




Tableau on AWS

Customer stories eBook





Together, Tableau and Amazon Web Services (AWS) create a powerful cloud analytics platform. You can perform every step of the analytics journey: data collection, transformation, storage and analysis—all at enterprise scale with Tableau and AWS products.

In this eBook, discover how some of our customers use Tableau on AWS to power their analytics in the cloud.

JUMP TO THE FOLLOWING STORY

Experian

uses Tableau's deep analytics to deliver targeted community care during the COVID-19 pandemic

St. Mary's Bank

consolidates data with cloud-driven analytics from Tableau and AWS

Box

cuts analysis time by days with Tableau and Amazon Redshift, freeing engineers to discover new high-growth markets

Sysco

grows revenue, increases agility with Tableau on AWS

FREE NOW

unifies data from 13 countries with Tableau, enabling self-service analytics for over 50% of its workforce

Experian uses Tableau's deep analytics to deliver targeted community care during the COVID-19 pandemic

Fully customisable dashboard developed and delivered in just two weeks using Tableau

Safeguard dashboard makes life-saving insights available to 70+ public organisations across the UK

Tableau Server deployment on AWS provides unlimited scalability

Experian is the world's leading global information services company, with operations in 37 countries around the world. Originally founded in 1996, it employs over 17,000 staff and generates annual revenues in excess of \$5 billion (FY2020). Here, Sarah Robertson, Product Director at Experian, discusses Tableau's pivotal role in the company's new Experian Safeguard dashboard, a powerful analytics tool that helps public organisations use demographic data to pinpoint and protect vulnerable communities from COVID-19.

What is Experian Safeguard?

Experian Safeguard combines open-source data with Experian's own proprietary ConsumerView data files and presents it at the local authority level via a fully customisable Tableau dashboard. The tool is free to use for public organisations and gives them fast access to key insights about their local communities. This could help, for example, to pinpoint areas where there's a high concentration of people over 70 and/or living alone, as well as those with low household incomes. By analysing where these different factors converge, organisations can quickly identify vulnerable areas that likely require extra care and support.



Why did you choose Tableau for this project?

Thanks to our existing relationship with Tableau in both the UK and US, where Tableau forms part of our Ascend Analytical Sandbox, we knew that Tableau's deep analytics and high-quality visualisation capabilities made it a great fit for the project. Firstly, we wanted Experian Safeguard to be accessible to a wide range of organisations, which meant a Tableau Server solution worked extremely well. Secondly, we wanted it to be easy to pick up and use without the need for training and Tableau's intuitive user interface allows people to do exactly that. Finally, we wanted it to be fully scalable, which we could achieve very easily by deploying Tableau in an Amazon Web Services (AWS) environment. Another key factor was speed to market. Unlike many products and solutions, which go through multiple concepts and test stages, we wanted to make Experian Safeguard available as quickly as possible, so we needed to use tools that allowed us to do that. Tableau's ease of use, combined with a wealth of pre-existing internal development knowledge, meant we were able to take Experian Safeguard from concept to deployment in just two weeks.

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— SARAH ROBERTSON , PRODUCT DIRECTOR - EXPERIAN

How many organisations are using the dashboard at present?

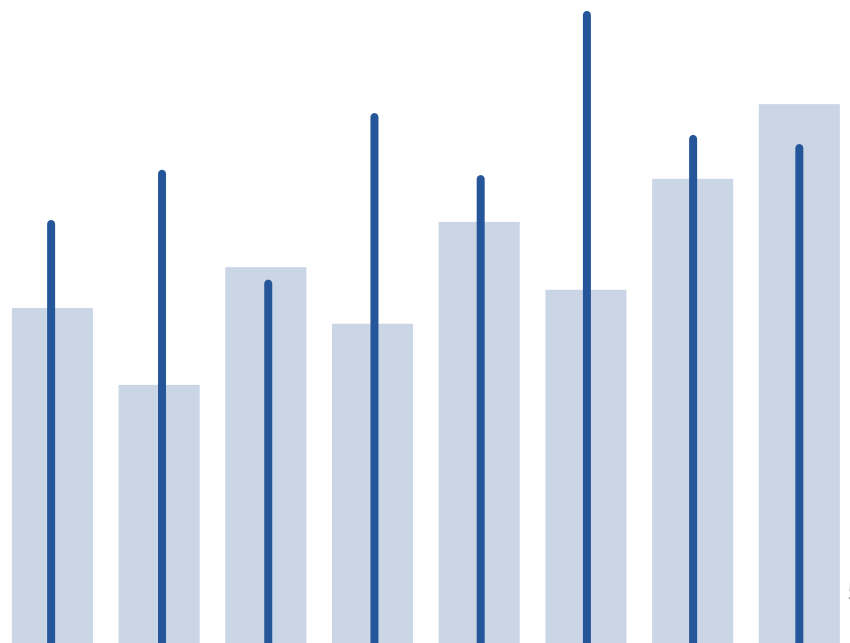
We currently have around 70 public organisations using it to identify and care for at-risk members of their communities. The dashboard is free to use on a 'data for good' basis, meaning it's not open to commercial users like supermarkets, but is widely available to local authorities, NHS Trusts, emergency services and charities. One example is the Trussell Trust, which is using Tableau heat maps to help establish the best locations for new food banks, and where they will reach the highest number of people.

How important do you think data has been during the COVID-19 pandemic?

As a data person, it's been incredibly interesting to see how the UK government has used it to effectively communicate with the population as a whole. Dashboards and visualisations showing demographics overlaid with COVID cases and deaths have played an increasingly central role in keeping the public informed as the pandemic evolves. Data will likely be even more important in the aftermath, as we try to gain a better understanding of what happened and how we can avoid something similar in future. Many people are already saying that data is the new gold or the new oil, and this will only be more true as time goes by.

What are your future plans for Tableau within Experian UK?

We already use Tableau for client deliveries and are always looking to extend our use of technology to deliver the best for our clients. Data visualisation and storytelling go hand in hand, helping people to spot trends quickly and understand what they mean. As such, the use of powerful visualisation technologies like Tableau will undoubtedly play a big role in our future.





St. Mary's Bank consolidates data with cloud-driven analytics from Tableau and AWS

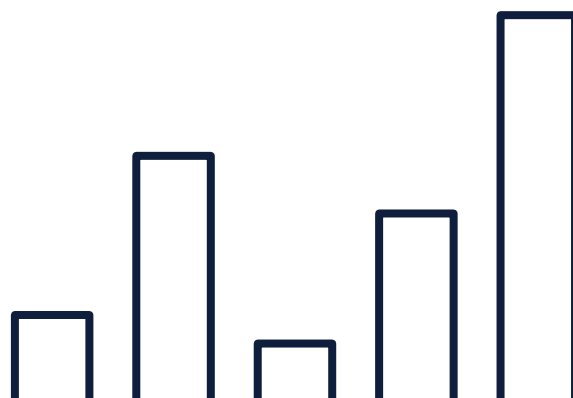
Resolved nearly 40,000 data errors with Tableau

Achieved 80%+ Tableau adoption across all credit union staff

Saved ~15 hours per week with automated reporting

St. Mary's Bank, the first credit union in the United States, has supported the financial needs of individuals, families, and businesses for more than 100 years with its banking, lending, and long-range planning services. Five years ago, disparate systems made it difficult to get a holistic view of their data and technology that needed updating. This made it challenging to engage and report to more staff without added cost and to track the accuracy of loan applications and financial transactions for its 100,000+ members.

They embarked on a journey - first, to upgrade technology and build a data warehouse to store all data in one place. With an emphasis on becoming a more data-driven company, they began replacing manual reports with Tableau dashboards. After successfully moving from on-premise to the cloud with Amazon Web Services (AWS), St. Mary's Bank scaled Tableau as its enterprise analytics solution. Today, with Tableau's native connection to AWS and data sources like Snowflake, St. Mary's Bank performs fast, reliable, and cost-effective analysis on customer assets totaling more than \$1 billion.





“We have greatly expanded our Tableau usage. In an organization that’s approximately 250 people, and an industry that is not known for being tech-focused... the fact that we have over 160 Tableau users is something we love to talk about.”

— MELISSA POMEROY, DIRECTOR OF BUSINESS ANALYTICS AND PROJECT MANAGEMENT

Easier data access improves branch operations and customer service

Today, nearly 70% of staff use Tableau to gather insights on branch operations and make data-driven decisions that improve customer service, asset management, and operations performance. With all data consolidated in AWS, the Business Analytics and Project Management team, with the help of Arkatechture, also introduced a rules engine on top of AWS, which expedited data cleansing and helped maintain regulatory compliance. Data quality is tracked in Tableau for business teams to view on-demand each morning, and so far, nearly 40,000 data errors have been resolved with a weekly savings of 10 to 20 hours.

St. Mary’s also monitors volunteerism, a strategic company goal, with Tableau as well. The dashboard tracks monthly volunteer hours for all employees and the monetary value of those hours so leadership can recognize individual, department, and collective company accomplishments that support its culture of giving.

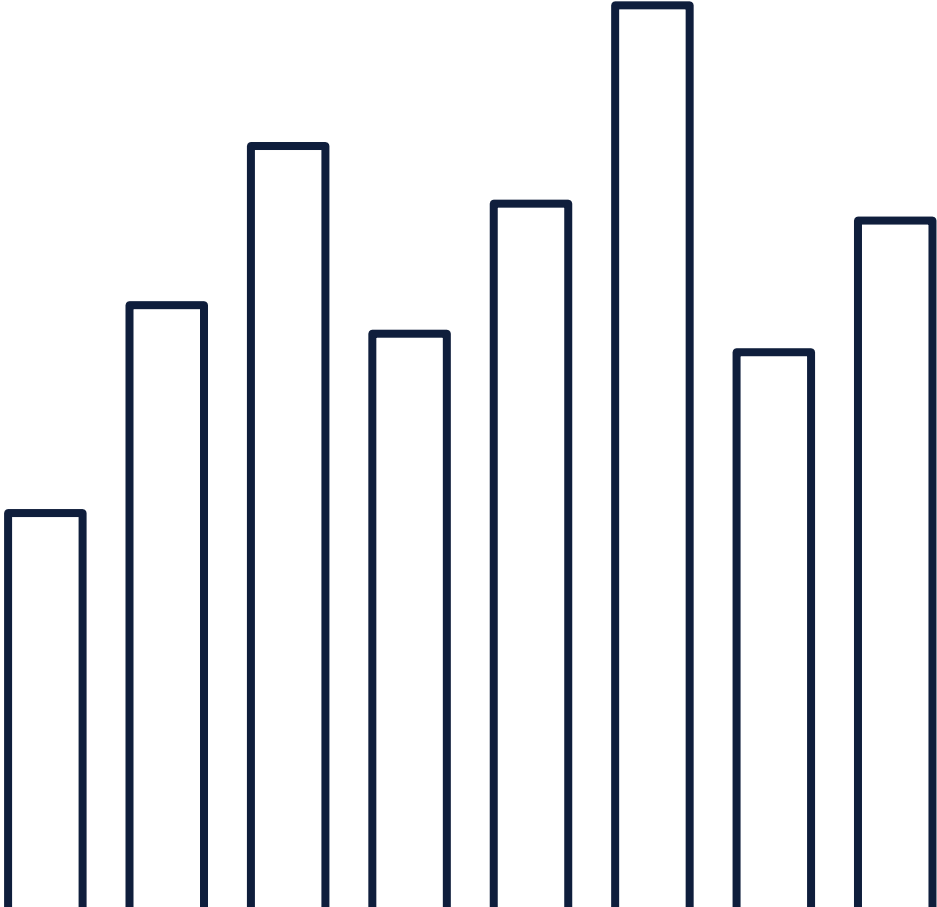
“When I look at what our teams are doing within each different department, and I look at the prevalent role data plays in each operational production environment, it makes me proud of the data culture we’ve developed at St. Mary’s Bank,” shared Melissa Pomeroy, Director of Business Analytics and Project Management.

Nurturing data culture with community activities

As Tableau adoption grew within St. Mary’s Bank, the business analytics team opened up what they call “Tableau office hours.” Every six weeks, employees can stop by to ask questions or to learn something new from their peers.

The team is also investing in training other employees on how to access available dashboards or access data to build their own. They also add some fun to the mix by creating games for employees to test their Tableau knowledge.

“We ask for a representative from each business area and we put a business question up on the board,” shared Melissa. “We give them ten minutes to go into a dashboard or workbook and whoever can come up with the answer wins a prize. It has really helped people get excited and understand that data can be fun.”



Box cuts analysis time by days with Tableau and Amazon Redshift, freeing engineers to discover new high-growth markets

Increased productivity for 1,100 daily Tableau users

Seamless access to millions of rows of data stored in Amazon Redshift

Discovered device-level insights in growing markets

More than 41 million people and 74,000 organizations trust Box to store content in the cloud. These customers constantly emit data that holds critical answers about how to accelerate growth or streamline operations. Today with Tableau, over 1,100 Box employees can turn millions of rows of data from sources like Amazon Redshift into actionable insights around product usage and customer demographics. For example, Box analysts discovered a growing product presence in countries like India and Saudi Arabia, leading to a more strategic distribution of resources. And Tableau usage continues to grow as executives replace static PowerPoint slides with interactive dashboards, inspiring strategic decision making from the top down.



“Tableau can connect to Redshift really fast. Redshift has very, very fast query processing time, because it’s columnar based so it works very well. I would say Tableau plus Redshift—it feels like it’s one thing. It works really well together.”

— ABHISHEK GUPTA, SENIOR ANALYST, BOX

Analysts discover device-level insights for new markets with Tableau

Starting with just a few Tableau Desktop licenses, more and more teams started adopting Tableau. About a year later, the company migrated to Tableau Server. Today, over 1,100 Box employees access Tableau workbooks on a daily basis.

Teams at Box leverage Tableau to understand how customers use the product—“features they use, how they use it, how are they not using it,” and ways to make the experience better.

“People should have access to the numbers and they should be able to understand how people interact on the product—if certain investments are paying off or if they’re not paying off,” says Abhishek Gupta, Senior Analyst. “Information is truth and our dashboards are open to everyone in the company.”

Box is a multi-platform product. With Tableau, teams can understand what devices customers are coming from to optimize the user experience.

“A lot of our dashboards look at all [our customers’] various activities, and how and where they access their data from.”

— ABHISHEK GUPTA, SENIOR ANALYST, BOX



“You can use Box from your web browser or desktop clients or mobile products. So a lot of our dashboards look at all these various activities, and how and where they access their data from,” says Abhishek.

“We have international data, we have multiplatform data, and when you combine those two you can see the things you read about, like how mobile growth is expanding all over the world. You actually see it in your own data and in how people use your product.”

For example, Abhishek explains how his team uses Tableau dashboards to determine markets with high growth—international versus domestic. They can then determine which devices are most popular in these regions.

“One of the more interesting insights we found was countries like Saudi Arabia or countries like India actually have a huge Box presence, especially on mobile products like Android, Blackberry, Windows,” says Abhishek.

With insights like these, Box can make strategic decisions about where to invest resources and re-target consumers with potential solutions.

“[For example, these insights] may tell you that you have a Middle East presence and maybe offices in other countries can start focusing on it, start using those users as a potential up-sell opportunities.”

Creating a seamless experience between Tableau Server and Amazon Redshift

With Tableau, Box can access millions of rows of data stored in Amazon Redshift—supercharging analyses.

“Tableau can connect to Redshift really fast. Redshift has very, very fast query processing time, because it’s columnar based so it works very well. I would say Tableau plus Redshift—it feels like it’s one thing. It works really well together,” shares Abhishek.

Abhishek explains how Box got up and running with Tableau and Redshift really quickly—saving the engineering team time and creating a seamless experience for ad-hoc analysis.

“Let’s say you have an analytics team or a database engineering team setting it up. They’re not going to spend days and days. You can get up and running in minutes. I’ve set it up on my own. It’s really quick.”

“And then with Tableau, you just hook it up to the Redshift server, connect, run a query, and publish it to the Server and you’re literally done in an hour. It’s great—it feels like one product.”

“People should have access to the numbers and they should be able to understand how people interact on the product—if certain investments are paying off or if they’re not paying off. Information is truth and our dashboards are open to everyone in the company.”

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Executives increase meeting productivity, replacing PowerPoint slides with actionable dashboards

This newfound data transparency allows for increased collaboration between teams, offering a central source of truth for company data: “Tableau is going to be a great central place to go and access information. And that’s going to be really critical because as people ask more questions, they need to create more dashboards [and conduct] more analysis. And so that will be huge,” says Abhishek.

Instead of relying on static PowerPoint slides for meetings, teams now point to Tableau dashboards to show real-time data—reducing manual data preparation. And after meetings, users can reference data as it changes.

Even executives benefit from this approach. Abhishek shares how executives pull up Tableau dashboards in meetings to track company goals: “We have meetings with some regular cadence where we look at some [company] numbers. I’ve seen some executives do the whole meeting off of Tableau dashboards.”

Sysco grows revenue, increases agility with Tableau on AWS

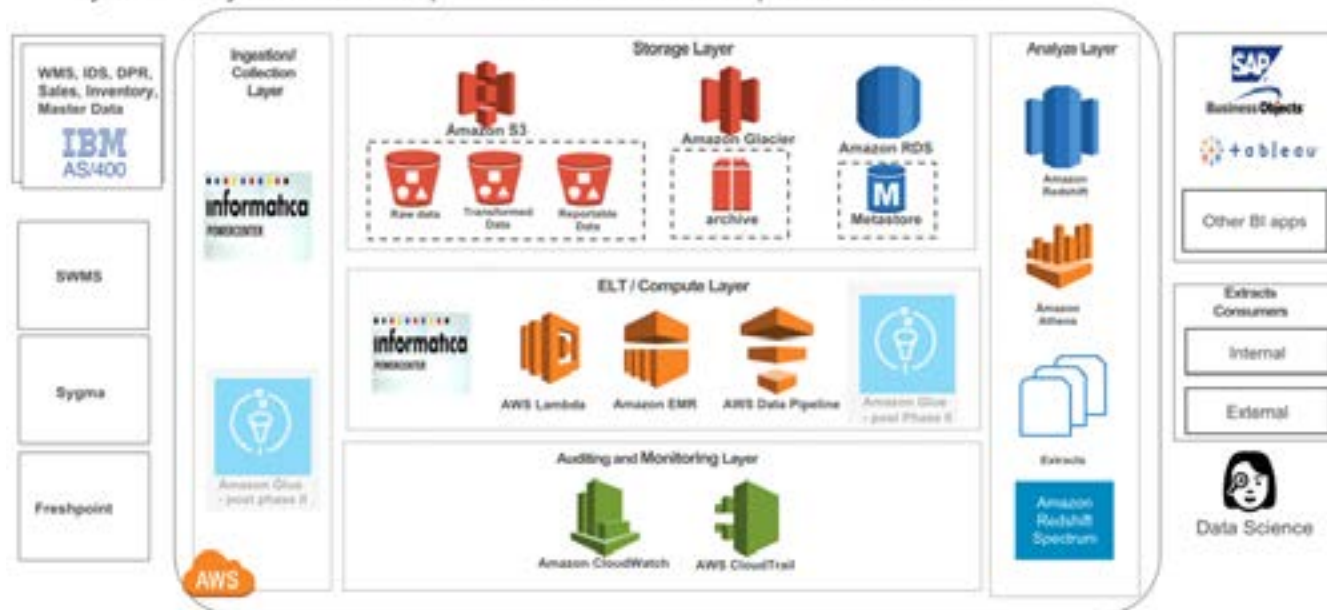
Increased Tableau usage from 64 to 12,713 users

Enabled revenue growth and operational efficiencies

Moved towards agile approach to analysis

SEED

Sysco Ecosystem for Enterprise Data – A Fit for Purpose Architecture



Starting with the business drivers, Sysco's analytics charter was informed by the goals of its three-year operating plan: Unlock savings, drive top line growth and market share, enabled by quick actionable insights. Navin Advani, Vice President of Enterprise Information Management, highlighted that Sysco's current state of analytics infrastructure was not fit to deliver that plan. It was plagued by the lack of abilities to analyze large volumes, reporting inconsistencies, long lead times, creeping cost of ownership and scalability, along with stability issues. Navin and team needed an enterprise view of its customers, products, and suppliers that would deliver more intuitive information to internal and external customers through a self-service reporting model, which in turn would ultimately enable revenue growth and operational efficiencies with better data management and better decisions.

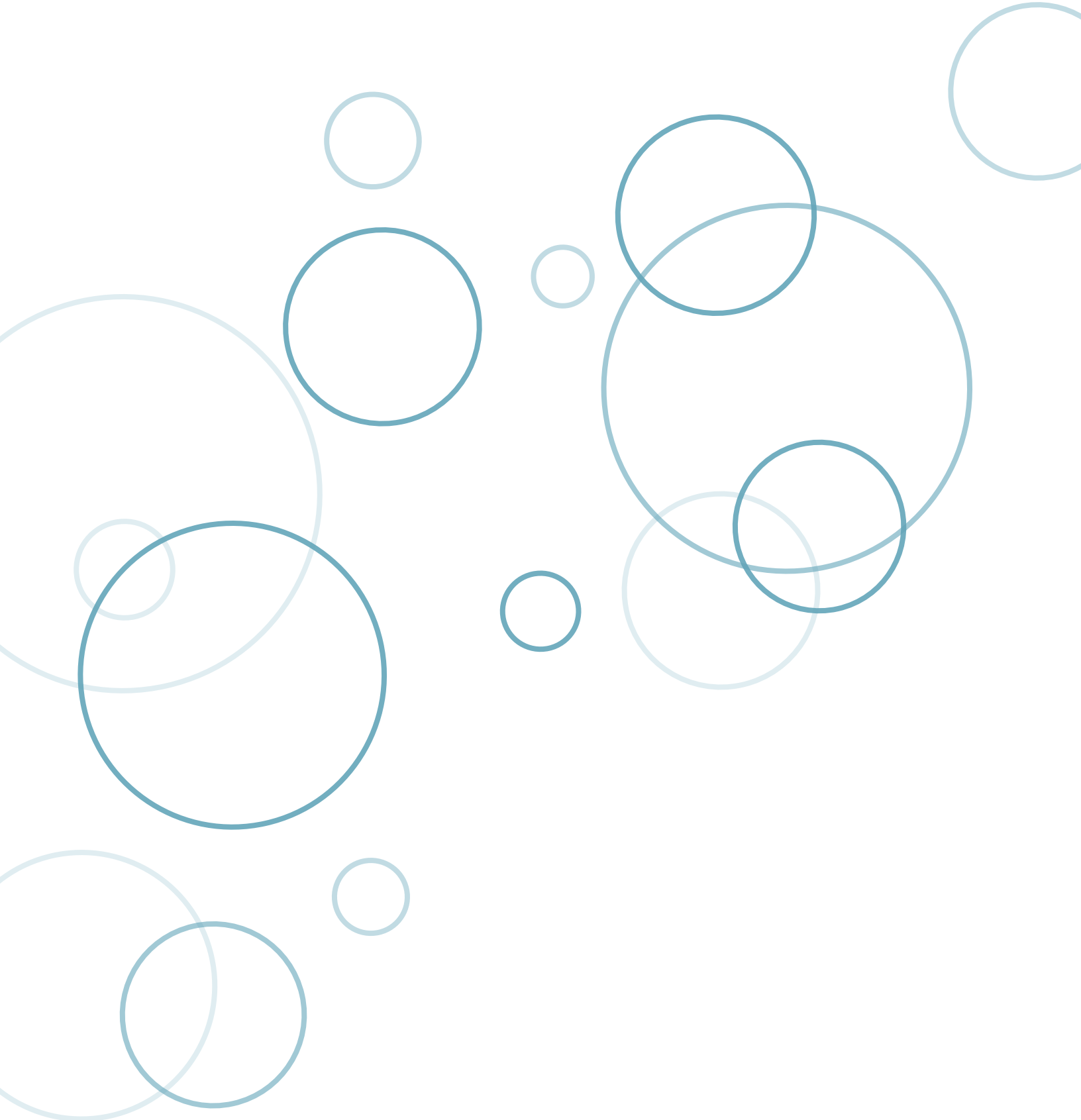
“Tableau on AWS provides a next-generation architecture that fosters innovation and reduces costs. The solution has changed our BI consumption patterns, moving from hindsight to insight-driven reporting.”

— **NAVIN ADVANI**, VICE PRESIDENT, ENTERPRISE INFORMATION MANAGEMENT, SYSCO

After Sysco undertook an enterprise-wide transformation exercise, their data and analytics processes morphed and matured. In certain business functions, there has been a shift from consuming hindsight information using row and column-based flat reports to ad-hoc data analysis for deriving insights to support better decisions-and even developing some predictive analytics. This has provided a launch pad to further develop Sysco's analytics capabilities, driving them to a data-driven culture, and serving as a catalyst for the business intelligence roadmap.

With Tableau on AWS, Sysco implemented a “Sysco Ecosystem for Enterprise Data” also known as “SEED.” Navin expressed the vision behind SEED—to scale with evolving business needs and provide a foundation for data governance and data security. SEED was cloud native, meaning that Sysco could move from “build first and see later” to a more agile and “continuous improvement” approach towards analyzing business data. Using this approach, they set up the ability to quickly stand up sandbox environments for experimentation. “SEED” was also developed with broad and deep functionality to support a range of use cases across multiple functions including marketing (Churn Analysis, Share of Wallet, ML for future promotions etc.), merchandising (Assortment optimization, Market Basket, Lotting using decision trees etc.) and revenue management (Predictive pricing simulations, Pass thru predictive pricing, Margins review etc.).

The agility, governance, cost leverage and discipline that SEED has brought to how data is mined and used at Sysco has delivered amazing results. People feel empowered to use data in their day-to-day work and Tableau usage has exploded from 64 to 12,713 (roughly a 20x increase) in three years.



FREE NOW unifies data from 13 countries with Tableau, enabling self-service analytics for over 50% of its workforce

Employees are using Tableau to improve service and operations for 14 million passengers across Europe

Central analytics platform, underpinned by AWS, gives both flexibility and control within one source of truth

Fully scalable platform keeps pace with FREE NOW's rapid growth

FREE NOW, part of a joint venture between BMW Group and Daimler AG, is Europe's leading taxi app, with more than 14 million passengers in more than 100 European cities. Founded in 2009 as mytaxi, the company employs 750 staff across 26 offices and works with over 100,000 drivers as part of its European network. In 2014, FREE NOW (then mytaxi) made Tableau its sole data analytics and visualisation tool, unifying multiple fragmented data sources and creating a single source of truth from which all employees can self-serve their analytics needs. Doing so has greatly improved trust in data and enabled more informed decision making at all levels of the company.

Tableau's scalability has also allowed it to grow rapidly alongside mytaxi, from 15 users in 2014 to 450 in 2019, without compromising speed or consistency of analysis in any way.



We have Tableau users in nearly every department now, where it has quickly become an invaluable tool for fast self-service analytics.

— ANDREW EMMETT, HEAD OF ANALYTICS

Single, central analytics platform significantly improves trust in data

When FREE NOW was first founded as mytaxi in Hamburg, Germany in 2009, the local nature of operations meant that data-based decision making was relatively simple. However, as the company rapidly expanded its operations across Europe over the next five years, stemming from an acquisition by Daimler Mobility Services GmbH in 2014, data and personnel became increasingly fragmented.

“Decision makers were no longer in one room and local data silos were springing up everywhere, making everything much harder to control and coordinate,” says Andrew Emmett, Head of Analytics at FREE NOW. “The bigger the company got, the lower the alignment across departments was becoming and the harder it was to make fast, accurate, business decisions.”

This rapid growth was also causing problems with the company’s underlying data infrastructure, which was unable to keep up with the pace of expansion. So in 2015, the company conducted a significant infrastructure overhaul, replacing its existing monolithic system with a 100 percent cloud-based system, underpinned by Amazon Web Services (AWS). Tableau was then implemented as the sole data analytics layer, creating a single source of truth for the whole company to work from.

“Straight away, we had a new level of scalability and control throughout our operations that simply wasn’t there before,” says Andrew. “With a fully flexible system based in AWS, we can handle seasonal spikes in demand and the resulting data processing much more easily. Tableau then integrates seamlessly into this, ensuring everyone in the company can see and work from the exact same data sets, no matter where they are geographically.”

Tableau’s intuitive interface also makes complex data easier to understand, analyse and visualise, even with only basic training. As more and more employees realise they can now self-serve their own data analytics needs, usage throughout the company has increased dramatically. In the last five years, the number of Tableau users has grown by over 2000%, from 15 (around 10% of the workforce) in 2014, to over 400 today (more than 50% of the workforce).

“We have Tableau users in nearly every department now, where it has quickly become an invaluable tool for fast self-service analytics,” says Andrew. “Uses range from customer engagement monitoring in our product teams, to KPI and budget tracking in our finance team and campaign performance assessment in marketing.”

Tableau’s flexibility has allowed us to grow unconstrained,
it works just as well with 400 users as it does with 20.

— **ANDREW EMMETT**, HEAD OF ANALYTICS

A highly flexible, scalable solution that’s grown alongside FREE NOW

For Andrew, one of Tableau’s key attributes is its ability to scale alongside FREE NOW, allowing new users to be added whenever needed, without compromising speed or consistency of data analysis.

“We’ve grown very fast in the last five years, which could have caused major issues without the right tools in place” says Andrew. “Tableau’s flexibility has allowed us to grow unconstrained in this regard, it works just as well with 400 users as it does with 20.”

A good example of this was when mytaxi merged with Hailo, the leading taxi hailing app in the UK and Ireland, in 2016.

“Following the merger, mytaxi’s workforce jumped from 250 to 400 almost overnight,” says Andrew. “When that happened, we were able to have the first new employees up and running with their own user accounts on Tableau in just 5 weeks.”

Tableau’s built in governance and control tools also provide the right balance of freedom and control.

“The aim of any organisation is to equip employees with tools that give them the freedom to do their jobs quickly and flexibly, but to also control those tools in order to maintain consistency,” says Andrew. “Tableau lets us set the rules and create a controlled playground that can be trusted to produce accurate analysis and intelligence at all times.”

As a product, Tableau has also grown alongside FREE NOW, meaning Andrew has never been in a position of wanting functionality that Tableau can’t provide.

“Tableau lets us set the rules and create a controlled playground that can be trusted to produce accurate analysis and intelligence at all times.”

— ANDREW EMMETT, HEAD OF ANALYTICS

“As the business has evolved over the years, so too has Tableau,” says Andrew. “There have been many occasions when we’ve realised new functions such as level of detail calculations or cross database joins would be really beneficial to us, only to find they are included as part of the latest Tableau update.”

Advanced Analytics helps drive service improvements for 14 million passengers

Tableau’s advanced analytics and visualisation capabilities have helped FREE NOW uncover previously hidden data insights and use them to refine its European business operations. One of the key areas where this has happened is in the creation of service boundaries for the cities where the company operates.

“In each of our cities we use historical ride data to define the area of service and ensure the best experience possible for both our customers and drivers,” says Andrew. “In Tableau we can visualise all of this data on a heatmap, which clearly shows where the majority of journeys take place. Once this is done, we can quickly identify the point at which the provision of service is no longer viable from a business perspective.”

A particular benefit to Andrew was the fact the Tableau dashboard used for this process only had to be built once and could then be rolled out across every city involved, rather than building a new one from scratch every time.

“Using Tableau for key operational activities like this saves time and also helps us make more informed operational decisions,” says Andrew. “As a result, all our drivers benefit from higher passenger frequencies, while customers enjoy shorter wait times and better quality of service overall.”

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