

RF SITE SURVEY

RF site survey checklist

What to check before, during and after a radio-frequency site survey for UWB, RAIN RFID, BLE AoA, LoRaWAN and Wi-Fi location, so the design holds up on a live shift. Terms are explained on page 3.

BEFORE THE SURVEY

The pre-survey checklist

- ☐ **Site walk at different times of day**, including the busiest shift, noting shift patterns, door cycles and traffic.
- ☐ **Floor plan checked** against the as-built layout.
- ☐ **Metal and glass partitions mapped**, the main causes of reflected signals (multipath).
- ☐ **Moving equipment logged**: forklifts, AGVs, doors and presses.
- ☐ **Existing radio scan**: Wi-Fi, BLE, DECT, Zigbee, any existing UWB, and sub-GHz systems such as RAIN RFID and LoRa.
- ☐ **Operations interviews**: what the floor team needs to see, and where visibility is lost today.
- ☐ **KPI baseline measured**, such as WIP, search time, dock dwell or OEE.
- ☐ **Pass and fail acceptance criteria signed** before the pilot is scoped.

Covered in the survey: ceiling heights, floor surfaces, ducting and sprinklers, and the network map.

BEFORE THE SURVEY

Before anyone climbs a ladder

- ☐ **Use cases confirmed**, with the smallest distance that changes a decision.
- ☐ **Acceptance metrics agreed** in writing.
- ☐ **Floor plan version frozen**, so design and survey refer to the same layout.

Covered in the survey: peak-hour schedules and candidate mount points.

SURVEY

What a TRACIO survey covers

- **The building**: ceiling heights, floors, ducting and sprinklers.
- **The radio**: what is already on air, band by band.
- **The network**: switches, power over Ethernet and the time source.
- **Your use cases**, and the distance that changes a decision.

Scoped per site. The fees are on page 3.

Want a second pair of eyes? Book a [free 30-minute call](#) and bring your quote or spec for a second opinion.

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DURING THE SURVEY

Test under live conditions

- ☐ **Real tagged assets** walked and driven, not foam boards.
- ☐ **Repeated with doors open and closed**, and with nearby equipment present.

Covered in the survey: candidate positions and the measurements each technology needs.

PER TECHNOLOGY

UWB, RAIN RFID, BLE AoA, LoRaWAN and Wi-Fi location

Each technology has its own checks, from timing budgets to antenna geometry. We tailor these to your site in the survey.

AFTER THE SURVEY

Deliverables to insist on

- ☐ **Annotated drawings** with proposed mounts.
- ☐ **Risk register** for multipath and non-line-of-sight zones.
- ☐ **Density recommendation tied to your KPIs**, not the technology provider's default.
- ☐ **A clear statement** of what the survey did not prove.

Covered in the survey: the bill of materials and the go-live test plan.

AFTER THE SURVEY

Handover pack

- ☐ **Risk zones**, with the location error the provider expects in each zone, to be tested.
- ☐ **Change control note**: which layout changes trigger a new survey, and who decides.

Full handover pack agreed in the survey scope.

HANDOVER

What you get after a TRACIO survey

- **Drawings** with every mount, height and orientation.
- **Schedules** for cabling and power.
- **A test matrix** and a go-live script timed for peak operations.
- **The raw logs**, stored with the signed acceptance metrics.

Send us an existing survey report for a free second opinion.

Sign-off

ROLE

NAME AND SIGNATURE

DATE

Operations sponsor

IT/OT owner

Procurement

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A second pair of eyes, before you commit

We are independent advisers on RTLS, RFID and IoT. We do not sell hardware, so we can review a survey, a study, a pilot plan or a design on its merits, and tell you plainly what is missing.

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.

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.

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.

Plain-language glossary

RF: radio frequency.

UWB: ultra-wideband, a short-range radio technology that locates tags using fixed anchors.

RAIN RFID: passive UHF RFID tags with no battery, read at gates or by handheld scanners.

BLE AoA: Bluetooth Low Energy angle of arrival, where locators measure the direction of a tag signal.

LoRaWAN: a low-power wide-area network for small, infrequent messages.

OEE: overall equipment effectiveness.

WIP: work in progress.

AGV: automated guided vehicle.

DECT: the radio system used by cordless phones.

Zigbee: a low-power radio for sensors and building controls.

RTLS: real-time location system, showing where tagged items are.

RFID: radio-frequency identification, tags read by radio.

IoT: internet of things, connected sensors and devices.

IT/OT: office IT and operational technology, the systems that run the site.

KPI: key performance indicator, a number you track.

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