment** goes both ways — renting out to others and hiring in for projects (Section 7). (2) This "property rental" is **entirely separate** from "labor housing" in [Site logistics](#) ; two different screens and two different accounting accounts — do not confuse them.

02 The lease contract: the heart

Everything in the module revolves around the [lease contract](#) ("Lease contracts" tab → [New contract](#)). Each contract has an automatic number (RC-...), and its fields are grouped:

Unit and location	The area, unit address (required), description, building/floor/unit number, and unit type : Residential / Warehouse / Other . The contract can be linked to a project (optional — classification/filtering, see Section 6).
Landlord, term and money	The landlord (lessor), start and end dates (end after start), the term description and number of months (suggested from the dates), the monthly cost and the total value of the contract.
The deposit	The deposit amount paid and its status: fully paid / refunded / partially refunded / undefined / forfeited , and the refund amount and date (set later at settlement — Section 5).
Disbursement (how rent is paid)	Payment day (free text), the frequency : monthly / semi-monthly / every few months, and the method : transfer to landlord / petty cash / transfer to the agent / cash (with "petty cash" the custodian's name is required).
Occupancy and status	The number of rooms, beds and occupants (and the cost per person is computed live without being stored). And the status: active / pending renewal / expired / cancelled by decision / vacant — and "cancelled by decision" requires the cancellation reason and who decided it .

! The status is entirely **manual**: a contract that has expired by its date does not automatically become "expired" — it stays as you set it and only appears in the alerts/reports lists (Section 7). There is no independent renewal/early-termination cycle; renewal = editing the dates or the status. And "cancellation" is a soft delete (no permanent delete from the screen).

03 Master data

The [Master data](#) tab gathers the lists the contract is built on, in four sections:

Areas	An internal classification of locations (name + enabled), and areas can be linked to projects for reporting purposes.
Landlords	The lessor as a full entity: the name, national ID, whether there is an agent (with their name and national ID), and a list of phones . (Its counterpart is the "landlord statement of account" in the reports.)
Beneficiaries	The party the unit serves: a job category or a specific person — and the contract is linked to one or more beneficiaries.
Inspection templates	Ready-made checklists (sections and items) for residential units and warehouses, used during inspection and edited here.



Classified files are attached to the contract (a copy of the contract · proof of ownership/power of attorney · **civil defense license** · **insurance policy** · inspection report · other) with an expiry date — and the two critical documents are tracked in the alerts.

04 Inspections: check-in and check-out

The **Inspections** tab documents the unit's condition with photos, meter readings and an assessment, in three types: **check-in** and **check-out** and **periodic** (for warehouses).

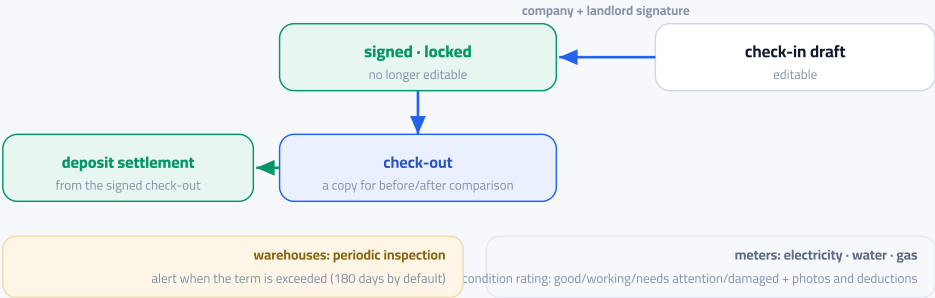


Figure 2 — The inspection cycle: draft ← signed (locked) after both parties sign; the check-out is copied from the check-in for comparison, then the deposit settlement is applied — with the meters, the condition rating and the periodic one for warehouses

The types	Check-in when entering the unit, check-out when leaving it, and periodic for monitoring warehouses. Each inspection is on an inspection template with rated items (good/working/needs attention/damaged), photos and a deduction amount , with meter readings (electricity/water/gas) and consumption calculation.
The cycle and the lock	The inspection is a draft until the company and landlord signatures are captured, then it becomes signed and is permanently locked (neither it nor its items can be edited). The Create check-out button clones a signed check-in (with its items and meters) for a "before/after" comparison.
The periodic one and exceeding the term	Warehouses have a periodic inspection; and the alert highlights the warehouses whose last inspection has exceeded the set term (180 days by default, editable).

05 The deposit and its settlement

When leaving the unit, the **security deposit** is settled starting from a **signed check-out**: the refunded and deducted amounts are determined, a journal entry is created, and the deposit status on the contract is updated.

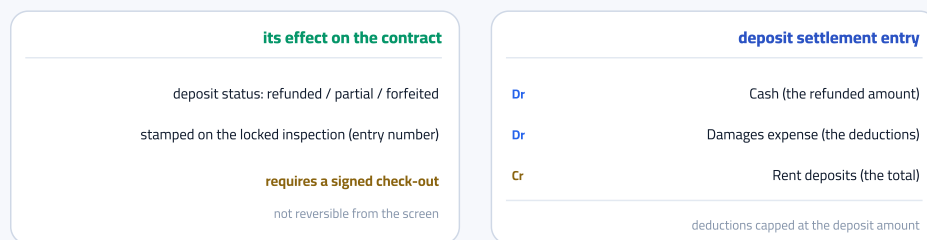


Figure 3 — The deposit settlement: an entry that debits the refunded amount to Cash and the deductions as a damages expense against Rent deposits, and updates the deposit status and stamps it on the locked inspection

When and where	From the inspection page on a signed check-out only, with the apply-settlement button — then the deposit fields on the contract are updated, the entry is created, and its number is stamped on the inspection.
The entry	From Cash (the refunded) + from Damages expense (the deductions, capped at the deposit), to Rent deposits (the total of the deposit).

! The settlement is **one-directional and is not reversed from the screen**, and the signed inspection is a locked legal record. Furthermore, the settlement **requires Finance permission** — the Rentals editor alone cannot post it.

06 Monthly billing: where rents are posted

There is no "invoice" in the Rentals module, and no posting button inside it. The monthly rent is posted from **Finance** (the general-ledger periods screen) — and Rentals only feeds it with the contracts.

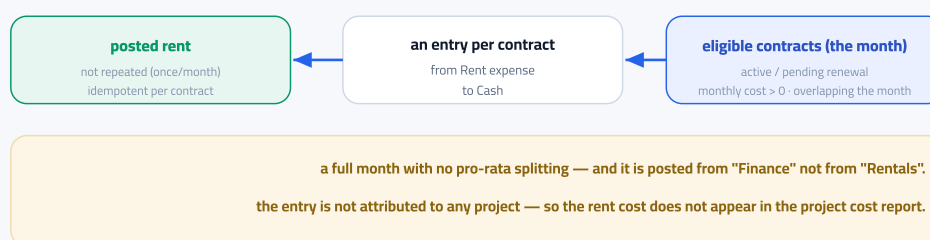


Figure 4 — The monthly rent: Finance picks the month, so for each eligible contract a "Rent expense ← Cash" entry is created once — a full month with no splitting, and without attributing it to any project

Who posts and when	The accountant, from Finance ← general-ledger periods : previews the rent for the month then posts it. The posting is not repeated for the same month and the same contract (protected by design).
Which contracts are posted	Contracts that are " active " or " pending renewal " with a monthly cost greater than zero, and whose term overlaps the selected month — a full month per contract with no pro-rata splitting .

 Linking the contract to a project is **only a tag for filtering and reporting within Rentals**: the monthly rent entry and the deposit settlement **do not carry the project number**, so the rent cost does not enter the project cost report, and there is no link to a quantity item.

07 Equipment rental

In addition to properties, the module manages **construction equipment rental** — heavy or light — in **two directions**, and links its billing directly to the general ledger. You find it under **Rentals** ← the "**Equipment**" tab (two sections: "Equipment" and "Rental contracts").

The two directions	Renting out to others (you rent your equipment to a client ← revenue) or hiring in for your projects (you hire from a vendor ← cost). The direction determines the accounting entry.
The equipment register	Each item's data: the category (heavy/light), make, model and plate/serial number, the hour meter, the default rates (per hour/day/week/month), and the status (available/rented/maintenance/withdrawn).
The billing basis	Each contract has a basis: per hour · per shift · per day · per week · per month , and a unit price. With additional components: an operator (at a unit rate), fuel (within the price / billed at actual / excluded), mobilization (Mobilization — one-time), insurance, and VAT.
The usage log (the meter)	For per-hour/shift/day contracts: usage readings are recorded (a quantity, or an opening/closing meter that computes the quantity automatically, and fuel liters). And billing can be filled from the un-billed usage , and is tagged as "billed" so it is not counted twice.
Billing and accounting posting	You create a "billing period" (a draft) that shows the breakdown live (basis + operator + fuel + mobilization + VAT = the total), then post it to the ledger with a single button. The posting is idempotent per period, and "cancellation" reverses the entry and frees the usage.

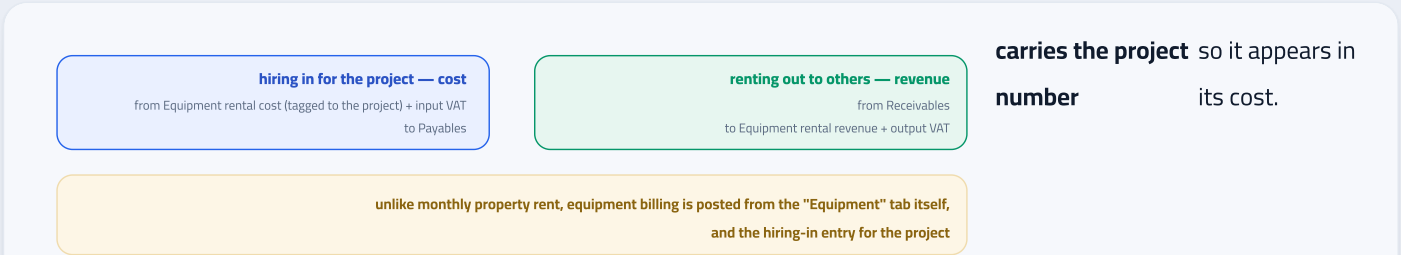


Figure 5 — The two equipment-rental entries: "renting out to others" records revenue with a receivable and output VAT, and "hiring in for the project" records a cost tagged to the project with a payable and input VAT

- ✓ The two new accounts are created automatically on the first posting: **"Equipment rental revenue" (4110)** and **"Equipment rental cost" (5120)** — renamable in the chart of accounts like the rest of the system accounts.

08 Alerts, reports and purchase orders

Three operational tabs keep you informed: alerts, reports and outputs, and purchase orders.

Alerts	Lists computed on the dates: expired / about-to-expire contracts , critical documents nearing expiry (civil defense/insurance), and warehouses that have exceeded the periodic-inspection term (the threshold is editable by the editors).
Reports and outputs	Multiple reports: detailed by area · overall summary · expired contracts · by beneficiary · landlord statement of account · deposits · contracts without / not matching a purchase order · vacant units · monthly disbursement · cost per person and occupancy · audit log.
Purchase orders	Text reference numbers entered manually on the contract (number/months/value), with no link to the Procurement module. The tab is essentially a matching screen that highlights contracts without a purchase order or not matching one (non-blocking warnings).

09 Permissions — the limits — and the summary

Action	Owner	Admin	Manager	Viewer
View all tabs (read)	✓	✓	✓	✓
Contracts · inspections · master data — create/edit	✓	✓	▲	▲
Manage "authorized editors" · permanently delete master data	✓	✓	✗	✗
Post the monthly rent · settle the deposit	✓	✓	✗	✗

▲ = only if the person is added to the "authorized editors" list (managed by the Owner/Admin), regardless of their role. Editing is generally for the Owner/Admin or the Rentals editors; the signed inspection is **locked for everyone**. As for the monthly posting and the deposit settlement, they require **Finance permission**. And the module appears only for the organizations for which the "Rentals" add-on has been enabled.

- ✓ **Chapter Nine summary:** Rentals manages the **leased properties** (apartments and warehouses) around a **central contract** that brings together the landlord, the unit and the deposit, guarded by **signed, locked inspections** with meters and assessments, and it feeds the **monthly rent and the deposit settlement** in Finance. Remember the limits: property rental here is leasing in for the organization (and equipment rental is two-directional — Section 7), the module is separate from labor housing, the status is manual, and monthly property rent is a full month not attributed to the project. With this the support modules are complete, and **Governance and permissions** remains as a final chapter.

Chapter Ten - Governance & Permissions: the layer that guards the whole system

After going through every module, this **closing** chapter brings together the full governance model: the organizations and roles, the gates that reveal the modules, the **two protection layers** (the front end and the database), the audit and approvals, and the enterprise "Governance" module — so you understand **who can do what, where, and why**.

Chapter 10 — Governance & Permissions: the layer that guards the whole system

- 
 organizations and roles
- 
 gates and add-ons
- 
 two protection layers
- 
 audit and approvals
- 
 account security and privacy

01 Before we start

This is the **closing** chapter. After going through every module, we gather here the "layer" that guards the whole system: **who you are** (your organization and your role), **what you see** (the gates/add-ons), and **what you are actually allowed to do** (the protection in the database).

i "Governance" in BuildFlow has two meanings: (1) the **permissions system** that governs all the modules — the subject of most of this chapter; and (2) the independent enterprise **"Governance" module** (board decisions, minutes and approvals — Section 7) that appears only if its add-on is enabled.

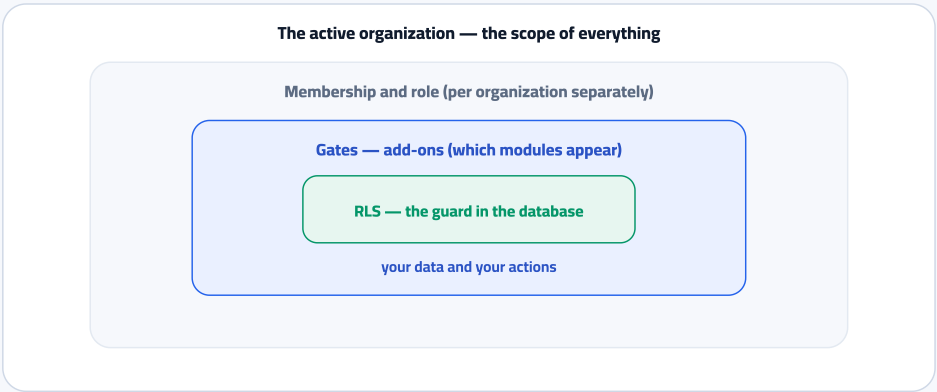


Figure 1 — The nested governance layers: the active organization surrounds the role, the role passes through the gates (the add-ons), and at the heart RLS guards your data and your actions

! A golden principle: hiding a button in the front end is not protection — the real protection is in the **database (RLS)**. All the permissions you saw in the previous chapters are enforced by the database, not by the screen alone.

02 Organizations and membership

Everything in the system is owned by an **organization**. You may be a member of more than one organization, each with your own independent role.

The active organization	You can belong to several companies, and you switch between them from the company switcher at the top of the menu — and the selected one is the "active" one.
A role per organization	Your role is taken from your membership in the active organization — so you may be an owner in one company and a viewer in another.
The scope follows the active one	All the data, permissions and visible modules are confined to the active organization — you do not see the data of your other companies until you switch to them.

! **Switching the company changes everything at once:** the role, the visible modules, the governance/rentals permissions, and the displayed data. Always make sure of the active company before working.

03 Roles

Five roles within the organization (plus "candidate" at the account level before joining). And the permission is built on the role.

Key permissions	Delete	Edit	Read	Role
legal identity · settings · permanent role	✓	✓	✓	Owner
all administration and member permissions	✓	✓	✓	Admin
editing content without deletion	✗	✓	✓	Manager
inviting candidates and recruitment	✗	✗	✓	Recruitment officer
view only (read)	✗	✗	✓	Viewer

Figure 2 — The five roles and their permissions: reading for everyone, editing for the Owner/Admin/Manager, and deletion for the Owner/Admin only — with the highlight unique to each role

Owner	The highest role: all the Admin's permissions + exclusive privileges (the legal identity, company settings, the danger zone). Their role is permanent within the organization : it is not granted, transferred or ended between members (Section 4) — the only exception is a transfer or assignment carried out by the platform owner under their oversight (Section 9).
Admin	Full administration: editing, deletion, and managing members and roles.
Manager	Edits the operational content but does not delete , and does not manage members.
Recruitment officer · Viewer	The "recruitment officer" is like a viewer operationally but invites candidates and manages recruitment; and the "viewer" is view-only with no editing or deletion.

i On top of the role, the Owner/Admin can grant an **"authorized editor"** to a specific member in the **Governance** and **Rentals** modules — so they can edit within them even if they are a viewer (the governance/rentals editors lists).

04 Members and invitations

Teams join by invitation, and their roles are managed from the [Users](#) page (HR center ← Users, for the admin).

Creation and ownership	Whoever creates the company becomes its owner — and this is the usual source of ownership. There is an exceptional path managed by the platform owner (transferring ownership, or assigning an owner to an "orphan" company with no owner, or approving a user's claim) — its details are in Section 9.
The invitation then the promotion	Every invitation is sent with the "viewer" role by force (the owner or recruitment officer invites); and after acceptance the admin promotes them to the appropriate role from "Users". No one can be invited directly as an admin/manager.
Changing roles	The admin switches roles among admin/manager/recruitment officer/viewer — and never touches the owner role at all (no promotion to it and no demotion from it).
Termination and resignation	The admin/owner ends a member's membership (and their tasks are reassigned), but an admin cannot end another admin, and the owner is neither ended nor resigns.

! **No ownership transfer between members within the organization:** neither the owner nor the admin can transfer ownership to anyone. The only two ways to change it: **deleting the whole company** (company settings ← danger zone), or **a transfer carried out by the platform owner** under their oversight — see Section 9.

05 Gates and add-ons

Not all modules appear for every organization. "Gates" (add-ons) determine which modules are **visible and available**.

Permanent core modules	Projects · Monitor · Facilities · Library — always enabled for everyone.
Optional modules	Commercial (Pricing/Procurement/Warehouses/Tenders) · Reports · Finance · Technical office · Contracts · HR · Governance · Rentals — disabled by default and enabled when needed.
The gate works on two layers	It hides the menu item, and prevents opening the link (redirecting you to Projects) if the module is not enabled.

! **Enabling/disabling add-ons is in the hands of the "platform administrator", not the organization.** Even the company owner does not enable their modules themselves — they request that from the platform administrator (the "Add-ons" panel). And "platform administrator" is a platform-wide permission, entirely different from the company "owner".

06 The two protection layers

Permissions are enforced on two layers: the front end (apparent) and the database (the real one) — and the second is the one that actually protects.

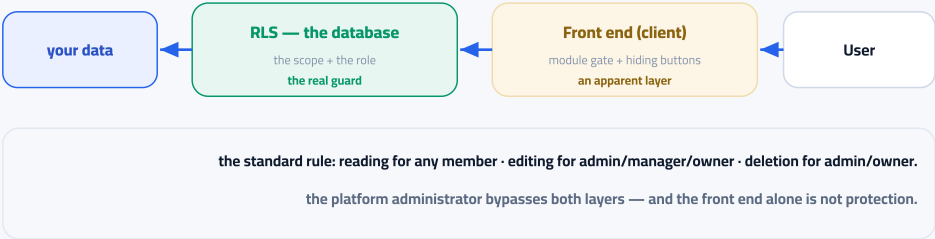


Figure 3 — Every request passes through two layers: the front end hides and disables (display convenience), and RLS in the database actually prevents or permits according to the scope and the role

The front-end layer	It hides the buttons and fields and disables them according to your role, and guards the routes (the gates). But it is a display convenience and courtesy , not protection.
The RLS layer	In the database: it enforces on every table that reading is for any member in the organization, and writing/deletion is according to the role — even if the API is called directly.
The standard rule	Reading for any member · editing for admin/manager/owner · deletion for admin/owner. And the "platform administrator" bypasses.

07 Settings, audit and governance

Where is governance set in practice? In the settings and administration pages, the audit log, the approvals, and the enterprise "Governance" module.

Company settings	The logo, name and manual profile, the legal identity (commercial register/tax card — for the owner only), the estimating and tax defaults, the e-invoicing data, and the danger zone (deleting the company).
Audit log	In Finance only : an immutable log that documents changes to entries, accounts and vendor invoices (who changed what and when), read by the owner/admin. There is no general activity log for the rest of the modules.
Approvals	Approval flows in Finance (amount limits and segregation of duties: whoever submits is not whoever approves) and in Governance (signatures and step-by-step approval).



each step is signed by the holder of its permission in the "authority matrix" — approval by an unauthorized person does not suffice.

the final approved decision has public verification via a QR code.

Figure 4 — The governance model cycle: propose ← review ← recommend ← approve ← execute ← monitor, with signatures of the permission holders, and a final decision that has public verification via QR

i The enterprise **"Governance" module** (if enabled) manages governance models: board decisions, minutes, committee formation, the RACI matrix and the **authority matrix**, delegations, periodic reports, incentives and penalties, conflict of interest and confidentiality, related parties, and evaluations (individuals/entities/vendors) — all with approved steps and signatures, and public verification with the QR.

08 Account security and privacy

In addition to organization permissions, BuildFlow gives you tools to protect your personal account and control your privacy — you manage them yourself from [My profile](#) .

Two-factor authentication (2FA)	Enable two-step verification from My profile by scanning a QR code with an authenticator app (Google Authenticator / Authy...); afterward a 6-digit code is requested at every login. Optional, and you can disable it later with confirmation.
Public visibility is optional	Your public professional profile is no longer visible by default — it stays private until you enable its visibility yourself (opt-in), and you can reverse it at any time.
Sensitive documents with secure links	HR, medical and custody documents are opened via temporary links that expire after minutes, instead of permanent public links — so only the permission holder reaches them.
Consent and privacy	When creating an account you agree to the Terms of Service and the Privacy Policy (two public pages that open without signing in), and your consent is recorded in your profile.
Account deletion (the right to erasure)	From My profile ← danger zone , by typing DELETE to confirm: it removes you from all companies (and your assigned tasks are transferred to the owner of each company) then permanently deletes your account. A company owner? Delete the company first, or ask the platform owner to transfer its ownership (Section 9).

✓ These tools are an implementation of the personal data protection principle (Law 151/2020): clear consent, control over visibility, secure access to sensitive documents, and a right to erase your account.

! **A security tip:** enable two-factor authentication especially for **owner and admin** accounts — it is the strongest protection if the password is leaked.

09 Platform owner: companies and ownership

Alongside the organization roles, the **platform owner** (not the company owner) holds special tools for managing **company ownership** across the whole platform — they appear on the [Platform](#) page under the [Companies & ownership](#) tab, and are visible only to the platform owner.

i **What is an "orphan company"?** A company that exists in the system **without an owner** — created in an unusual way (such as an import or a pre-provisioning) rather than via "create company". No one can enter it as an owner until the platform owner assigns it an owner, or approves a claim to it.

Ownership transfer	The platform owner selects the company, then a new owner from its current members only (not from outside it). The previous owner automatically moves to the admin role — so the company is not left without administration. Every operation is recorded in the ownership events log.
Assigning an owner to an orphan company	In the Orphan companies section: the platform owner searches for the user by name or email, then assigns them as an owner of the orphan company — so it becomes an ordinary owned company.
Creating a protected company	The Create protected company button — at the top of the Orphan companies section — creates a company without an owner with a specified name and type. It reserves the name immediately so no one can register under it, until an owner is assigned to it or a claim to it is approved. And the system does not accept two identical names (after normalization), so two companies are not created with the same name.
Ownership claims	The Pending claim requests section shows everyone who tried to register under the name of a protected/orphan company. Each has its data (the name, email, phone and note) and two buttons: Approve (which makes them an owner of the company and rejects the rest of the claims on it) and Reject .

i Ownership events log: every **transfer**, **assignment** or **claim approval** is recorded automatically (the event type · from whom · to whom · who carried it out · the time) in an immutable audit log — for complete tracing of each company's ownership history.

! **The name-reservation gate — from the user's side:** if any user tries to create a company with a name matching an existing protected/orphan company, a new account will not be created; instead **a pending claim request is recorded automatically** and they see an amber notice stating that the request is under review. **There is no separate button for the claim** — the same creation attempt in **Create company** is what records the request. Then the platform owner reaches out and approves or rejects from the tab above.

✓ The reservation compares names after **normalizing** them (ignoring differences in spaces and letter case) so it cannot be circumvented with an extra space or a slight difference. And all these tools are protected in the database with the **platform owner** condition — hiding the tab is not enough.

10 Summary: who does what

A consolidated matrix of the system's key actions against the roles — it summarizes what we detailed across all the previous chapters:

Action	Owner	Admin	Manager	Viewer
View the active organization's data (read)	✓	✓	✓	✓
Edit content (tasks · items · module records)	✓	✓	✓	✗
Deletion	✓	✓	✗	✗
Manage members and roles (promote/terminate)	✓	✓	✗	✗
Legal identity · company settings · danger zone	✓	✗	✗	✗
Enable/disable add-ons (modules)	✗	✗	✗	✗

"Recruitment officer" ≈ viewer + inviting candidates and recruitment. And "Owner" = admin + exclusive privileges (the legal identity, company settings, the permanent role). Enabling add-ons is in the hands of the "platform administrator" not the organization (hence all roles ✖). And the Owner/Admin can grant an "authorized editor" to a specific member in Governance and Rentals on top of their role. Reading and editing are confined to the **active organization**, and the real guard is **RLS in the database** not the hiding of buttons.



Chapter Ten summary — and the manual's conclusion: Governance is the layer that makes everything before it safe and organized: an **organization** defines the scope, a **role** defines what you do, **gates** define what you see, and **RLS** guards everything deep down, with **audit and approvals** for accountability. With this the manual's journey through BuildFlow is complete — from the first project to the accounting entry to the governance that protects everyone. 🏠



User manual of **BuildFlow 1.0**

Bilingual (Arabic/English) · RTL & LTR · dark mode

The reference register of codes and standards

On what foundation was BuildFlow designed?

A comprehensive register of every standard, code, law, professional/governmental authority or cybersecurity framework that BuildFlow's design rests upon, with a statement of what the system actually embodies for each item.

BuildFlow — Standards, Codes & Regulatory Reference Register

01 Executive summary

BuildFlow was designed on a genuine standards base in **Egyptian accounting and taxation, Egyptian labor, social insurance and data protection laws, FIDIC 2017 contracts, document control and quality (ISO 19650 / 9001), earned value (PMI) and dimensional take-off (NRM2/CESMM)**, with **multi-tenant data isolation enforced in the database**.

- ✓ **The strongest things the system rests on (mandatory in the database):** balanced double-entry with posted journal entries not editable · period locking · an immutable financial audit log · the A/B technical-approval gate before purchasing · money held by non-conformance NCR/RFI · enforcement of the governance approval chain by the appointee's account only · automatic RLS on every table · secured functions with a fixed search path · publishing gates with written confirmation.

02 Engineering and construction

What the system rests on in classification, measurement, estimating, quality, document control and cost control.

Standard / Code	Authority	What the system actually embodies
CSI MasterFormat Classification of work sections	CSI — Construction Specifications Institute	A section ← item hierarchy for classifying library items and activities and aggregating cost reports; 6000+ items shared globally, not copied per organization
FIDIC 2017 — Conditions of Contract for Construction Second edition (Employer/Main contractor)	FIDIC — International Federation of Consulting Engineers	A full contract generator: agreement, contract data (Part A), letters of tender and acceptance, guarantees (performance/advance/retention/parent company/bid/payment), with the sub-clause number verbatim for each field (1.1.27 Defects Notification Period, 4.2, 5.1, 8.8 delay damages, 14.2/14.3 advance and retention, 19 insurance, 21 Dispute Avoidance/Adjudication Board DAAB)
ICC URDG 758 Uniform Rules for Demand Guarantees 2010	International Chamber of Commerce ICC	Guarantee texts refer to it and require the demand for payment to be documented through a bank or a notary
ISO 19650 Information management and Common Data Environment CDE	ISO	CDE state constrained by rule (WIP/Shared/Published/Archived); document type and revision status are mandatory; a revision chain with supersession; transmittals with mandatory purpose/means; suitability codes SO–S4/A1/B1
Approval review codes A/B/C/D A approved · B approved with comments · C resubmit · D rejected	Standard consultant convention	A database constraint on {A,B,C,D}; a hard gate : no award of a request for quotation (and therefore no purchase order) for a material without an A or B approval
ISO 9001 — Non-conformance NCR Disposition, root cause and corrective/preventive action (§10.2)	ISO	Severity (minor/major/critical), source and disposition (rework/repair/use-as-is/reject/regularize) are mandatory; the violated specification clause; the CAPA triad
ISO 9001 — Money held by quality NCR/RFI hold the payment	ISO + contractual convention	The value of works under an open NCR or a blocking RFI is excluded from the approved value of the client's payment certificate; and approval/payment of the subcontractor's payment certificate is refused until closure
ISO 9001 — Material returns after NCR	ISO	A return requires a purchase order, a catalog item and a quantity on the NCR, and is capped by the returnable quantity
ISO 9001 §8.4 — Control of external suppliers Approved vendor list AVL and qualification	ISO	AVL status constrained by rule (pending/approved/conditional/suspended/rejected); five qualification criteria (legal, financial, technical, track record, quality/safety); periodic performance evaluation; expiry of ISO 9001/45001 certificates
ISO 9001:2000 / ISO 9000 In the entity qualification questionnaire	ISO	Two textual questions on the existence of a quality system and its certification
ISO 45001 Occupational health and safety	ISO	A log of incidents/near-misses/injuries/illnesses, severity, lost days (≥0 mandatory), corrective action, linkage to the project; count indicators
ISO 30414 Human capital reporting	ISO	Selection of indicator families (workforce, turnover, training hours/cost, absence, safety)
PMI — Earned Value Management EVM "The standard PMI formula"	PMI — Project Management Institute	BAC, EV (from actual site progress, quantity executed ÷ planned), AC (with no double-counting across manual/inventory/invoice), CPI=EV/AC, EAC=BAC/CPI, VAC; an S-curve and a CPI<1 alerts dashboard
NRM2 / CESMM Dimensional take-off sheet (Dim sheet)	RICS / ICE	N×X (m), N×X×Y (m²), N×X×Y×Z (m³), negative "Ddt" deduction lines, repetition/density/waste factor, quantity locking by version (v1, v2...), an append-only progress log (correction by a new row not by editing, and deleting a measured row is refused)
CIOB / RICS practice The price build-up and preliminaries chain	CIOB / RICS	Direct + share of preliminaries = prime ← ×(1+overheads) ×(1+risk) ×(1+profit) = selling; a unit price to two decimals; 8 preliminaries categories; resources (materials/labor/equipment/subcontract); assumptions of 12% / 3% / 10%
IAS 2 — Capitalization of landed cost Landed cost	IASB	Customs/freight/clearance/other are allocated proportionally by value across the purchase order lines and enter the unit cost
Three-way match Purchase order / receipt / invoice, price variance ±5%	Procurement convention	Matched = ordered = received = invoiced; a 5% price variance is flagged; a receipt rejected on inspection is excluded from inventory

Standard / Code	Authority	What the system actually embodies
Variation orders VO The technical → commercial bridge	Contractual convention	A technical change request ← a priced variation order with automatic numbering; only the approved one adjusts the contract value and the revenue
PMI — Schedule adherence SPI / start & finish variance / baseline comparison	PMI — Project Management Institute · FIDIC 8.4	Schedule baseline frozen at kickoff (re-baselined only by an approved EOT); planned % linear over duration; SPI = $\Sigma(\text{actual \%} \times \text{duration}) \div \Sigma(\text{planned \%} \times \text{duration})$; forecast finish at the actual progress rate; Δ in calendar days; contractual completion = time/date + approved extensions
SCL — Delay & Disruption Protocol delay events / contractual liability / attribution	Society of Construction Law · FIDIC 8.4–8.5	One delay event per task with a fixed cause code carrying its liability (employer: excusable & compensable · neutral: excusable, not compensable · contractor: LD exposure); attributed to a party from the parties register and a responsible person; evidence, recovery action and status; linked to the variation order when an EOT is claimed
FIDIC 2017 — 8.8 Delay Damages exposure, relief and back-to-back charge	FIDIC · subcontract agreements	Daily damages = % of contract value or a fixed amount, capped; overrun = forecast – completion revised by approved EOT; relief from excusable days not yet converted into an EOT; subcontractor charged its attributed days × its agreement terms (ld_rate_pct_per_day, ld_cap_pct) never beyond the project overrun; required of the causer = remaining % ÷ days left
PMI — Critical path (CPM) and schedule compression crashing / fast-tracking	PMI — Project Management Institute	FS/SS/FF/SF dependencies with lag; forward/backward pass on remaining durations, float, critical path; iterative crashing on the cheapest critical task (cost per saved day = daily cost × resource-type premium, capped cut, or a task-specific quote); fast-track FS → SS at half duration; net benefit = delay damages avoided – extra cost; resulting cash flow
Inspection requests IR/WIR and method statements	Execution convention	Inspection type/result/status are mandatory; linking the inspection to an NCR; a method statement with a risk level and a review code A–D
Requests for information RFI	Execution convention	Mandatory priority, cost/time impact, linkage to a document, and the blocker holds a value until the answer
Handover / As-built file	Project closeout convention	A checklist (as-built drawings, operating manuals, warranties, test certificates, spare parts, training, snag list, compliance certificate) with a completion percentage
ISO 4217 Currency codes	ISO	A complete list; functional currency EGP; exchange rates per project
Abbreviations glossary (~500) ACI · ASTM · ASCE · AASHTO · ASHRAE · NFPA · NEC · IEEE · IEC · OSHA · EPA · CSI · EJCDC · AIA · ANSI · DIN · EN · BS · BIM/COBie/IFC/LOD · USGBC ...	Multiple authorities	A linguistic reference translated into five languages explaining the abbreviations

03 Accounting, finance and taxation

The system's most standards-mature axis: double-entry accounting enforced in the database, IFRS/Egyptian standards named explicitly and implemented as engines, and genuine integration with the Egyptian Tax Authority.

Standard / Law	Authority	What the system actually embodies
Double-entry, trial balance and financial statements Accounting principles	—	A line is debit <i>or</i> credit, not both (CHECK); posting requires ≥2 lines and total debit = credit ≠ 0, otherwise it is refused; a posted journal entry is not edited or deleted (correction by a reversing entry only); the account type is locked after posting; a unique sequential JE- number; a trial balance as a view; income statement/balance sheet/statement of changes in equity
Period locking and year-end closing Retained earnings	—	Posting to a closed month is refused by rule; the annual close closes revenues/expenses into 3200 and locks 12 months; reclosing is refused
IFRS 15 / Egyptian Accounting Standard 48 Revenue by percentage of completion (cost-to-cost)	IASB / Egyptian Standards Board	Percentage of completion = min(cost to date ÷ estimated cost EAC, 1); recognized revenue = contract value (base + approved variations) × the percentage; over/under-billing; CVR margin; a frozen monthly snapshot; the report footer states the standard explicitly
IAS 19 / Egyptian Standard 38 Accrued leave provision	IASB / EAS	Provision = unused balance × daily wage (basic ÷ 30); a delta entry Dr 5510 / Cr 2540; not repeated
IAS 19 — End-of-service benefits Gulf engine + Egyptian policy	IASB + Gulf labor systems	SA tiers (half a month/year ≤5 then a month), AE (21/30 days, cap 24 months), QA (21), OM (15 then a month); Saudi resignation factor; Egypt a month/year as policy; Dr 5800 / Cr 2700 and a settlement to the bank
IFRS 9 Expected credit losses ECL	IASB	Ageing (current/30/60/90/+90) at rates 0.5/1/5/20/50%; Dr 5700 / Cr 1290 delta
IAS 16 / Egyptian Standard 10 Fixed assets — straight-line	IASB / EAS	(cost – scrap) ÷ life in months, a full month; acquisition Dr 1500, depreciation Dr 5600 / Cr 1600, disposal with gain/loss 4200
IAS 12 Deferred tax	IASB	Temporary differences between book and tax depreciation; a tax rate of 22.5% (Egypt); reducing-balance tax depreciation 25% adjustable per asset; Dr 5900 / Cr 2800
IAS 21 The effects of changes in foreign exchange rates	IASB	Functional currency EGP; currencies EGP/USD/EUR/GBP/SAR/AED/KWD; realized exchange difference on settlement to 4300; revaluation of open balances (2900/1295)
IAS 7 / Egyptian Standard 4 Statement of cash flows — indirect	IASB / EAS	Classification by the account code prefix: 11xx cash, 15xx/16xx investing, 24xx loans and 31xx capital financing, the rest operating
IAS 2 / Egyptian Standard 2 Perpetual inventory	IASB / EAS	Receipt Dr 1400 / Cr 2110 (GR-IR); issue to the project Dr 5410 / Cr 1400; return to the supplier; capitalization of landed cost
Chart of accounts "simplified Egyptian style"	—	60+ accounts (1000–5900) with system keys (cash, bank, receivables, retention, withholding under account, VAT inputs/outputs/settlement, employee advances, rental deposits, inventory, assets/accumulated depreciation, payables, GR-IR, client advances, subcontract, payroll and insurance and taxes payable, leave/end-of-service provisions, deferred tax, capital, retained earnings, contract revenue, exchange differences, expenses...) created at first use and edited freely, with self-healing of missing keys
Auto-posting engine Operational event ↔ journal entry	System design	~40 event types (approval/payment of a supplier invoice, receipt, issue, return, supplier advance, subcontract cost/payment, payment-certificate revenue/collection, retention release, payroll accrual/payment, employee advances, leave/end-of-service/debt provisions, training, medical, communications, logistics, custody, monthly rent, rental-deposit settlement, assets, VAT return, deferred tax, revaluation, deferrals, recurring, opening balances, closing) — one entry per event (source_type + source_id) not repeated, and correction by reversing then reposting; provisions on a "required level" logic (delta)
Budget and project cost EAC and cost centers	Cost control practice	ETC = max(budget – actual, open commitments); EAC = actual + ETC; the variance; two analytical dimensions (project/cost center); purchase-order commitments; bank reconciliation; a cash forecast — monthly over 6 months or weekly over 13 weeks, company-wide or per project, charted (assumptions of 60/30/28 days); receivables claims
Egyptian value-added tax 14% Outputs and inputs and a monthly return	Egyptian Tax Authority	Outputs on the current works value of the payment certificate (2210); inputs on supplier invoices (1230); a monthly return with a settlement Dr 2210 / Cr 1230 / Cr 2211 not repeated; a tax register for export
Withholding under account 1% Contracting	Egyptian Tax Authority	Withheld from the amount due to the client and recorded as a prepaid asset (1220); exported to the Tax Authority with code T4/W010
Stamp duty and contracting insurance	—	Two fields in the settings with a value of 0

Standard / Law	Authority	What the system actually embodies
E-invoice system Version 1.0 document · OAuth2 · CAdES signature	Egyptian Tax Authority (ETA)	preprod/production environments with the Authority's official endpoints; OAuth2 client_credentials; a document of type I version 1.0 with an issuer/receiver of type B; tax codes T1/V009 (VAT) and T4/W010 (withholding); rounding to 5 decimals; a serialization algorithm for the CAdES signature; a readiness check (registration number, activity code, address, EGS codes); UUID/status registration; sending from the server only (the secret does not leave it) and for approved/paid payment certificates only
The company's legal identity Tax number and commercial register	Tax Authority / commercial register (as fields)	The owner alone sets them (RAISE); a match of the tax number with registered parties generates a verification request approved by the platform administrator; the tax number is the parties' identity key and the source of the RIN received in the e-invoice
Immutable financial audit log Audit trail	Audit practice (SOX-style)	A SECURITY DEFINER trigger records every insert/update/delete on entries, accounts and supplier invoices (who, what before/after, when, the actor's email from the JWT); read for the owner/administrator; no write policies so it is not edited from the application
Approvals and segregation of duties Segregation of duties	COSO-style	Amount limits for manual entries and a separate disbursement authorization for suppliers; recording the submitter/approver; a hard check in disbursement custody: the approver ≠ the submitter

04 Payroll, labor and social insurance

Law / System	Authority	What the system actually embodies
Egyptian Labor Law 14/2025	Ministry of Labor (Egypt)	A written contract form (permanent/fixed/seasonal type, probation period, hours, leave, notice period); a high alert "an employee without an active contract — the law mandates a written contract" ; alerts for expiry of the contract/probation/documents/work permit; annual leave of 21 days; a health and safety section
Social Insurance Law 148/2019	National Social Insurance Authority	An insurance number and a subscription date; a "no insurance" alert; an insurance wage with a minimum/maximum (2000–12600); an employee share of 11% and an employer share of 18.75%; accrual entries 2510
Payroll income tax — progressive brackets	Egyptian Tax Authority	Personal exemption 20,000; marginal annual brackets 0/10/15/20/22.5/25/27.5% on (gross – employee insurance)×12 then ÷12; a bracket editor per organization
Gulf labor systems — end-of-service benefits and leave Saudi Arabia Arts. 84–85 and 109 · UAE · Qatar · Oman	Gulf labor ministries	A data-driven register per jurisdiction; end-of-service tiers; the Saudi resignation factor (0 / ⅓ / ⅔ / full); statutory leave scaling with service (SA 21 → 30, QA 21 → 28, AE/OM 30)
GOSI · GPSSA · GRSIA · PASI Social insurance of Saudi Arabia/UAE/Qatar/Oman	Gulf social insurance institutions	Citizen/expatriate rates and wage limits per country (e.g. SA citizen 9.75%/11.75%, expatriate 0/2%, limit 1500–45000); zero income tax; nationality classification
Egyptian leave catalog	Labor Law	Annual 21 (feeds the provision) · sick · casual 7 · unpaid · maternity
Personal Data Protection Law 151/2020	Personal Data Protection Center (Egypt)	Cited as a justification for RLS policies: the employee file and its sensitive documents (national ID image, the contract) are read by the administrator or the data subject only ; the medical by a named delegate; payroll for the owner/administrator for all operations
SHRM BASK	Society for Human Resource Management (SHRM)	A design reference for the records and performance model
ISO 30414 · ISO 45001	ISO	Human capital indicators and a safety log

05 Legal, contractual and governance

Item	Reference / Authority	What the system actually embodies
FIDIC 2017 — Legal clauses 1.4 governing law and language · 1.15 limitation of liability · 17.2(d) forces of nature · 19 insurance · 21 DAAB	FIDIC	Fields for the governing law, the governing language and the language of correspondence, the contractor's limitation of liability, forces-of-nature risks, insurance limits (professional liability, fitness for purpose), a Dispute Avoidance Board with an appointing entity "the FIDIC President"
Subcontractor contracts	Contractual convention	A retention percentage; the net amount due a generated column (claimed – retention); agreement and payment-certificate statuses are mandatory; an NCR/RFI gate prevents approval/payment
Client payment certificates: retention, advance and deductions	"The usual Egyptian arrangement" (a comment)	The current = cumulative – previous – retained; retention 5%; VAT on the current; withholding under account and the advance and others are deducted; retention release on the client/subcontract side is mandatory; retention ageing 90/180/365
Supplier advances and their application	Practice	On approving the supplier invoice its advance is applied automatically: its own order first then the oldest; reversible
Tender register	Practice	Mandatory statuses (Bidding/Submitted/Won/Lost/Cancelled); converting a win into a project; the project phase is mandatory (tender/execution/closed); freezing the baseline before kickoff
Contractor qualification questionnaire Registration/classification certificate "in the local federation" · the authorized signatory · the capital · a banking disclosure authorization · consortiums	The Egyptian Federation for Construction and Building Contractors (implicitly)	A full self-qualification form: works executed by year, executives, proposed team, equipment, subcontractors, similar projects, a quality system and ISO questions, an HSE manual, a banking disclosure with authority, "all data in Arabic"
The governance module — 26 form types Board resolutions · minutes · committee formation/plans · periodic reports · resolution follow-up · delegations (Art. 17) · performance evaluation (Art. 32) · conflict of interest (Chapter 9) · confidentiality undertaking NDA · related parties · onboarding · opportunity registration (Art. 11) · initiatives · RACI · payment schedules · sub-alliance agreements · incentives (Arts. 48/51–53/55) · founders' contributions and rights · individual/entity evaluation · organizational structure	The corporate governance charter and company bylaws (internal)	Numbered corporate forms with a draft/final status, along with the texts of confidentiality and conflict-of-interest undertakings (adherence to the "governance charter and professional conduct rules"), incentive eligibility conditions, and statutory onboarding steps; defined boards, committees and an authority hierarchy
The authority matrix P/R/T/A/E/M and enforcement of the approval chain "Appendix (1) of the executive governance manual"	The company governance manual	A hierarchy (general assembly ← board ← executive board ← committees); 4 default, editable permission groups; a derived approval chain; RLS: no approval except by the account appointed to that authority, one approval per step, and no signature attributed to another account
E-signature and QR-code verification	—	The QR = a public verification link <code>/verify/g/<uuid></code> with an unguessable identifier; the public function exposes metadata only (the reference, the title, the status, the approval chain, the signatures) not the resolution text; the generated contracts use a capability token independent of the internal identifier; the signatures are PNG images attributed to their owner's account under an RLS constraint. SHA-256 content seal (Level A) : each signature is sealed with a SHA-256 hash of the document content at the moment of signing (computed inside the database via pgcrypto and fixed by the insert trigger), and the verification page recomputes and compares it, thus revealing any later modification to the content (tamper-evidence: sealed/the seal is broken). This is still not a signature with an accredited PKI certificate nor an accredited timestamp (RFC 3161), and it does not seal the PDF file image at the binary level

Item	Reference / Authority	What the system actually embodies
Legal identity and verification	Tax number / commercial register	The owner alone sets them; the platform administrator alone approves the verification; the verified data are auto-filled into the contracts
Invitations and roles	Access governance	Every invitation with a "viewer" role under a CHECK constraint; role change from an allowed list only; the owner is protected from promotion/demotion/termination
Legal rental attachments A copy of the contract · proof of ownership/power of attorney · a civil defense license · an insurance document · an inspection report	Civil Defense (a license type)	The attachment types are mandatory; the critical ones (civil defense, insurance) have a red alert on expiry; insurance, disbursement and contract statuses are mandatory; "cancelled by decision" requires a reason and who decided; an owner with a national ID and a delegate (power of attorney); a signed inspection is locked by a trigger
The source and intellectual property	—	Modules ported from a previous system and re-scoped

06

Cybersecurity and data protection

The code does not cite any security framework by name; therefore **every actual control was aligned** with the recognized frameworks (OWASP Top 10/ASVS, ISO/IEC 27001, NIST SP 800-53, COSO, Law 151/2020, GDPR principles, and Supabase practices). The alignment is by design — **it does not mean certification**.

Control	The framework it aligns with	The actual mechanism
Multi-tenant isolation via RLS + an auto-enablement trigger	OWASP A01 · ISO 27001 A.9.4.1 · NIST AC-3/AC-4	Every new table in public has RLS enabled automatically by a DDL trigger; <code>belongs_to_my_org</code> compares against the active organization with a membership check (tampering with <code>active_org_id</code> does not help)
Role-based permissions within the tenant	NIST AC-6 · ISO 27001 A.9.2.3	Read = any member; write = administrator/manager/owner; delete = administrator/owner; the platform administrator overrides; two documented fixes (the active organization's role, and lax task policies that allowed a viewer to write)
Prevention of self role escalation	CWE-269 · OWASP A01	The user does not change their role/status; a role-change function with an allowed list that protects the owner (two documented and fixed production vulnerabilities); a CHECK on the roles
Sealing the tenant key from the server	CWE-639	<code>org_id</code> is populated from the active organization before insertion and is checked by the insert policy
SECURITY DEFINER functions with a fixed search path	CWE-426 · Supabase checks	<code>SET search_path</code> on every definer function; a retroactive fix of three "search path injection" functions
Revoking EXECUTE from PUBLIC and anon (4 documented rounds)	NIST AC-6 · Supabase check	A documented lesson: revoking from anon alone is not enough — it must be from PUBLIC; trigger functions are revoked from everyone
security_invoker views	CWE-1220	Views do not bypass RLS
Authorization inside functions (~225 RAISE guards)	OWASP A01 · ASVS V4	"Not logged in" + a role check for each sensitive function (verification, invitation revocation, party deletion, company creation...)
No raw SQL (injection)	OWASP A03 · CWE-89	The client is via PostgREST exclusively; migrations use <code>format(%I)</code> on literal lists
Authentication and session	OWASP A07 · ASVS V2/V3 · NIST IA-2	Email/password + Google OAuth + recovery; a one-hour JWT with refresh-token rotation; login rate limits from the platform; account-enumeration mitigation
Account status gate	ISO 27001 A.9.2.1 · NIST AC-2	Approved/pending/rejected with separate screens
Immutable audit log	ISO 27001 A.12.4 · NIST AU-9 · SOX-style	A definer trigger that is not bypassed; no write policies
Append-only logs (site progress)	ISO 27001 A.12.4 · ISO 19650	Correction by a new row; deleting a measured row is refused (RESTRICT)
Attributed approvals and signatures (non-repudiation)	NIST AU-10 · ISO 27001 A.6.1.2	Approval by the appointee's account only; the signature by its owner's account; a personal signatures vault with no edit policy
Financial segregation of duties	COSO · NIST AC-5 · SOX 404	Submitter/approver recorded with amount limits; a hard check in custody
Secrets management	OWASP A02 · NIST IA-5 · ISO 27001 A.9.4.3	No embedded credentials; boot fails without environment variables (no silent fallback); the anon key for the browser only; Tax Authority/AI/email secrets in edge functions; ignoring <code>.env</code> and SQL dumps; no keys in the repository (verified)
Edge function authorization	OWASP A01/A07 · NIST SC-5	JWT identity + organization membership + document status; a scheduled secret for reports; rejecting non-POST; size/count limits for the AI
CI/CD: restricted deployment and confirmed destructive operations	ISO 27001 A.12.1.2/A.12.1.4 · NIST CM-3/CM-5	Migrations are deployed only when their path changes and with a branch ↔ environment binding (no secret crossover); syncing/rebuilding staging requires typing a code (SYNC-STAGING / REBUILD-STAGING) with an automatic backup of the branch; the secrets in GitHub only
Testing gates	ISO 27001 A.14.2.8 · NIST SA-11	An E2E check required on every PR to main + nightly; units on the services
Storage: private buckets and short signed links	ISO 27001 A.10.1 · NIST SC-8	Drawings and rental attachments with 60-second links, take-off 300 seconds; bucket policies with a <code><org>/</code> or <code><user>/</code> path; a fix for a public file-listing leak
Validation of uploaded files	ASVS V12 · CWE-434	Allowed-type lists and limits of 2–20 MB on the client; a 50 MB server-side ceiling
XSS	OWASP A03 · CWE-79	React's default escaping; <code>escapeHtml</code> on every cell in the export; ~14 direct-HTML positions all escaped; no eval

Control	The framework it aligns with	The actual mechanism
Data integrity	NIST SI-10	Allowed lists, non-negativity, cross conditions, unique per tenant, deliberate delete semantics (CASCADE/SET NULL/RESTRICT), a 1000-row ceiling per request
Personal data protection in RLS	Law 151/2020 · GDPR Arts. 5(1)(f)/32 · ISO 27001 A.9.4.1	The administrator or the data subject; the medical by a named delegate; payroll for the owner/administrator; the Tax Authority secret does not reach the rest of the members
The right to erasure (company + individual)	GDPR Art. 17 · Law 151/2020	Company deletion: the owner only + typing the company name to confirm; an orderly teardown with a termination log. Individual account deletion: written confirmation, a clean resignation from all companies, protection of company owners, and deletion of the auth account with the service role
Transport and client	NIST SC-8 · OWASP A05	HTTPS exclusively (no http:// in the code); the service worker excludes Supabase from caching
The unauthenticated public surface	GDPR Art. 5(1)(c) · OWASP A01	Three paths (a shortlisted file, governance verification, contract verification); governance verification with minimal exposure; the contracts with a capability token
The platform administrator	ISO 27001 A.9.2.3 · CWE-798	A flag on the profile that overrides RLS and manages the add-ons and verification
The software supply chain	OWASP A06 · NIST SA-12 · ISO 27001 A.12.6.1	A committed lock file + npm ci; up-to-date dependencies
Operational documentation and recovery	ISO 27001 A.12.1.1 · A.17 · NIST CP-9	A full re-provisioning guide (migrations, functions, secrets, Auth setup, the storage policies vulnerability, data migration)

07 Register of governmental and professional authorities

Every authority whose footprint appears in the system, its actual role, and the degree of reliance on it. "Implicit" means the authority is not named in the code but its product (a law/number/license) is used.

Governmental and regulatory authorities

- **Egyptian Tax Authority (ETA)** — VAT 14%, withholding under account 1%, payroll income tax, income tax 22.5% (deferred), **the e-invoice system (actual integration)**, a tax register for returns
- **National Social Insurance Authority** — Law 148/2019, insurance number, wage rates and limits (its name as an abbreviation only; no integration)
- **Egyptian Ministry of Labor** — Labor Law 14/2025 (written contract, probation, leave, safety)
- **Personal Data Protection Center** — Law 151/2020 as a justification for access policies
- **Civil Defense** — a license as a type of critical attachment for the leased units (as a type) / the authority is implicit
- **Commercial register / tax card** — legal identity fields verified by the platform administrator
- **The Egyptian Federation for Construction and Building Contractors** — "registration/classification certificate in the local federation" in the qualification questionnaire, implicit
- **Saudi Ministry of Human Resources** — Labor System Arts. 84–85, 109; **GOSI/SANED**
- **GPSSA (UAE) · GRSIA (Qatar) · PASI (Oman)** — insurance rates and end-of-service benefits

Professional authorities and standards

- **IASB (IFRS/IAS) + Egyptian Accounting Standards Board (EAS)** — 15/48, 19/38, 16/10, 12, 21, 2, 7/4, IFRS 9
- **FIDIC** — Conditions of Contract for Construction 2017 as a contracts generator
- **ICC** — URDG 758 in the guarantee texts
- **ISO** — 19650, 9001, 45001, 30414, 4217
- **CSI** — MasterFormat
- **PMI** — earned value (the cost side)
- **RICS / ICE** — NRM2 / CESMM (the take-off sheet)
- **CIOB** — price build-up practice
- **SHRM** — BASK as a design reference
- **~500 authorities in the abbreviations glossary** (ACI, ASTM, ASCE, AASHTO, ASHRAE, NFPA, NEC, IEEE, IEC, OSHA, EPA, EJCDC, AIA, ANSI, DIN, EN, BS, USGBC...) **a linguistic reference only**
- **Security frameworks** (OWASP, ISO 27001, NIST 800-53, COSO, Supabase practices) — alignment by design, **not certification**
- **Deloitte / KPMG** — mentioned as an aspiration of "presentability to auditors" in a migration header

08 Confidence statement — what can be said with confidence

The user's confidence is built on what can be proven from the code. Here is what can rightly be said with confidence about BuildFlow:

✓ Rightly said (backed by the code)

- "The accounting was designed in accordance with IFRS and the Egyptian standards (48/IFRS 15, 38/IAS 19, 10/IAS 16, IAS 12, IAS 21, IAS 2, 4/IAS 7, IFRS 9) with double-entry **enforced in the database**, closed periods, an immutable audit log, and segregation of duties."
- "It meets the requirements of the Egyptian Tax Authority: VAT 14%, withholding under account, and **actual integration with the e-invoice system** (version 1.0 document) without retaining your signing key."
- "It invokes Labor Law 14/2025, Social Insurance 148/2019 and Data Protection 151/2020 in the HR model and the access policies."
- "It generates FIDIC 2017 contracts with the clause reference, controls documents in accordance with ISO 19650, and manages quality in accordance with ISO 9001 (NCR/CAPA/approved vendor list) **with gates that actually hold money**."
- "It computes earned value in accordance with PMI (the cost side) and adopts a dimensional take-off on the NRM2/CESMM pattern."
- "Each company's data isolation is enforced in the database on every table automatically, with secured functions, secrets outside the code, and deployment behind confirmation gates."

Applied security and privacy measures

- Two-factor authentication (TOTP) with a self-enrollment service in "My profile" and a verification step at login.
- Transport security headers (HSTS, framing prevention, content-type sniffing prevention, referrer and permissions policies) and a Content Security Policy (CSP) baseline.
- Reading public data is limited to a restricted set of columns, and public visibility is opt-in.
- Private storage of sensitive documents with short-lived signed links generated only on opening.
- Determining the user's role by their active organization.
- A governed software supply chain: automatic dependency updates and a security scan of the code in continuous integration.
- An integrated privacy program: privacy/terms pages, consent at registration, individual account deletion (the right to erasure), and a retention/destruction policy — in enforcement of Data Protection Law 151/2020.
- Linking the FIDIC contract data to the payment-certificate engine: the retention, advance and recovery percentages are read from the contract linked to the project.