

TECHNICAL TRIUMPHS IN TRANSACTION DATA

BACKGROUND

In 2013, a major credit card transaction company that processes **more than 60 billion transactions per year** approached us about modernizing their data infrastructure while making consumer data available to their small business customers through a web-based analytics platform. At the time, all of their data lived in legacy mainframe systems cobbled together over several decades, each of them unique. These systems contained a wealth of valuable consumer information but were impossible to analyze in a single data layer, let alone share in any meaningful way.

PROJECT STRATEGY

Over the course of our close collaboration with our partner's technical and product management teams, it became clear they had two challenges: one, they needed a way to store data in a modern infrastructure that could handle rapid iteration. Two, they needed to be able to deliver insights about their customers' business – how much coffee a local shop sells on a rainy day; the effect of a particular coupon or promotion – in a way that individual business owners would actually use. Data problems encompassing hundreds of terabytes and hundreds of billions of records can take years to solve. With Palantir, it only took one.



Our engineers attacked both problems in tandem. Working closely with our partner, we began to understand the scope of their data needs as well as the types of analysis that would meet their own customers' needs. Our partner needed data infrastructure with a flexible architecture so that we could not only deploy new feature releases without additional overhead, but also take a more ambitious approach to the project without damaging the production environment. We believed the cloud was the best solution for their needs while also affording significant savings on hardware and maintenance.

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But given the extremely sensitive nature of the data, we needed a creative solution to mitigate significant compliance and security issues. Our partner's data was contractually prohibited from being given to a third party, which would include a cloud provider. We realized that if we could guarantee full encryption of the data both in transit and at rest, our cloud provider would never have access to the data.

Our team needed to **migrate eight separate platforms composed of multiple mainframes with little data consistency to the cloud with zero perceived downtime for our partner.**

To integrate the data, we needed to clean up and build its structure ourselves. Managing a migration of this size without taking any system offline meant running two data pipelines simultaneously, all while ensuring that every transaction was perfectly updated, right to the cent. After six months of continuous migration and a deeply embedded partnership, we were able to successfully move the production system to an entirely new infrastructure platform without losing access to any revenue-generating information.

While the data migration took place on the back end, our engineers were also attacking the front end. Now that our partner's data would soon be accessible, how could it become helpful for its own customers? Many of our partner's customers are small business owners, without financial analysts dedicated to interpreting dense transactional data and market trends. Our product had to be intuitive, light, and mobile.

We interviewed small business owners in a variety of industries to find out how they would want to interact with their data. Then we built it. The ensuing analytics portal gives any of our partner's customers an end point on any web-enabled device using our partner's preferred point-of-sales system. The app works with data integrated into the cloud is near real time, and provides additional insights surrounding business trends. More than 1,500 merchants have already registered for the service.

OUTCOME

For our partner, **years of data that was inaccessible can now be explored and analyzed in a single data layer.** Their new cloud-based data infrastructure mitigates prior storage limitations and allows customers to unlock the power of the information to grow their businesses.

For Palantir, this project gave us the opportunity to do the work we do best: take on an exceptional technical challenge that could only be solved with our unique approach to human-computer interaction. By securely leveraging the cloud in innovative ways, we've enabled future generations of business owners to leverage their own data with the tap of an iPhone.