VECTOR
WORKFLOW

Owner's Manual

Setting up Vector Workflow for your plant, and running the work inside your shop from request to hand-back.

Written for the plant admin who sets Vector Workflow up and the supervisors who run it. Where someone else's authority differs, the manual says so at the point it matters.

Before you begin

Vector Workflow is not difficult to use. It asks for an hour of setup, and for every supervisor to understand one idea before the first request comes in: a part's place on the plan is wherever its last scan put it. This manual is that hour and that idea, written down.

Read Parts 1 and 2 first. Do Part 3 with the web app open in front of you, then run your first real job with Parts 4 to 6. The rest you can read as the work reaches it.

What you need

- **A computer with a web browser** for setup. Plant setup, People, work orders and Material live on the web, at vectorxpro.com/workflow/app.
- **One plant admin.** Probably you: someone who knows the buildings, the teams and who supervises each one.
- **Your org chart**, kept under Team setup, Org chart (vectorxpro.com/team) and shared with the other Vector apps. Late-work emails climb it, so managers matter.
- **A printer and a phone** on the floor: travelers are printed, and scanned with a phone camera or a plug-in scanner.
- **One real job** to start with. Not a pilot invented for the purpose: a request that is really coming in this week, with a parts list.

How this manual is written

Every instruction is one action. Where the app says **Send Request**, the manual says **Send Request**: the words match the screen, so you can follow along without translating. The phone app (iPhone or Android) and the web show the same screens; where something is on the web only, the manual says so.

> **Where you will see this**
>
> Boxes like this one flag something that will otherwise cost you time: a limit on who can do what, something that cannot be undone, or a decision worth making on purpose rather than by accident.

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PART 1

What Vector Workflow actually does

It runs the work inside a tool room, prototype shop or small job shop. A request comes in, the right team plans it, and every part is scanned as it moves. Everyone can see where their work stands without walking the floor.

Most small shops run on a whiteboard, a spreadsheet and the supervisor's memory. Requests arrive by email, hallway and phone. Nobody outside the shop knows where their part is, so they walk out and ask, and the supervisor spends the morning answering instead of running the floor. A job that has been sitting at a vendor for a week is found out when someone needs it.

Vector Workflow gives every job one path. The request is written down once, with its project code and the day it is needed. The supervisor of the right team routes it. The team that does it opens a work order with the parts and each part's route. From then on, every hand-off is a scan, and the plan follows the part.

One path for every job

1. **Request it**: what's needed, the project code and the day it's needed.
2. **Route it**: the supervisor of the right team sets the priority and sends it on.
3. **Plan it**: work orders, the parts list and each made part's route.
4. **Make it**: a scan at every machine, move and vendor; kits, quality and the bay.
5. **Hand it back**: checked, built and delivered, with its whole history on the record.

Who uses it

Who	What they do in Vector Workflow
Anyone who needs the shop	Sends requests and watches Where's my part. Logs time.
Supervisors	Triage their team's requests, pass problems on, and get the late-work emails for their machines.
Team members	Open work orders, scan parts, report problems.
Material handlers	Receive, pick into kits, move and count stock (a team that handles material).
Quality	Pass or fail a complete kit or a staged assembly (a team that checks quality).
Leaders	Route any request anywhere, raise priority and escalate. See the whole plant.
Cost viewers	See estimate against actual on every work order and project code.
The plant admin	Builds the plant, invites people, sets the rules and the shop screens.

Why the record matters

Every request, routing, scan, problem, note and hour is kept, with who did it and when. Nothing is overwritten and no file is ever deleted: a wrong one is withdrawn with a reason. That is what lets a supervisor answer *why is this late?* in one look, and what makes the cost of a job something you can show rather than estimate.

PART 2

Getting in, people and who does what

One Vector account for every Vector app, an invitation for each person, and a few switches that decide who sees what.

One Vector account

Vector Workflow uses the same Vector account as the other Vector apps. People sign in on the web at vectorxpro.com/workflow/app, at a desk, on a shop-floor screen or in a phone's browser, and in the phone app (iPhone or Android), with their email and password. Companies that use Microsoft, Okta or Google can sign in with their company instead; we set that up with your IT team.

Accepting an invitation

1. Open the newest invitation email from notifications@vectorxpro.com.
2. Press **Choose your password**. It opens a page on the web; nothing is used up yet.
3. Type a password of at least 8 characters twice, and press **Accept and choose password**.

The link works once, within an hour, and sending it again cancels the earlier email. If the button won't open, the phone app's **Have an Invitation Code?** takes the 6-digit code from the same email.

Who is on your plan

Workflow is priced per plant by the number of people on it, and everyone who signs in counts, including a shop-floor screen's account. The admin switches Workflow on or off for each person in **Settings, People**; someone switched off can't open it, and stops counting.

> **Make people leaders on purpose**
> A leader can send any request anywhere, raise priority and escalate, and sees the whole plant. Most plants need two or three. Cost viewing is separate: admins and leaders see costs, and the admin can switch it on for anyone else, such as a supervisor.

PART 3

Setting up your plant

An hour, done once, with the setup wizard open. Everything else in this manual assumes it has been done.

Open **Settings** and choose **Setting up**. The setup wizard walks the plant in nine short steps. Each step shows what the plant already has, in full, and lets you change it right there; new lines are checked against what exists, so nothing is made twice. Everything the wizard does can also be done in **Plant setup** later.

3.1 Your buildings

Your main building and any others the work moves between. Give each a short name (MAIN, EAST): it goes on labels and travelers. Tick **Keeps parts here** for the buildings with racks, receiving and shipping.

3.2 Your teams

A team is a group that does one kind of work: Machining, Weld, Tool design, Maintenance. Its **supervisor** gets the team's requests, problems and late-work emails, and passes work on to other teams' supervisors. Tick **Handles material** for the teams that receive, pick, move and count stock, and **Checks quality** for the teams that pass or fail a kit or an assembly before it is built.

> **Every team needs a supervisor**
> A team with no supervisor has nobody to triage its requests or receive its late-work emails. Name one before the first request comes in, even if it is you for now.

3.3 Machines and stations, and bays

For each machine or station: its name (CNC mill 1), a short name for the traveler (CNC1), its kind (machine, station, inspection, CMM), what it does, its building and its team. Bays are where kits and assemblies are staged and built (Weld bay 1). A bay can have more than one kit or assembly going at once.

3.4 Storage and vendors

Racks, levels and spots where parts sit (**Build a rack** makes the bays and levels of a rack in one go). Vendors are the outside shops you send work to: heat treat, coating, grinding. Their promise dates drive Where's my part while a part is out.

3.5 Requests and codes

The kinds of request people send (Tool repair, New fixture, Prototype), each with the team it goes to first. Your project codes, and capital numbers if your plant asks for them. Your plant can share a link straight to one kind of request (Plant setup, Request types, Copy link).

3.6 Sign off, then People and Rules

The last step records who signed the setup off and prints the setup sheet. Then:

1. **Settings, People**: invite people (one at a time, or paste a list), switch Workflow on, make leaders, switch cost viewing on.
2. **Plant setup, Rules**: working hours per day, the slack added to every step, when the manager is emailed about late work, the hours limit on a run, and a labour rate if you want costs in money.
3. **Plant setup, Rules and shop screens**: name a screen for each shop TV and pick its boards.

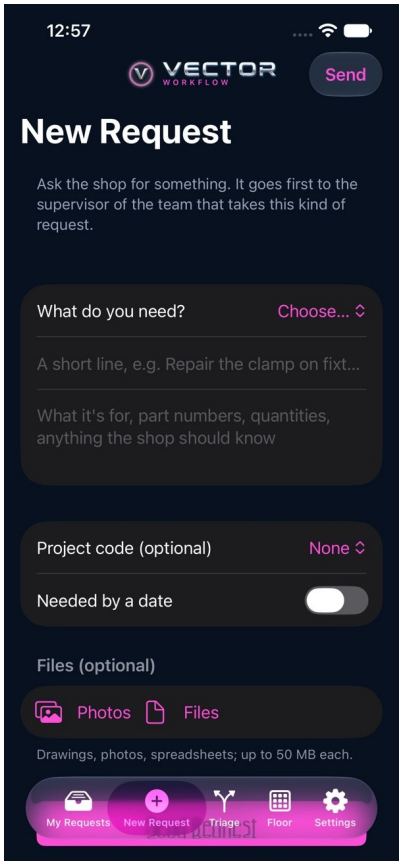
PART 4

Requests and triage

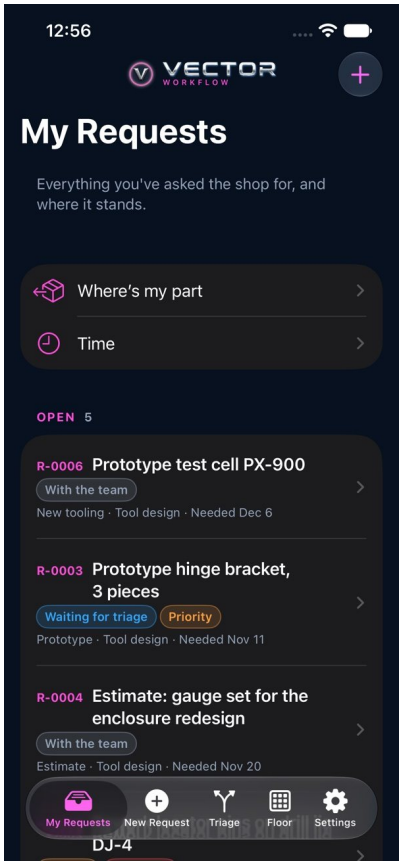
Ask once, in writing. The right supervisor routes it, and everyone on it can see where it stands.

4.1 Send a request

1. Tap **New Request** (on the web, **New request**).
2. Pick the kind of request and give it a short title and the details.
3. Pick the project code. If your plant asks, pick a capital number, or tap **No capital**.
4. Set the day you need it, and add photos or files (drawings, spreadsheets, up to 50 MB each).
5. Tap **Send Request**. It lands with that kind's first team, whose supervisor gets an email.



New Request



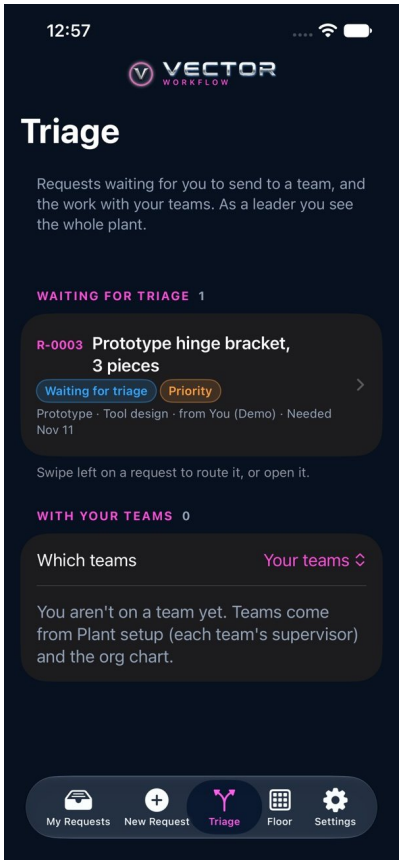
My Requests, with Where's my part and Time

4.2 Where it stands

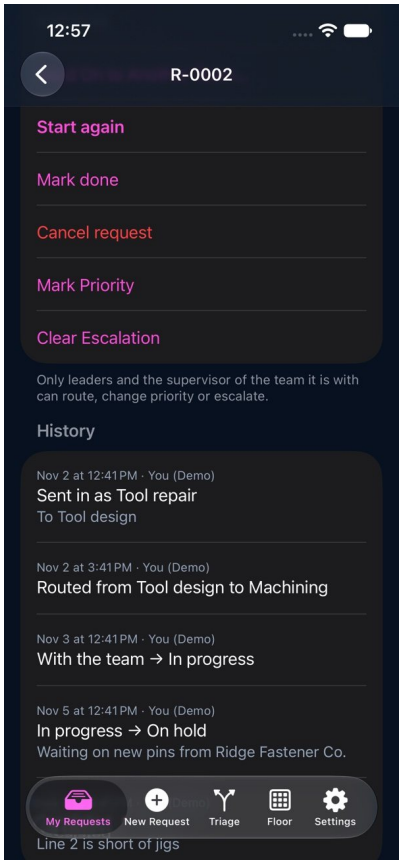
Waiting for triage: no supervisor has sent it to a team yet. **With the team**: it has been routed. Then **In progress**, **On hold**, **Done** or **Cancelled**. A request's page shows its details, files, parts and whole history; the team it is with can Start, Put on hold and Mark done, and a note goes to everyone on the request.

4.3 Triage

Supervisors see new requests for their team in **Triage**, set the priority and send each to the team that will do it. Leaders can send anything anywhere, raise priority and mark a request **escalated**, with a reason.



Triage



A request's page and its history

> **Who can route**
> Only leaders and the supervisor of the team a request is with can route it, change its priority or escalate it. Everyone else sees it and can add a note.

PART 5

Work orders, parts and routes

The team a request is with turns it into work: what parts, where each comes from, and the steps each made part goes through. This is done on the web.

5.1 Open a work order

1. On the web, open the request and open a work order on it.
2. Paste the parts list from Excel: part number, description, quantity.
3. Say where each part comes from: stock, buy, make, or a sister plant.
4. Give each made part its route: machines, moves between buildings and outside vendors, with estimated hours.
5. Release it to the shop. It releases only when every made part has a route.

Travelers are printed on the web: one per made part, with a barcode and a QR code (WO-0001-03 is part 3 of work order 1). The **Dates** card shows when each step is due and when the job is expected; the team can set a date on any step and on the bay.

5.2 Big jobs

A prototype of 500 to several thousand parts is run as a **project**: assemblies and levels, part numbers that grow (100, 100-10, 100-10-3), and a parts list imported from .xlsx or .csv with its level column (all or nothing, up to 10,000 lines). A revision is compared before it is applied, line by line. The spreadsheet view changes many rows at once and exports to Excel with the same columns as the import.

> **Drawings before release**
> On a project, a made part needs a drawing before it is released: a file on the line, or its drawing number and revision. It is on by default. Every assembly also passes a quality check before it is built.

5.3 Material

Teams that handle material use **Material** on the web: stock by location, receiving, picking stock into a job's kit, orders with promise dates, and **Shortages** (what is still missing for jobs in due-date order, and stock below its reorder point).

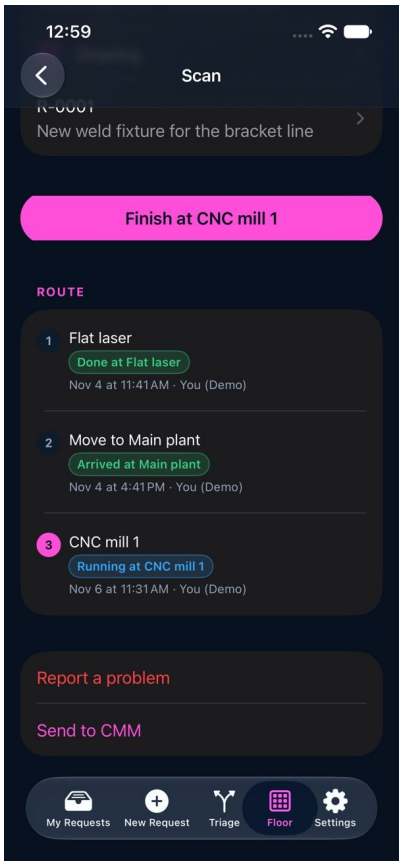
PART 6

On the floor

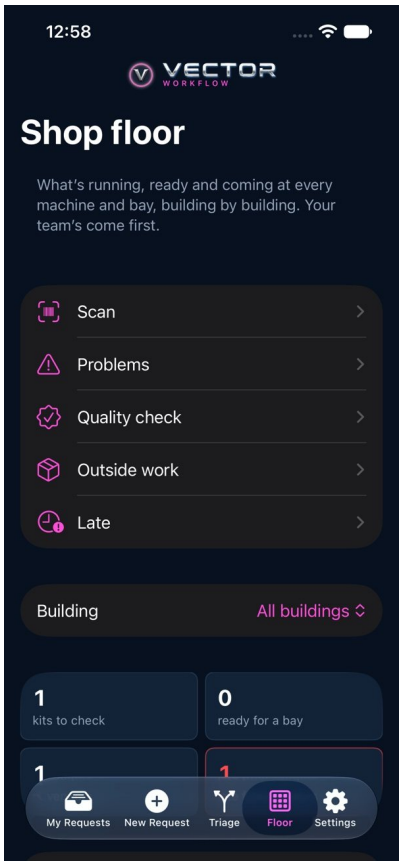
One scan at every hand-off. The plan, Where's my part and the hours all follow from it.

6.1 Scan the traveler

1. Open **Floor**, then **Scan**.
2. Tap **Camera** and point it at the traveler's code, or type it (WO-0001-03). A plug-in scanner works on the web.
3. Press the one button for the next step: **Start** or **Finish** at a machine, **Send** or **Arrived** for a move, **Out** or **Back** for a vendor.
4. After a part's last step, take it where the screen says: its kit, or its assembly's staging spot.



Scan: one button for the next step

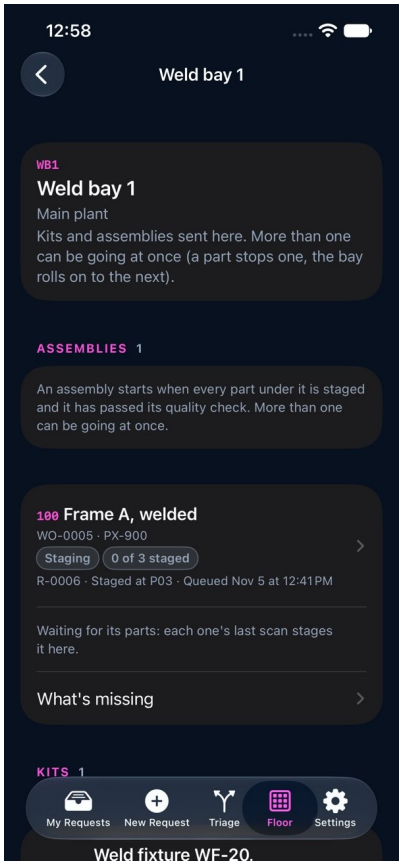


The shop floor

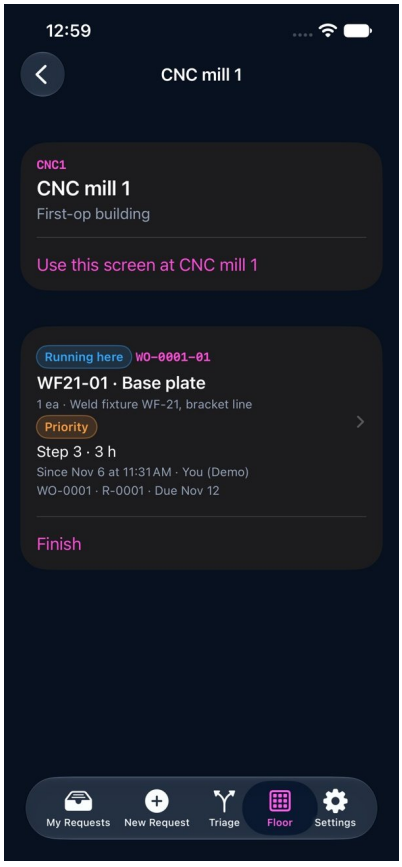
Your own last scan can be undone for 15 minutes (**Undo My Last Scan**). A phone that stays at one machine can be set to **Use this screen at** that machine: one scan starts a part planned there, the next finishes it.

6.2 Machines, kits, quality and bays

Floor shows what is running, ready and coming at every machine and bay, building by building, your team's first. A CMM records **Pass** or **Fail** instead of Finish. A complete kit is checked by a team that checks quality, then sent to a bay. At a bay: **Pull the kit**, then **Built**. An assembly starts when every part under it is staged and quality has passed it; **What's missing** lists the rest.



A bay and its assemblies



A machine's queue

6.3 Outside work

Outside work lists parts going to or at a vendor: **Send**, a new promise date, and **Back** when they return. While a part is out, its expected date is the vendor's promise.

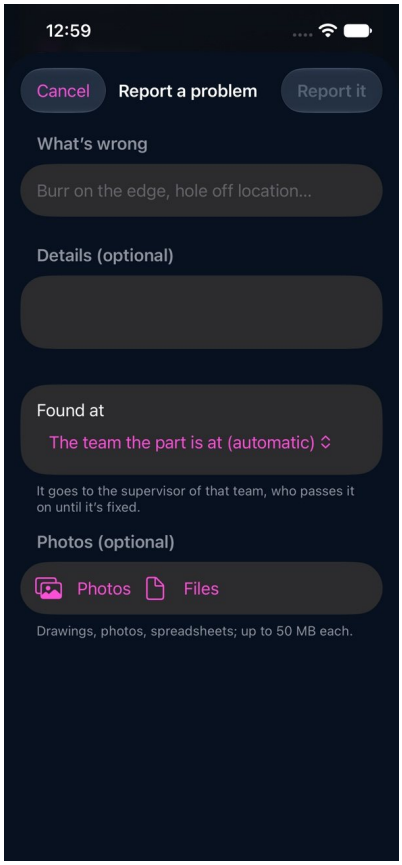
PART 7

Problems and validation

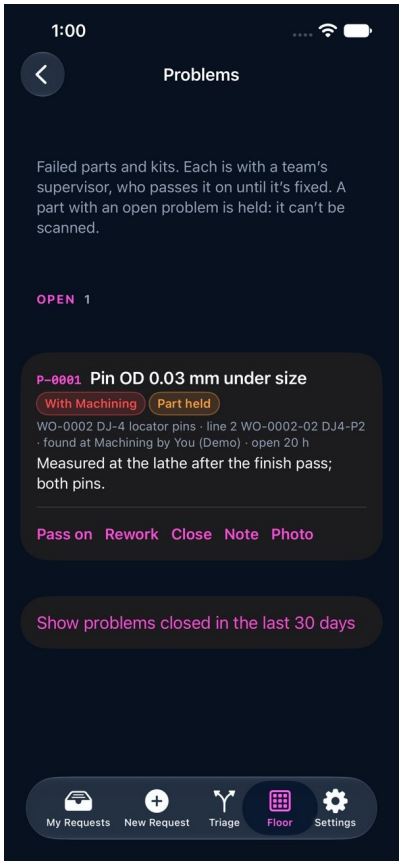
A bad part is held, not hidden. A buy-off is booked, not remembered.

7.1 Problems

A problem on a part holds it and goes to the supervisor of the team where it was found, who passes it on to the team that can fix it. Report one from Scan or a work order's page, with photos. **Floor, Problems** shows each with its history: **Pass on**, **Note**, **Photo**, **Rework** steps, **Close** and **Reopen**.



Report a problem



Problems and their history

> **A held part refuses every scan**
> Until its problem is closed, a held part can't be scanned on, and Where's my part says **Held: a problem is open**. That is on purpose: close the problem, or pass it on, rather than working round it.

7.2 Validation

A fixture buy-off or tool tryout at the bay, with the right people invited. Once a kit is at a bay, open the work order and choose **Set a ready date**: the type, the time, how long, where, and notes. **Set it and invite** emails the type's usual people a calendar invitation. **Move it** emails everyone the new time. On the day, the bay's supervisor (or a leader) marks who attended, then records **Passed**, or **Failed** with what failed, which opens a problem on the kit.

PART 8

Late work, time and cost

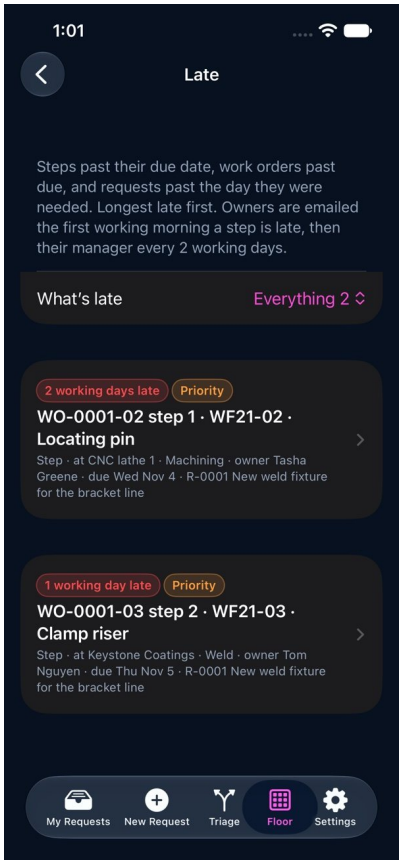
Late is found out the morning it happens. Hours come from the scans. Cost is estimate against actual, on every job.

8.1 What counts as late

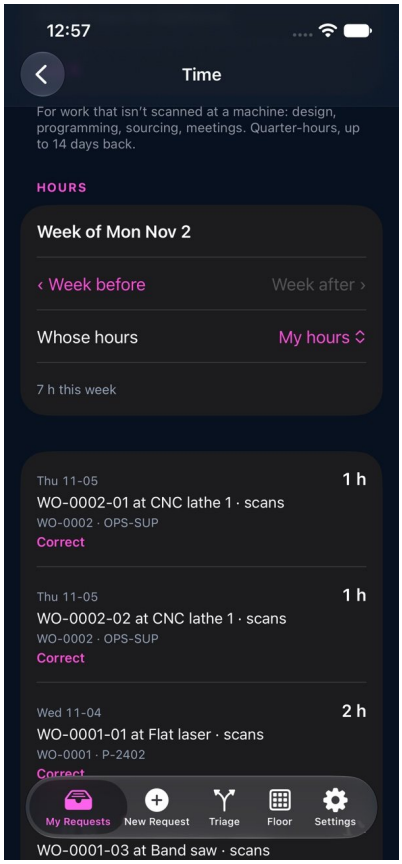
A step is due the day the part reaches it, plus its estimated hours in working days, plus your plant's slack. Outside work is due on the vendor's promise date. **Floor, Late** lists late steps, late work orders and requests past the day they were needed, longest late first.

8.2 The emails

The first working morning a step is late, its owner is emailed: the supervisor of the machine's team (for outside work and moves, the supervisor of the team the request is with; at a bay, the bay's person). After a set number of working days their manager in the org chart is emailed, then the next level up. The admin sets the timing in **Plant setup, Rules**.



Late, longest late first



Time: the week's hours

8.3 Time

Shop hours come from the scans: Start to Finish at each machine, and start to done at a bay. A run longer than your plant's limit (12 hours unless changed) is marked **Check hours**, and the machine's team supervisor or a leader corrects it with a reason. Everyone else logs time in **Time**: the day (up to 14 days back), the hours in quarter-hours, the work order or project code. Your own entries can be changed or withdrawn for 7 days.

8.4 Cost

Cost viewers (admins, leaders and anyone the admin switches on) see a Cost card on every work order and **Cost by project code** on the web: estimated hours (the steps, the bay and office hours) against actual (scans and logged time), and material estimated against what was paid or picked. With a labour rate in Plant setup, Rules, hours become money too. Nobody else sees costs, and shop screens never show them.

PART 9

Running it week to week

Vector Workflow works when the scans are honest and the problems are closed. A few minutes a day keeps both true.

9.1 Every morning, for a supervisor

1. Read the late-work emails, then open **Floor, Late**.
2. Clear **Triage**: every new request routed, with a priority.
3. Open **Floor, Problems**: pass on anything sitting with your team that another team should fix.
4. Check **Check hours** on your machines, and correct any run that was left open.

9.2 Shop screens

Any signed-in browser on a shop TV can be a screen: **Floor, Shop screen**, pick one, and it fills the window and cycles its boards (late, machines, bays, quality check, shortages, outside work, problems, today's validations), updating every minute.

9.3 Every week, for the admin

- New starters invited, leavers switched off in **Settings, People**.
- Request types, machines and vendors kept current in **Plant setup**.
- **Cost by project code** reviewed with whoever owns the budget.
- The Help Center (vectorxpro.com/workflow/help) and the quick card handed to anyone new.

APPENDIX A

Who can do what

What	Who can do it
Send a request, watch Where's my part, log time	Everyone with Workflow switched on
Route a request, change its priority	Leaders, and the supervisor of the team the request is with
Escalate a request (with a reason)	Leaders, and the supervisor of the team the request is with
Open and release work orders	The team the request is with
Scan parts	Anyone on the floor teams
Pass a problem on	The supervisor of the team it is with
Pass or fail a kit or an assembly	A team that checks quality
Receive, pick, move and count stock	A team that handles material
Mark attendance at a validation	The bay's supervisor, or a leader
Correct a run's hours (with a reason)	The machine's team supervisor, or a leader
See costs	Admins, leaders, and anyone the admin switches on
Plant setup, Rules, shop screens, People	The plant admin

APPENDIX B

Setup checklist

Before you invite anyone	
☐	Every person has the right manager on the org chart
☐	Leaders and cost viewers decided
Your plant (the setup wizard)	
☐	Buildings, and which ones keep parts
☐	Teams, each with a supervisor; material and quality teams ticked
☐	Machines and stations with short names for the traveler
☐	Bays, racks and storage spots
☐	Vendors
☐	Request types and the team each goes to first
☐	Project codes, and capital numbers if used
☐	Setup signed off
People and rules	
☐	Everyone invited, and everyone accepted
☐	Workflow switched on for each person who uses it
☐	Late-work timing, slack and working hours set
☐	A shop screen named for each shop TV
The first job	
☐	A real request sent and routed
☐	Work order released with every made part routed
☐	Travelers printed, and the first part scanned

APPENDIX C

The words Vector uses

Word	What it means
Request	What someone asks the shop for, with a project code and the day it's needed. R-0012.
Triage	Where a supervisor sets a new request's priority and sends it to a team.
Work order	The job a team opens on a request: its parts and their routes. WO-0003.
Route	A made part's steps: machines, moves and vendors, with estimated hours.
Traveler	The printed sheet that goes with a part, with its barcode and QR code. WO-0003-02.
Kit	A work order's parts, gathered in one spot for its bay.
Staged	A part whose last scan put it in its assembly's spot.
Bay	Where kits and assemblies are built.
Held	A part with an open problem. It refuses every scan until the problem is closed.
Late	Past its due date for that step. Its owner is emailed the next working morning.
Escalated	Marked by a leader or supervisor as needing attention, with a reason.
Check hours	A run longer than the plant's limit, waiting for a supervisor to correct it.

Questions? Craig · support@vectorxpro.com. Every screen, step by step: vectorxpro.com/workflow/help.