

## RFID · RTLS · PROCUREMENT

# How to judge an RFID or RTLS proposal before you sign

An independent guide to RFID (radio-frequency identification) and RTLS (real-time locating system) proposals, for procurement, operations managers, engineering, IT and OT (operational technology) teams, and executives. It covers what a good proposal contains, the red flags that cost money later, and where a second opinion pays for itself.

## What a good proposal does

You can see what you get, what it costs over time and how you get out

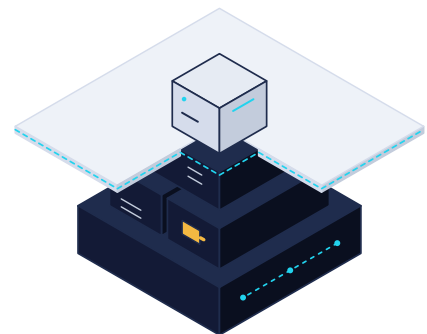
- **States the problem it solves:** the use case and site conditions in your words, and the measurable performance the provider will be tested against.
- **Itemises every cost:** one-off and recurring costs shown separately, covering hardware, software, survey, installation, integration, training and support.
- **Says how success is tested:** an acceptance test with conditions, method and pass marks.
- **Shows the cost over time:** licences, support, batteries and replacement tags for at least five years.



## Where the real cost hides

The pain points buyers meet after signing

- **Accuracy that only held in a demo:** the system works in the showroom, not in a full warehouse or hangar.
- **Licences that grow:** per-tag, per-reader or per-site fees, and yearly increases that were not in the first price.
- **Integration "by others":** the link to your warehouse management system (WMS), manufacturing execution system (MES) or enterprise resource planning (ERP) system turns out to be your job, or a second project.
- **Batteries and tags nobody counted:** replacement labour and stock appear only once the first tags go flat.



## WHO SHOULD READ WHAT

### Procurement

Pages 2 to 4.

### Operations managers

Pages 2 and 3: what changes on the floor and the acceptance test.

### Engineering

Page 3: accuracy, test conditions, tags and batteries.

### IT/OT

Pages 2 and 3: hosting, integration, security and exit terms.

### Executives

This page and page 5: total cost, payback and the decision.

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## What a proposal must contain

If a line is missing, ask for it in writing before you compare prices

### LINE BY LINE

The headline lines every proposal needs. Each one hides more detail that decides the real price.

#### CHECKLIST

##### Scope and design

- ☐ Requirements restated
- ☐ Site survey
- ☐ Bill of materials

More lines checked in our second opinion.

#### CHECKLIST

##### Software, integration and service

- ☐ Licence model
- ☐ Integration scope
- ☐ Acceptance test

More lines checked in our second opinion.

#### CHECKLIST

##### Lifetime and exit

- ☐ Battery plan
- ☐ Exit terms
- ☐ Ownership

More lines checked in our second opinion.

## Questions to ask, by role

Share these before the provider presentation, not after

| Role        | Ask the provider                                                    |
|-------------|---------------------------------------------------------------------|
| Operations  | What happens when the system is down?                               |
| Engineering | Under what conditions was the accuracy measured?                    |
| IT/OT       | Under whose change control are updates done?                        |
| Procurement | What is the full five-year cost?                                    |
| Executives  | What result do you commit to, and what happens if we do not see it? |

These are the opening questions. We bring the follow-ups.

### OFTEN MISSING

Lines we most often find missing from a proposal

- **Regional radio approvals** for every country of use.
- **Support life:** how long updates are provided.
- **The price after year one**, for licences and support.
- **Price validity:** how long the prices hold.

We check every line against your site in a second opinion.

### WHERE A SECOND OPINION PAYS FOR ITSELF

The points buyers most often find too late

- **A survey left out:** the price rests on guesses about your site.
- **Fees after year one:** the five-year cost is higher than the headline.
- **A link left "by others":** the integration becomes your project.
- **No exit terms:** the next change means replacing tags or data.

We check one proposal, or compare several, before you sign.

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## Red flags, and what to ask instead

None of these means the provider is wrong, but each needs a written answer

| Red flag                                       | Why it matters                                                                                                    | Ask instead                                                                                                                                                                        |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accuracy claims without test conditions</b> | A figure measured in an empty room says little about a busy site full of metal, people and stock.                 | Which metric (location error, read rate, missed and false reads, delay), measured where, with how many tags, at what height and speed, at what percentile, against what reference? |
| <b>Hidden licence or subscription costs</b>    | Per-tag, per-reader, per-user or per-site fees, cloud charges and yearly increases can outgrow the hardware cost. | Ask for every recurring fee, year by year.                                                                                                                                         |
| <b>Lock-in</b>                                 | Tags, data formats or cabinets that only work with one provider make the next change expensive.                   | Ask what you can take with you.                                                                                                                                                    |
| <b>Missing survey scope</b>                    | Without a survey, the layout and quantities are guesses, and changes appear later as extra costs.                 | Ask which assumptions the price rests on.                                                                                                                                          |
| <b>Missing integration scope</b>               | "Interface available" or "by others" often means you build or pay for the link yourself.                          | Ask who builds and tests each link, and whether it is in the price.                                                                                                                |
| <b>Tag lifetime and battery claims</b>         | Battery life depends on report rate, temperature and features in use. Tags also wear out, get lost or break.      | Ask for battery life at your settings.                                                                                                                                             |
| <b>Pilot that does not carry over</b>          | A pilot on very different hardware or software from the roll-out proves little.                                   | Ask which differences remain at roll-out.                                                                                                                                          |
| <b>Vague acceptance</b>                        | Without a test, "working" means whatever the provider says it means.                                              | Ask for the acceptance test in the contract, linked to payment.                                                                                                                    |

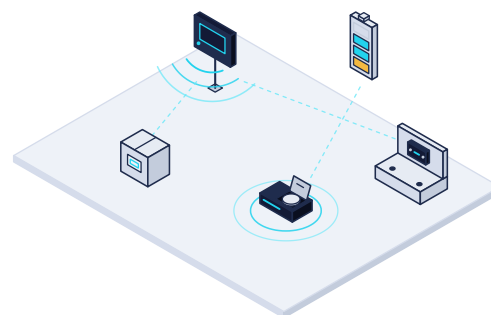
The follow-up questions that expose a weak answer are what we bring to the call.

**At contract stage, too:** payment milestones tied to dates rather than accepted results, and warranty terms that a site change can void. We review the terms with you before you sign.

## Tag lifetime and battery

### Count the cost of keeping tags alive

- **Replacement work:** someone has to find, open or swap each tag. Price that labour in the running cost.
- **Warnings:** low battery should be reported early, by tag, so swaps can be planned.
- **In the survey:** we cost tag upkeep from your report rate and site conditions.



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## Comparison checklist

Fill in one column per technology provider. A blank cell is a question to send back

| Check                                                    | Provider A | Provider B | Provider C |
|----------------------------------------------------------|------------|------------|------------|
| Same scope, area and use case as the others              |            |            |            |
| Site survey included, and its findings priced            |            |            |            |
| Acceptance test written and linked to payment            |            |            |            |
| Integration scope: systems, events, who builds it        |            |            |            |
| Every recurring fee listed for five years                |            |            |            |
| Data and configuration export, open format               |            |            |            |
| Five-year total cost of ownership                        |            |            |            |
| Plus the site-specific checks we add in a second opinion |            |            |            |

**Normalise before you rank.** Put every proposal on the same scope, the same period and the same quantities. A cheaper proposal that leaves out the survey or the integration is not cheaper.

## Run a fair comparison

Give every provider the same information and the same test

1 Same brief

2 Same site access

3 Same test

4 Normalise

5 Score

6 Clarify in writing

We run this for you, from one brief to written clarifications, so every bidder is judged on the same basis.

## Procurement support from TRACIO

### Before you invite bids

- One brief for every bidder
- The same site access and test
- Pass marks agreed with you

### When proposals arrive

- Clarification meetings with each bidder
- Reference checks on similar sites
- A shortlist you can defend

### Before you sign

- Acceptance test linked to payment
- Exit terms and data export
- A pilot that carries over to roll-out

### WHAT YOU GET BACK

When we compare proposals for you

- **A side-by-side** on the same scope, quantities and period.
- **A five-year cost** for each proposal.
- **Written questions** for each bidder, from every blank cell.
- **A recommendation** you can take to the decision meeting.

Scoped per project. The fees are on page 6.

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## KPIs, total cost and payback

Baseline each KPI before the pilot

### KPIS TO TRACK

A KPI is a number you track, before and during the pilot.

- **Read rate or detection rate** in your acceptance test
- **Location accuracy** at the agreed conditions
- **System availability** against the support terms
- **Time from event to your business system**
- **Tag and battery replacements** per month
- **Support response and fix times** against the contract
- **Your process KPIs**, such as search time or stock accuracy

We agree how each KPI is measured, and the baseline, in the pilot plan.

### TOTAL COST AND PAYBACK

ROI (return on investment) compares what you gain with what you spend. Payback is the time until the savings cover the cost.

#### What drives payback here

- Your process KPIs, measured against your baseline
- The full running cost over five years, not the first invoice
- One-off costs that are in scope, not added later

If the benefit is not bigger than the running cost, there is no payback.

#### Bring to the call

- One-off cost, from each proposal
- Running cost per year, from each proposal
- Today's figures, from your records

We work out total cost and payback with you from your own pilot data, not technology provider averages. **Bring rough figures to a free 30-minute call.**

## What it means for each role

### YOUR ROLE

### WHAT IT MEANS FOR YOU

|                                   |                                                                                        |
|-----------------------------------|----------------------------------------------------------------------------------------|
| <b>Procurement</b>                | Proposals that can be compared line by line, with exit terms in the contract.          |
| <b>Finance</b>                    | A five-year estimate with every stated fee, scale assumption and price change visible. |
| <b>Operations and engineering</b> | An acceptance test on your site that decides whether it works.                         |
| <b>IT/OT</b>                      | Network, security and change control agreed up front.                                  |
| <b>Executives</b>                 | A decision based on tested results and the full cost, not the headline price.          |

## Plain-language glossary

### Proposal terms

- **Bill of materials:** the list of every item, with quantity and price.
- **Acceptance test:** the test the system must pass before you accept and pay.
- **Total cost of ownership:** everything you pay over the period, not just the first invoice.

### Technology terms

- **Anchor:** a fixed unit that locates battery tags, for example in UWB.
- **Read rate:** the share of tags read when they should be.
- **Report rate:** how often a battery tag sends a signal so the system can update its position.

### Contract terms

- **Lock-in:** when changing provider means replacing tags, hardware or data.
- **Exit terms:** what you keep and how you get your data out when a contract ends.
- **Price validity:** how long the prices in the proposal hold.

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## How a TRACIO project works: five stages

### 1 Discovery

Your pain points, site, process and KPIs.

### 2 Assess and shortlist

Site survey, then the options that fit compared.

### 3 Pilot with KPI baseline

KPIs measured first. Pass marks agreed in writing before set-up.

### 4 Integrate

If useful, one agreed link into your business systems, under your change control.

### 5 Multi-site roll-out

Only after a go decision, one area at a time.

**How a pilot runs:** set-up, then live weeks in normal use, then a short written report with a go or no-go. Timings are agreed per site.

## Questions we hear

### "We already have a system."

We give a free second opinion and check how it performs against your KPIs, using your live data and a site visit.

### "How do we know it will work here?"

Judge us on method: a pilot, KPIs measured before and during it, and a written go or no-go.

### "Can you bid with us, or for us?"

Yes. We team with integrators, or act as the buyer's independent adviser, but never both on the same bid.

### "Do you sell or resell hardware?"

No. We don't sell hardware, so our advice stays independent. We rent pilot equipment and offer survey and installation support.

### Free second opinion

Send us your technology provider's quote or spec for a free second opinion. What to send: the quote or spec, a floor plan or site photos, item counts and your current process. Bring it to the call or send it via [tracio.com/contact](https://tracio.com/contact).

### TRACIO consultancy fees

- **UK:** £3k to £30k per project, £1,200 a day
- **Europe:** €3.5k to €35k per project, €1,400 a day
- **US and Canada:** \$4k to \$40k per project, \$1,600 a day
- **Middle East and Australia:** \$4k to \$40k per project, \$1,600 a day
- **Rest of the world:** \$3.5k to \$35k per project, \$1,400 a day

Scoped per project, no packages. Fees cover our work only; hardware, software licences and other supplier costs are separate. \$ = US dollars. Travel extra.

**Why TRACIO:** we work for you, not for the technology providers. We compare the options across the market that fit your site, provide site surveys and installation support, and work worldwide under your change control.

### SECOND OPINION

What to send us before the call

- **The quote or spec** you are comparing.
- **A floor plan** or photos of the area.
- **Item counts:** how many items, tools or assets.
- **Your current process**, and any test results you already have.

### SECOND OPINION

What we go through on the call

- **Scope:** survey, installation, integration and acceptance test.
- **Cost over time:** licences, subscriptions, tags, batteries and support.
- **Lock-in and exit:** standards, data export, ownership.
- **Claims:** accuracy and read rates, and the conditions behind them.

**Also from TRACIO:** buyer guides on VDA 5050 for robot fleets, automatic bookings into MES and WMS and tool control and RTLS for aviation MRO; checklists for RF site surveys, UWB anchor placement, RTLS pilots and RFID feasibility studies. Ask for any of them on the call or at [tracio.com/contact](https://tracio.com/contact).

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