

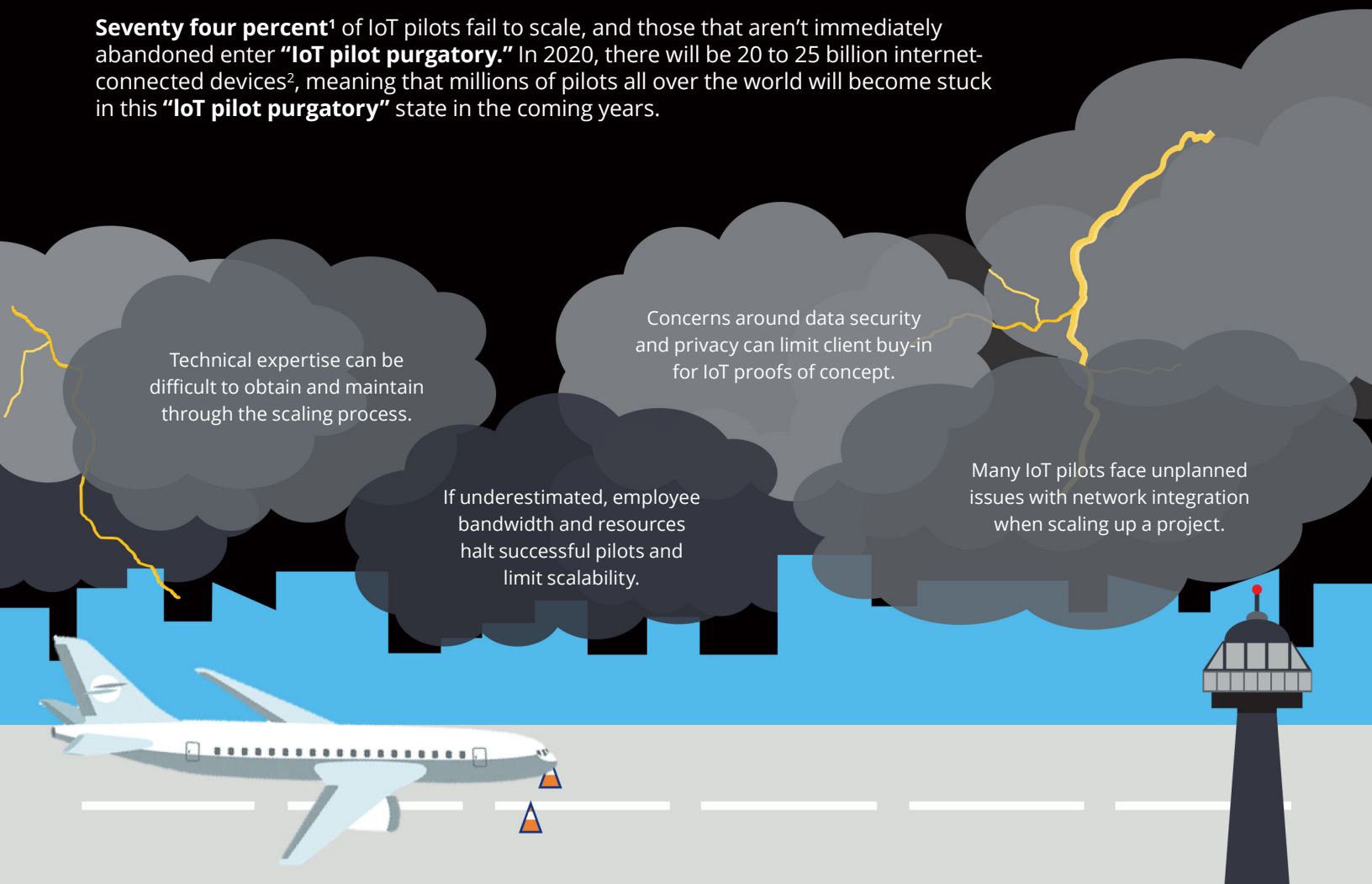


Stuck on the runway: IoT pilot purgatory

A large US-based airline deployed an Internet of Things (IoT) proof of concept to provide customers with security wait times. After the initial phase ended, **only 1.4 percent of target customers had used the technology**, and there was no clear path to scale across the organization; it was stuck in “**IoT pilot purgatory**”—a state of ambiguity without a clearly defined strategy to scale.

Here’s the kicker: They’re not alone.

Seventy four percent¹ of IoT pilots fail to scale, and those that aren’t immediately abandoned enter “**IoT pilot purgatory.**” In 2020, there will be 20 to 25 billion internet-connected devices², meaning that millions of pilots all over the world will become stuck in this “**IoT pilot purgatory**” state in the coming years.



Clear for takeoff: With Deloitte’s help, the airline was able to pivot, navigate out of IoT pilot purgatory, and justify scaling. Turn the page to learn how . . .

Navigating out of IoT pilot purgatory

Escaping IoT pilot purgatory: With Deloitte's help, the airline pivoted to a less complex technology, emphasizing business value and customer opt-in ease. The strategy increased customer participation and predicted customer wait times within ~90 percent accuracy. Deloitte uses a time-tested **innovation scaling approach** to promote IoT innovation and scaling: think big, start small, scale fast, and fail forward.

Steps to avoid pilot purgatory	IoT piloting strategy
1. Create the proof of value	IoT pilots often fail due to being a technology-led implementation prompted by "shiny" new tech rather than a value-led implementation prompted by a business case. It's critical to know that the new technology will amplify value and that the value added will be greater than the change management and incremental cost of deployment before starting. Additionally, consider whether piloting is the most efficient method to demonstrate up-front value to stakeholders—a short experiment, proof of concept, or minimum viable product could also prove sufficient value while retaining the "stickiness" that will make sponsors increasingly interested.
2. Select IoT pilot group and location	Select a location where the pilot would have a large measureable impact, and where the technology can easily connect with existing infrastructure and networks. Conduct a network assessment to verify the IoT (e.g., sensor) data transmission easily integrates with the existing data platform(s). Partner with an experienced, agile IoT vendor for quick and standardized implementation at the pilot location.
3. Establish specific goals and measures of success	IoT pilots often fail because success is initially defined as a successful deployment of a new technology rather than a measurable business goal. Measures of success need to be directly tied to the IoT pilot's proof of value. Common measurable metrics for IoT pilots include Overall Equipment Effectiveness (OEE) (e.g., run time, sensor and network connectivity, bandwidth, and speed), end-user statistics (e.g., usage length and frequency), and database and security monitoring (e.g., encrypted protocol analysis).
4. Develop, deploy, and evaluate the pilot	View every decision through the lens of scaling. Consider greenfield vs. brownfield technology integration, custom coding needs, data collection and processing requirements, data storage, and data security requirements. Plan to scale your technology's network and associated bandwidth appropriately, both in cost and size.
5. Document the key steps, dependencies, and success factors	Even when an initial IoT pilot is successful, forgetting to record the business and technical steps taken make duplicating and scaling the solution a challenge.
6. Develop a scaling roadmap and checklist	Explicitly schedule reoccurring touchpoints between information technology and operational technology teams—IoT forces business change via technology and these interactions cannot be left to chance.
7. Develop shared infrastructure	Rather than repeating steps each time the IoT technology is introduced to a new group of users, consolidate these efforts to save time and money. Establish a single shared platform and infrastructure to support and connect IoT data and networks (e.g., different data structures, date types, and coding languages). Create standard training materials to ease the often difficult transition to technology-based and automated solutions.
8. Scale the program	Emphasize change management—scaling IoT is just as much about changing the business process and people's behavior as it is successfully implementing the enabling technology. Incentivize IoT implementation to change workforce behavior if necessary. Consider that the proof of value and documented implementation steps will likely vary across business units.

Get in touch:

Kelly Marchese
Tel: +1 404 915 2346
Email: kmarchese@deloitte.com

Chris Bates
Tel: +1 240 237 4528
Email: chbates@deloitte.com

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¹ Cisco, "The Journey to IoT Value: Challenges, Breakthroughs, and Best Practices," *Connected Futures Cisco Research*, May 20, 2017.

² <https://iot-analytics.com/state-of-the-iot-update-q1-q2-2018-number-of-iot-devices-now-7b/>