

Field note

Design excellence: the questions to ask before you choose a system

Design is how a system works, how it feels to use, and how it fits the airport around it. It is also where most of a programme's delivery risk is decided. The questions an evaluator can put to any product, proposal or design before committing to it.

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Why design belongs in the evaluation

Ability to execute is usually tested through the plan, the team and the commercial terms. The design gets a technical compliance check and moves on. That misses the point: the design is the thing the plan will build, the team will run and the terms will govern for a decade. A weak design is the delivery risk that surfaces last and costs most, because by then it is in a contract.

Design excellence sounds like a vendor's phrase, and it is one; on the selling side it is among the strongest cases a supplier can make. On the buying side it is a discipline: a set of questions that separate a system that will be used, supported and extended from one that will be tolerated. The questions below work for a product on a shortlist, a solution in a proposal, or a target architecture on a whiteboard.

The questions

Question	What you are testing	What it looks like at an airport
Aesthetics. Is it visually clear and confident?	Credibility and care. A system that looks considered usually is; one that looks like an afterthought usually was.	An operations display a duty manager can read across a room at 03:00. Signage and kiosks that belong in the terminal they stand in.
Functionality. Does it do the job it was bought for, and do it well?	Fit to purpose over feature count.	The resource management system produces a stand plan the operations team will use on a disrupted day, rather than a plan they override by hand.
Usability. Can a new member of staff use it without a manual?	How much of the training budget the design is quietly consuming.	A check-in agent on their first shift, a contractor at a self-service bag drop, an immigration officer in a queue of two hundred.

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Sustainability. Is it built for the long run?	Energy, hardware refresh cycles, and whether the roadmap outlives the contract.	Touchpoints that run on standard hardware, power that is measured, and a product that is still being invested in at year five.
Room to grow. Can new capability be added without a rebuild?	Whether the architecture is open or a set of locked boxes.	Adding biometric boarding to an existing common-use platform through published interfaces rather than a new programme.
Context. Does it know where and how it will be used?	Whether the design has met the environment it is going into.	Hub and regional airport, air side and land side, local regulation, local partners, and the systems already in place.
Inclusive and accessible. Can every passenger and every member of staff use it?	Whether the design gives every traveller accessibility, safety and dignity, whatever their ability or background, and whether it meets the accessibility rules of the market.	A passenger with reduced mobility, low vision or no local language completes self-service without help; an agent with a week's experience runs the desk.
Secure. Is security in the architecture rather than bolted on?	Data residency, identity and access, patching and incident response, designed with the regulator's tests in mind.	Critical information infrastructure hosted where the regulator requires it, with staff and contractor access controlled and an incident the operator can handle at 02:00.
Experience. How does it feel to use, for staff and for passengers?	Whether people will adopt it or route around it.	A passenger who moves through the airport without wondering what to do next, and staff who reach for the system rather than the workaround.
Buildability. Can it be delivered and scaled as designed?	The gap between the demonstration and the deployment.	The pilot at one gate becomes the same design at sixty gates, in the timeframe and at the cost that was quoted.

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Durability. Will it stand up to the operation?	Resilience, degraded modes and recovery.	The airport keeps processing passengers when the connection to the world is cut, and comes back cleanly when it returns.
Adaptability. Can it change with the airport?	The cost of the next change, and the one after that.	New carriers, new regulations, a new terminal, a new border process: absorbed through configuration and release management rather than a fresh procurement.

Using the questions

Put the questions to every option on the shortlist and score them the same way; the pattern of answers says more than any single one. Ask suppliers to answer them against your airport, with your traffic, your systems and your rules, rather than in general. And ask them early, at the design stage, when the answers can still change the design. In procurement the questions confirm; before procurement they shape.

For suppliers, the same list is a proposal outline. A bid that answers them plainly, with evidence from airports like the one being bid for, has made most of the ability-to-execute case before the evaluator reaches the plan.

Our position

Treat design as the first test of ability to execute, and test it with the same rigour as the plan and the price. The questions are ours to bring to an evaluation or a proposal; the evidence has to be the supplier's, given against the airport in front of them. A design that answers them well is one that will be used, supported and extended for the life of the contract, which is the outcome the whole programme exists for.

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