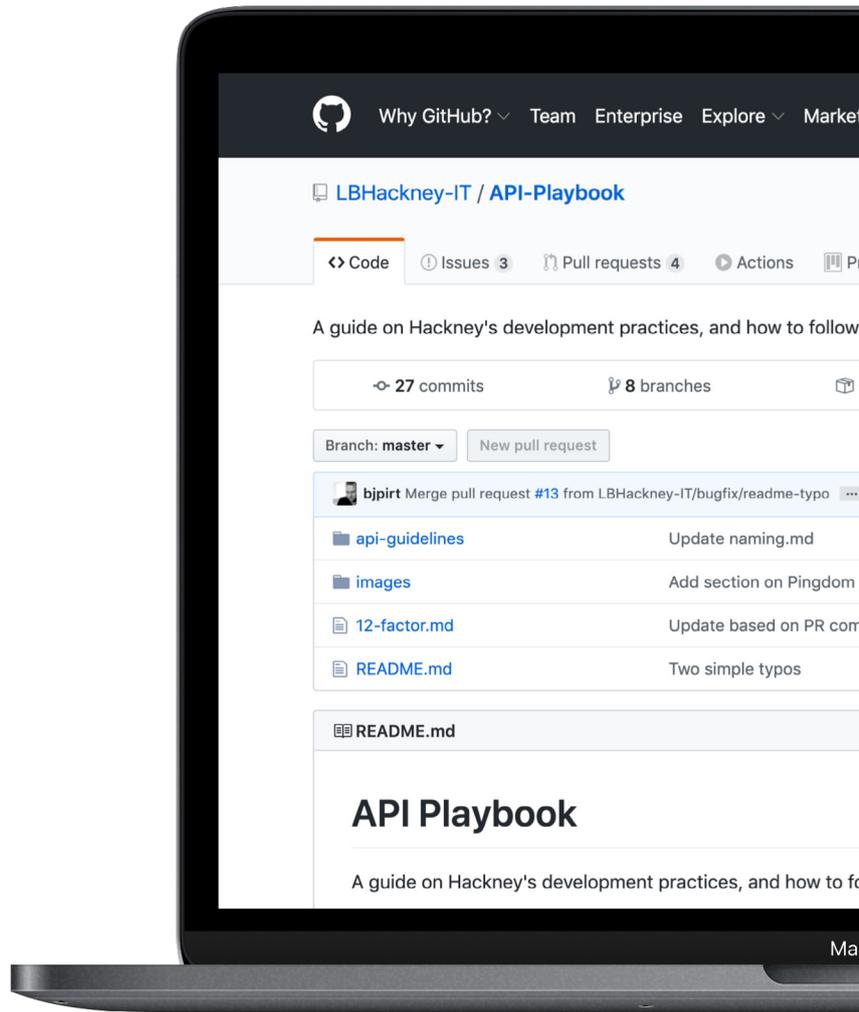




CASE STUDY

Building an API platform for Hackney Council

We helped Hackney Council to build an open-source API platform and microservice architecture that unlocked critical housing data



Introduction

Hackney Council had become frustrated by critical housing data being locked away in a legacy system, hindering their ability to deliver new and improved services that meet the needs of residents.

They wanted to free this data so it could be consumed by new applications while also upskilling their team in a range of modern software delivery practices.

By working closely with the team to help them learn by doing, we delivered an API strategy and platform that freed Hackney Council to work with multiple vendors and suppliers by greatly increasing the openness of its application ecosystem.

The API playbook we developed was not only the council's first, it was also the first to ever be delivered at a local government level.

“Made Tech has met and exceeded all the standards we set for a technology supplier. Myself and my team are really happy with the work they have done.”



Matthew Cain, Head of Digital and Data, Hackney Council

Housing's importance to Hackney Council

Housing is a big issue for Hackney Council and one that it is determined to improve.

As of January 2020, the number of people applying for a council home in Hackney is rising and there is a housing shortage. There are currently nearly 13,000 people on its housing waiting list and up to 500 more apply to be added each month. About 3,000 of the people on the waiting list are homeless families in temporary accommodation. This number has tripled in five years and continues to rise.

To respond to this problem, the Council has one of the country's biggest housing regeneration programmes. It is building more than 9,000 new homes for social rent, shared ownership and outright sale to replace ageing properties that are uneconomical to repair.

Hackney Council's Housing department has a wide range of services and responsibilities that go beyond providing homes to live in. It provides estate services, such as cleaning and grounds maintenance, and tenants services, such as insurance, repairs and alterations. It has responsibility for housing strategy and planning, as well as combatting homelessness and a number of other related services.

All of these services have systems, processes and, most importantly, people making them work. When we started working with Hackney Council, it was clear that in order to help the Council improve outcomes for residents, we needed to improve the technology its services relied on.

The project to unlock critical housing data

The main change that needed to occur was unlocking critical housing data from legacy applications. This data was not only being used by the Housing department but most of the other areas of the organisation too.

The data was held in a proprietary system which had little documentation. Therefore, the data was locked away from being used in any new digital services, such as the income collection service for rent arrears that the council wanted our help to build.

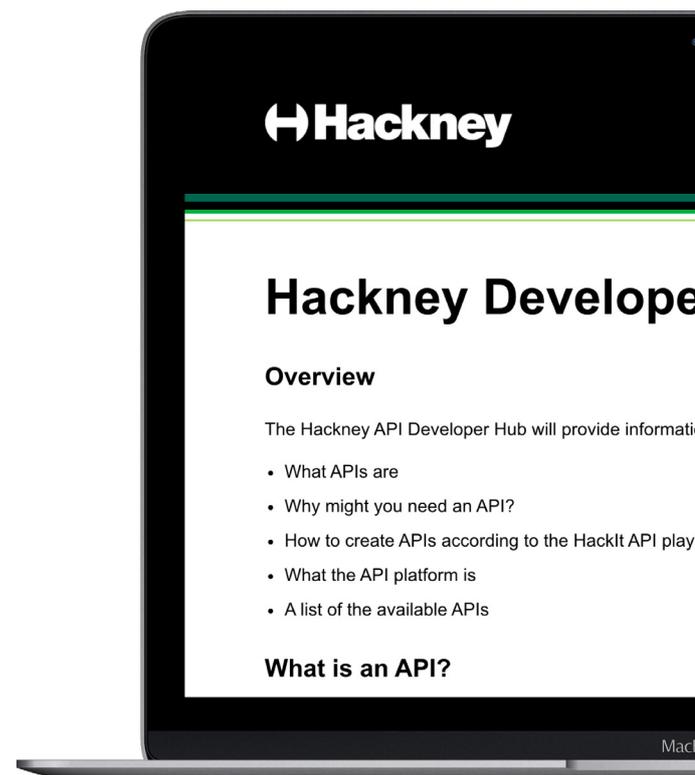
Instead of buying a new version of the software from the existing vendor, Hackney Council wanted to free itself from the single vendor lock-in that was frustrating its progress and become master of its own destiny.

“We want to build open APIs so good that people prefer to use them.

This means our work has to result in secure, reusable, uniform and scalable code. The services we provide will be resilient and have a knowledgeable, enthusiastic team maintaining and improving them.

Along with our partners, we will provide our users with the most effective, efficient service possible.”

From the Future Ambition of Hackney Council's API Team



It wanted to build cloud-based APIs that would allow any new services and applications to consume this critical housing data. In doing so, it also wanted to increase its adoption of modern software delivery practices, including the use of containers, test-driven development (TDD) and automated continuous integration and continuous deployment (CI/CD).

We began helping the team to fix the plumbing and develop an API strategy that would enable them to learn new skills. Then we collaboratively built an API platform to be used by the new income collection service, as well as any other digital new applications that might be built in future.

Our approach to building APIs and upskilling the team

Hackney Council wanted to gradually replace the existing legacy system that held their critical housing data with their own software. In order to keep existing services running, they needed to keep the data in place while they iteratively replaced the system.

We worked with Hackney to develop a lightweight data platform of REST APIs and a microservice architecture that would enable them to access and integrate a number of key data sources within housing.

This involved developing an API strategy that outlined how the Housing department could use APIs to service different domains, such as payments or managing housing stocks. We also defined an API playbook to ensure there were common standards for interoperability of services and features across the Council's various domains.

This was not only Hackney Council's first API playbook but also the first one to be developed at the local government level.

We worked closely with the technology teams at Hackney to make this change and ensure it was sustainable. This involved working with the existing team of C#/NET developers and 8 apprentices to upskill them in modern software delivery practices. Our API work was done in parallel with the development of the new income collection service, so the team was constantly learning by doing.

The platform we helped Hackney Council to build is made of APIs that have been built like adaptors, so they could be used for different products. They are also open-source, so other councils can use them. The council now has common API standards to ensure interoperability of services and features.

Modern software development practices we introduced

- A suite of **open-source REST APIS**
- Common standards for an **API playbook**
- Deploying **C#/.NET and Ruby/Rails to the cloud**
- Use of **containers (Docker)**
- **Test-Driven Development** (TDD)
- **Automated Continuous Integration and Continuous Deployment** (CI/CD)
- Constant **learning by doing**

“Hackney’s API Platform is one to watch.”

Rosalie Marshall, Lead Technology Advisor at GDS, in

“10 things we learned from our API Community of Practice event”

The results – a sustainable and open application ecosystem

By building an API platform and playbook for Hackney Council, we were able to help them improve their data infrastructure and insights and enable new technology capabilities.

Crucially, our work has meant that multiple suppliers and vendors can easily connect to Hackney's applications. This was a key requirement for the council and has greatly increased the openness of their application ecosystem.

As a result of our work, the IT team can deploy C#/NET to the cloud, use test-driven development (TDD) and automate Continuous Integration/Continuous Development (CI/CD). They were also able to develop further APIs, using the **API playbook** we had developed.

Because of the transformation we helped them to make, Hackney Council is now able to deliver new digital services as sustainable technology, more quickly and cheaply than was previously possible.

About Made Tech

Made Tech are public sector technology delivery experts. We provide Digital, Data and Technology services across the UK market.

We help public sector leaders to modernise legacy applications and working practices, accelerate digital service delivery, drive smarter decisions with data and enable improved technology skills within teams.

If you'd like to find out more, you may want to read about some related projects:

- [Delivering GovWifi for the Government Digital Service \(GDS\)](#)
- [Rapid digital service delivery at the Ministry of Justice](#)
- [Technology Capability Building at Ministry of Justice](#)
- [Check out what we do at madetech.com](#)

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