Pitfalls to Avoid When Selecting IoT Data Plans

If you're in the IoT world, you know that machine-to-machine cellular data usage is skyrocketing. The average monthly data usage has nearly doubled in just the last three years. Given that dramatic increase in data usage, it's also no surprise that one of the most common questions we get here at Twilio is how to most cost effectively manage data plans.

In fact, a recent survey from IDC revealed that when customers looked at data plans, their two top concerns were data costs and pricing models. In fact, managing cost has emerged as a top concern for organizations *regardless* of use case, deployment location and device fleet size.

Those same customers outlined the primary sources of their data costs:

- 65% of organizations are paying for overages and unused data
- More than 50% of the organizations manage multiple mobile carriers
- For organizations with multiple domestic mobile operators, their top challenge is having multiple bills to reconcile, normalize and pay
- For organizations with multiple global mobile operators, the top challenge is overage fees.

It all adds up to wasted time and dollars. Let's look at where all those costs are coming from today.

The Current State of Cellular IoT Plans

Many cellular IoT plans look pretty similar to the consumer rate plans that we all saw with our mobile devices over the last decade. Let's take a minute to look at the different approaches on the market today.

Many plans require that businesses anticipate the amount of data needed in advance for their IoT devices. This "use it or lose it" approach usually results in paying for unused data. Conversely, if you exceed your plan and go over, you are charged an overage fee above the negotiated rate. Either way you are paying the price for an incorrect estimation.

To mitigate that situation, some carriers offer data pooling. With this option, even though you are picking a fixed amount,the unused data can carry over. Since the devices are aggregated, they can all draw from the pool. While this approach is an improvement, overages are still very common.

Another last approach is the move by carriers to create regional worldwide zones. In those plans, the data rates are bundled based upon an average cost structure in the particular geography. While this does bring some pricing consistency, the problem is that you are still picking a fixed amount of data. Plus, that fixed price data is typically more expensive, since the rates are often based on the highest cost in that geography.

Five pitfalls to avoid before picking your cellular IoT provider

Over the course of nearly 10 years in IoT and 20 years in telecom, I think I've probably seen every variation of a data plan. Here are a few of the most common pitfalls specifically related to IoT data plans. Ask these questions as you dig down into the details of each data plan that you are considering:

1. **What is the rounding policy?** This is important because some carriers round up to the megabyte. While that may seem like a small increment, over time and at scale, that rounding up can add up significantly.
2. **Do they charge to suspend and reactivate devices, say for seasonal devices?** Many carriers will charge to "change states" and suspend / reactivate a device. Imagine the challenge and cost for thousands of devices to simply shut them down when the holiday season ends.
3. **Are the devices auto-provisioned? Does your carrier offer a small amount of free data for testing?** Some carriers require that you pay for testing during manufacturing and have a manual provisioning process. Also check to see if they have a data trigger to allow the device to work out-of-the-box.
4. **Are you able to conduct on-the-fly SIM data management?** To contain costs and analyze your IoT connectivity, you need to know how your SIMs are performing and consuming data on a daily basis. You'll want to manage and analyze data usage from the outset, from activating SIMs and monitoring SIMs in every region you have active SIMs. Plus, you should be able to quickly suspend a 'runaway SIM' should you encounter a bad actor or another cause eating up your data usage.
5. **Does your carrier have a breadth of international access and coverage?** In this digital global economy, you'd think that getting a list of countries in which a provider operates would be an easy task. But many carriers aren't comfortable with that level of transparency. Ask for a list of available operators, the regions they operate in, and what their plans for expansion are.

Eliminating cost and complexity with the Twilio pay-per-use model

Here at Twilio, we offer a completely different model where we only charge our customers for what they use. Let's look at a few areas where you can really see the difference:

Scale: The Twilio model allows you to deploy IoT anywhere around the world - one iot SIM card with global reach and consistent APIs across the globe. That translates into the quick and easy roll out of new services. For example, one customer started with tracking fleet telematics, but then quickly needed to add video to meet customer demand. Before Twilio, they would have needed to negotiate new rate plans globally. But with the Twilio pay-per-use model and the competitive rates, you sign up once and don't have to renegotiate the cost structure to scale.

No hidden costs: Beyond the simple pay-per-use pricing, Twilio also eliminates hidden costs you find with other cellular IoT plans: Twilio charges to the byte - the smallest amount of data possible while other providers round up to the MB. Twilio allows SIM state changes without charge (and you can even automate that with our APIs). We've also eliminated a lot of manual processes in your provisioning process. Twilio auto provisions when the customer turns it on. As soon as 250 KB passes, the device starts working - allowing for easy scalability and known costs.

Simplified operations: Having a single rate plan reduces the complexity across the organization. Many times we see customers with 25+ different rate plans. With Twilio, you have one rate plan, anywhere in the world. We find the best rate plan and coverage for you based upon your needs. Beyond the cost, there is an accelerating domino effect of complexity with multiple carriers. Imagine a global deployment with multiple carriers who have multiple platforms and APIs. The time to negotiate and manage all of those plans consumes time and revenue. With Twilio, you have one platform with APIs, making it easy to expand and grow.

Learn how Twilio delivers global IoT with no shenanigans

Our customers love our platform, the APIs, the developer-first approach, and our great support. But teams across their entire business - like the CFO, the product managers, and the sales team - love our simple approach to cellular data.

We put the power into your hands, giving you total control of which networks you connect to with competitive pricing. We offer one price per network so you can see exactly what you're charged. And with our transparent approach, you can also pick any lower cost network. Need coverage no matter what? Choose multiple networks at one fixed fee per network. Need global coverage? We've got you covered with nearly 400 cellular networks for customers across 157 countries.