White paper

Evaluating the potential for IoT in your business

Global IoT Connectivity
Made Effortless

Pelion

Doing IoT

In our conversations with potential customers and partners, one theme seems to recur more and more often. They'll have a good understanding of what IoT is but struggle to map the potential for leveraging IoT to improve their business. Someone higher up in the organization starts asking if they're "doing anything with IoT"? They haven't figured out a business model yet, but they'll start developing a new product or planning an IoT solution.

The business model comes after the fact. There are a lot of external pressures to just "do something" with IoT! This is a common cause of why IoT projects fail: the business model doesn't work (or doesn't exist), so they simply don't see any return on their investment. "Doing IoT" just for the sake of having done it will never be a good reason to sink the time, money, and resources into implementing an IoT strategy for your business.

> ***"I'm going to build an IoT product... I'm going to re-invent my service and use IoT!"***

We've developed a short guide to help walk you through the factors you should consider prior to starting your IoT project, including potential stumbling blocks and ways to monetize your solution or project.

In this guide:

1. **Mapping your IoT project to your business**
2. **Making the right technology decisions**
3. **Monetizing IoT and seeing better ROI**

1 Mapping your IoT project to your business

Where can you leverage IoT?

As mentioned above, some of the most common conversations with potential customers start with these basic statements of intention. It's critical to take the time prior to kicking off your project to consider exactly where (and why) you can leverage IoT to greater impact. The most successful models we've seen start from fully integrating IoT from the beginning, instead of as an after-thought. For these customers, now is the time they're creating a solution/product, so they're already asking how they can use IoT to enhance their plans and improve their business. We've also seen digital transformation efforts really kick off in quite a few industries as a result of the Covid-19 pandemic, exacerbated by the enormous pressures to move faster and do more.

Outcome driven

By considering their end goal, they're already thinking about their top line objectives and preferred outcomes and that drives the technical decisions they'll need to make. Asking themselves what they're trying to achieve, when do they want to achieve it, helps them evaluate where the potential lies, as well as the challenges they may face.

Are they looking to position their service in a new market or at lower cost? Or to harvest data from "dumb" sensors located on a machine to enable predictive maintenance? Or to develop an innovative new product that uses IoT for better results, creating new revenue streams?

1

You've got the why, what's next?

Once a rough plan of "why IoT" is in place, the next challenge is tackling the "how". Having a good understanding of all the different bits of the IoT puzzle match to you seeing better results from your transformational investment into IoT. Try mapping out the limitations and creating a framework of how you'll deploy, not only externally but also within the business. It's important to keep in mind that you'll need buy in and agreement within your organization to drive any substantial change to your business strategy.

We're also seeing a lot of uncertainty externally in the market, with customers not sure where to even start with their solution or product. Software engineers are burnt out working from home, supply chains are disrupted. Sometimes our role is to help customers realize that it can be quite difficult to do what they want to do and offer a better understanding the supply chain. The IoT ecosystem is complex and it can be difficult for innovators to navigate and understand who they need to speak to for which piece of the puzzle.

1

Build or buy?

This is when you might come up against your next consideration: Build vs buy. Once you have your goal in mind, you've recognized the opportunity and gained support within your business, do you build or do you buy?

Building your own device, and doing all the development and testing yourself, is incredibly difficult and costly. You might not have the right competencies or skills available in house. Or maybe the supply chain is just too complex to navigate, so you look into buying something off the shelf instead. But then how do you fully integrate this new device into your IoT strategy? This is often where Pelion steps in to help guide customers to the right decisions to make in their planning process.

> ***"Pelion steps in to help guide customers to the right decisions to make in their planning process"***

Some of our most successful customers have been led entirely by their drive to innovate within their market and be one of the first to offer IoT-enabled services and products. They quickly move to build a prototype, then work on polishing and refining it. This has enabled them to take more risks and move faster to win business.

2 Making the right technology decisions

Device & connectivity

Another key consideration when evaluating where IoT can improve your business is your choice of device or connectivity technology. Again, asking the right questions at the right time will help drive these decisions.

You want to build a connected “thing”, so what technology are you going to use to connect it?

One stumbling block is that often buying decisions can be forced down the path of “what’s familiar” because it seems easier.

In one case study, a Pelion customer wanted to develop a product which could be connected and managed from anywhere in the world, and they decided to use Bluetooth. It simply didn’t work for their use case, but the internal architect pushed for Bluetooth because it was what he knew

Now, many months into their development cycle, they’ve had to rethink, scrap their plans, and start fresh.

2 Future-proofing is key

> *For true long-term success, don't just go along with what is familiar*

Think long-term. Ask yourself what new technology should you be evaluating and where will it be in the next few years in terms of future development? Most companies lack the foresight to future proof their plans. For true long-term success, don't just go along with what is familiar, draw conclusions and then make decisions based on what you already know. You need to take the time to research what other options are available to you. Finding the right partner to inform these decisions is critical, and this is often where Pelion can bring our expertise to the table.

If you took the time to complete our recommended exercise of mapping out what you want to achieve, you'll find that planning can help drive a lot of these discussions and dictate how you direct your investment strategies. Ask yourself what foundational technology will be needed to achieve your business objectives, and how it will fit into your plans.

2

Ignore the hype, keep it simple

If the people making the key technology decisions don't understand IoT, the project will fail. Too often, we see customers investing heavily into understanding the "hype" technologies or implementations that are a complete mismatch for their end goal. Keep it simple. Map the decision making process to the outcomes that the business is trying to achieve and consider which technologies are best fit for the job (in the present as well as the future). Finding a partner who can help you deploy today is great, but you also want to ensure they'll be able to help you innovate in the future.

These decisions can look vastly different depending on the organization, with larger firms able to hire people and design internally, with plenty of engineering resource and tons of money invested. More traditional company will need to rely on system integrators and external partners to effectively design and deploy their IoT plans.

3 Monetizing IoT and seeing better ROI

How do we make money?

It's surprising to see just how many IoT projects are built backwards when it comes to seeing a good return on the investment. They build an IoT solution and then ask "So, how do we make money?" Certainly, they've achieved their goal of creating something, but they've been so focused on what they're trying to build that they lost sight of where the investment potential of IoT was in their business and how they wanted to make money.

We've also seen customers who have had a successful trial or deployment of IoT and are now tackling the next big step: a real large-scale commercial roll out, which has very different complexities.

> ***"It's surprising to see just how many IoT projects are built backwards"***

3

Focus on your business model and your end user

It's important to always keep the business model in mind, with the end customer always at the forefront of what you're doing and why. 90% of IoT projects fail because people are building "something" without considering where it's going to fit and who is going to pay for it. As an example, we've seen customers heavily invested in security, offering the most secure product on the market but it's 4 times as expensive. Are their end users willing to pay more for increased security? It is critical to balance heavy investment with potential return.

We see plenty of different business models and a huge range of ways that the market is monetizing IoT, including additional services that can be offered at an extra cost. We've also seen OEMs creating products-as-a-service and charging a monthly fee or integrating the costs into their existing contracts. Keep in mind that connecting and managing IoT is an ongoing cost, so how can you best fit that cost into your current plans?

For some customers, their previous model has been to sell their hardware once and that's their revenue. Encountering the ongoing costs to service their IoT devices drives them rethink how they sell to their market.

> *"Keep in mind that connecting and managing IoT is an ongoing cost"*

3

Product-as-a-service brings in new revenue streams

Product-as-a-service is a hot topic within the IoT industry. Manufacturers are creating new connected products and essentially "renting out" the hardware for monthly fee, creating a recurring revenue stream by offering innovative new features that bring value to their end users. This is especially compelling for high-cost products which have a long lifetime, bringing in more revenue over a longer period of time.

As an example, an OEM sells a product to a distributor, who can then sell that product on to an end customer. That end user can request the activation of digital services, such as predictive maintenance, and pay the OEM for that feature, incurring a monthly fee for the digital platform. For many traditional manufacturers, this is a completely new revenue stream for them.

Another option is to charge per item, with each service as a separate fee or integrated into a regular maintenance fee. One thing to consider here is the price sensitivity for your customers. Monetizing your IoT solution is a fine balancing act. And remember, there's the incoming data which flows through your devices and networks which is valuable to analyze. You're not just selling your service; you're gaining insights too. By harvesting better data around device usage, you can recommend new products or upsell depending on user behavior, which opens up a whole other range of potential for income.

3

More efficient operations and reduced costs

A common driver for IoT innovation is the operational efficiencies which can be gained from connecting devices. You don't always have to be selling a service or product – it could be as simple as saving time, resource and money within your business. Take the time to carefully observe which areas you're spending the most. If you're operating a fleet of vehicles, this could be fuel costs or maintenance. If you're shipping goods globally, you may be investing heavily in tracking where your shipments are located. If you're managing a factory and keeping a close eye on the performance of your machines, your largest costs could be downtime due to machine failure.

> ***"An Io solution could make all the difference in your bottom line"***

In each of these cases, an IoT solution could make all the difference in your bottom line, allowing you to monitor and track all your critical data and make important business decisions at the right time.

Where do you start?

If you followed our suggestions and avoided the common pitfalls of many failed IoT projects, you should be ready to start bringing your idea to a proof-of-concept phase.

We recommend following a common planning model for your project:

1. Assess your current business status, asking:
   Where are we now?
2. Set out your key goals and objectives for your project:
   Where do we want to be?
3. Create an overview of your plan for achieving your objective, or:
   How do we get there?
4. Get into the nitty-gritty details of your strategy by asking:
   Which tasks do we need to do?
5. Lay out the necessary actions that need to be taken to drive the project, or:
   What resources do we have?
6. Keep an eye on the key components to measure the effectiveness of your plan, asking:
   What do we monitor?

As a next step, have a look at our **IoT Supply Chain 101 primer** to guide you through those first critical technology decisions for your IoT product or solution.

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