



Automating at the Speed of Business



What's Driving Change?

If you work in technology, disruption and digital transformation are part of your ecosystem. As technologists the TechFabric team has developed a deep understanding of the sources driving this revolution. A significant portion is consumer driven, but an even bigger part is innovation driven. Self-driving cars, voice search, blockchain, precision robotic surgery and manufacturing for that matter -- these and much more are set to be delivered with the coming 5G wireless network.

Some industries are faster than others to adopt new information technology approaches but they all have the opportunity to be part of the boom in new products, new channels, new services, and business models offered through innovations in machine learning and AI combined with 5G.

If you're feeling market pressure for your company to evolve to meet the changing needs of your customers, the best way to address this pressure is to understand the exciting opportunities associated with these changing times. An important part of our job at TechFabric as application architects is to stay on top of all of the new and emerging technologies that can give our customers the competitive edge they seek. In the automotive industry, much like other industries, we see greater automation of tasks and digital connectivity as offering huge advantages in application development.

Technology, particularly machine learning and artificial intelligence allow TechFabric to look at the market and find patterns, discern trends, and then develop products that really move the consumer experience – and the market forward. At the intersection of the automotive and financial technology (“fintech”) markets, TechFabric has built a number of high name-recognition applications that allowed our customers to not only introduce secure, robust and highly scalable cutting edge solutions – but they did so with an accelerated time to market further boosting their newly found competitive edge.



Trends in Auto finance

Increasingly, people who plan to buy a new car want to go online, make a shortlist of vehicles, find the one they like and buy it. Today, a consumer can purchase a car without ever setting set foot in a car dealership; that's a huge departure from the past and consumers love it. There are a number of companies offering this already, but enabling this kind of convenience doesn't just happen. Technology makes it happen.

Consumers want their car buying experience to be as close to a one-stop shopping experience as possible. Especially when it comes to loans and credit approvals; buyers want this process simplified and accelerated. A well-architected software solution addresses the complexities behind the scenes that buyers don't see but have come to expect – a seamless, timesaving experience where they no longer have to endure the frustrating, *old way* of purchasing a vehicle; consumers just don't have the time (or the patience) for that any longer.

Another trend is being able to buy, sell or rent vehicles without the hassle of dealing with third parties. For people who want to buy a *used* car, for example, additional requirements to those mentioned above include verifying ownership, transferring registration, buying service contracts, applying for loans and making sure the car is in good standing with no liens, and that it has a clean vehicle accident history. This is presently a lengthy, manual process and an area of immense opportunity to automate and reduce these manual processes. TechFabric is already working with several companies to meet this growing consumer demand while ensuring fraud prevention at the highest level of security.

The auto finance company that can provide a seamless experience where the buyer can choose the vehicle, accessories, financing, verifications, warranties and insurance in one easy step will gain a real edge over the competition.

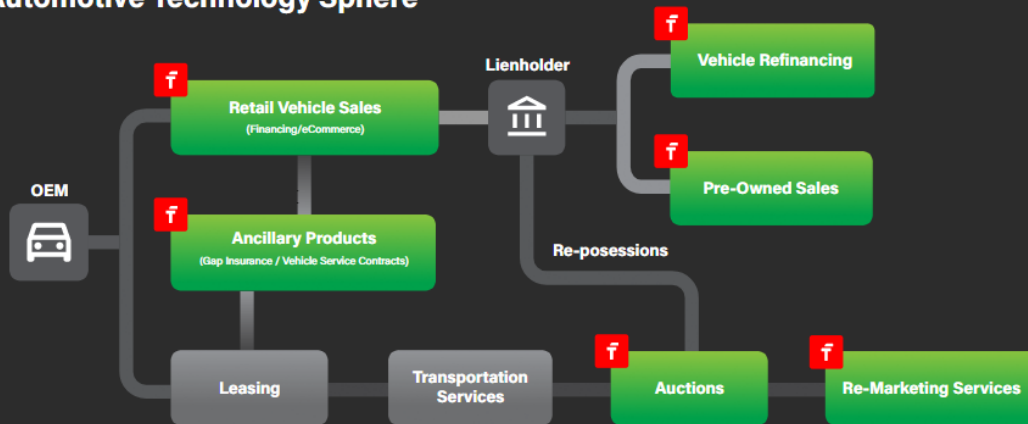
Automotive Innovation Center @ TechFabric

The convergence of automotive and fintech has resulted in what we at TechFabric consider amazing opportunities to create compelling, newly streamlined user experiences that will drive the new rules of success for lenders, manufacturers, aggregators and other providers in the automotive market.

The Automotive Innovation Center at TechFabric focuses on building collaborative processes and integrations with partners to explore and co-create novel experiences for end users by leveraging the power of cloud infrastructure and automation so customers can achieve their business goals more quickly and with a high rate of return.

Opportunity in the automotive industry is shifting from very large companies with huge markets to innovators who will fragment and capture market share via novel solutions to annoying problems that delight customers and result in high customer satisfaction, and brand loyalty.

Automotive Technology Sphere



The illustration demonstrates the breadth of experience we have in building applications for customers in the automotive and fintech industries. When developing technology solutions, it's not only important to choose a partner with demonstrated technical capability but also a partner who has experience and understanding of your business domain. TechFabric is uniquely positioned to help you build cutting edge products with rapid time to market and features that deliver an exceptional user experience.

TechFabric's Auto Fabric Integration Framework

Having worked extensively with the clients in the Automotive and Fintech industry, TechFabric has built many integrations with hundreds of third parties including LOS Providers, Refinance Lead Sources, Credit Bureaus, NADA, Speed Ship, Ring Central, Twilio etc. Drawing upon our experience in building Line of Business applications for the Automotive Industry, we've created a unique component-driven framework called Auto Fabric with various modules frequently used by companies in the Automotive Industry. Leveraging Auto Fabric to build Line of Business applications can significantly reduce the time it takes to bring your application to market while guaranteeing the safety, security and robustness of the overall solution.



Automation increases speed, TechFabric helps you drive safely

If you want your business to move at the speed of technology, your software needs to leverage the latest technologies and embrace efficient processes. Workflow is a key ingredient in the automation challenge; even poorly designed processes can be automated. TechFabric can spot problem areas and streamline for maximum efficiency. But as most people take a loan, security, privacy and fraud prevention are crucial to all parties. For example, it's important to quickly verify that the buyer can actually afford the desired vehicle which minimizes the risk of bad loans – a key business imperative.

Artificial intelligence is also creating new opportunities for banks and fintech lenders to access new sources of consumer data for predictive analytics to prevent fraud and reduce delinquent loans. By using Machine Learning and Artificial Intelligence, Techfabric has built predictive models that help mitigate risks and increase the bottom line for lenders.

Security, Compliance & Microsoft Azure

Whatever auto industry challenge you are trying to address, be it a lending, auction or other e-commerce solution, you need an IT partner who can guarantee the kind of security, compliance and risk management all parties demand. TechFabric is a Microsoft Gold Partner for Azure and has a demonstrated capabilities for building robust, secure and highly scalable applications.

TechFabric's solutions for Financial Services are designed to help customers meet compliance requirements outlined in the American Institute of Certified Public Accountants (AICPA) SOC1 and SOC2 standards, the Payment Card Industry Data Security Standard (PCI DSS) version 3.2, as well as the Federal Financial Institutions Examination Council (FFIEC) and Gramm0Leach-Bliley Act (GLBA).



TechFabric Services

Business process automation is at the heart of the TechFabric approach. Our mission is to build systems that automate the business and we accomplish this by building web and mobile applications and related APIs using the most modern, cutting edge technologies and practices. The kinds of efficiencies that we are able to achieve today with technology are areally quite astonishing, this is evident in every solution we build.

Web Applications

TechFabric has tremendous experience in building web applications that deliver rich user experiences. We have perfected the art of building modern web applications that work across all browsers and yet are compatible with secure enterprise environments. With our unmatched expertise and laser focus on JavaScript web app frameworks such as Angular, Vue and React, the TechFabric team can create rich user experiences for your end users. With over 100 successful web applications completed to date, many in the automotive and finance industry, TechFabric is well positioned to deliver on your unique auto industry needs.

Tech Stack : C#, Angular, ReactJS, VueJS, jQuery, .NET Core, Ruby, Java, Python, JavaScript, TypeScript, F#, C, C++, Erlang

Mobile Application Development

As one of North America's leading cross platform mobile app development companies, TechFabric utilizes the latest in mobile development frameworks such as Xamarin, React Native and Native Script to build apps for all mobile platforms including iOS, Android and Windows Universal Apps. We also specialize in buiding mobile applications using native languages and frameworks such as Swift, Java, C# for their respective native platforms like iOS, Android and Windows.

Tech Stack : C#, Xamarin, Swift, Java, NativeScript, React Native, Flutter

Event Driven Reactive Microservices & APIs

In addition to helping enterprises of all sizes with their application development needs, be they web or mobile, TechFabric also develops highly robust, secure and scalable APIs using Microservice frameworks. When building Line of Business applications, UX (user experience) and responsiveness (speed) have become equally important to having a rich feature set and functionality.

Tech Stack : Service Fabric, Kubernetes, Istio Mesh, Envoy, Traefik, Docker, Swarm, Rancher, Zookeeper, Consul, Mesos, Marathon

Big data and Analytics

TechFabric's built-in data analytics solutions allow you to measure, and then optimize your application for greater revenue. Deliver better experiences and make better decisions by analyzing massive amounts of data in real time. Get the insight you need to deliver intelligent actions that improve customer engagement, increase revenue, and lower costs.

Our commitment to continuous delivery ensures that we are always working on high value features and working software for your business.



The TechFabric Advantage

Building the Best using Agile, Cloud & Advanced Analytics

TechFabric technologists approach each project with a high level of empathy for what the customer is looking for. Much like when building a home – we take a “measure twice, cut once” approach to requirements gathering.

We take great care in first understanding who all of the stake holders are who will interact with the end product. That knowledge is then used to make sure the technology we select will meet the needs of all of the stakeholders. If the application is consumer-facing, we need to understand what they expect the application to look like as well as what the administrator requirements need to be. When we begin to architect the solution, we have a complete understanding of what success looks like for each stakeholder.

From the top down, TechFabric is an agile, tech-focused company. With our deep understanding of mobile and web analytics, we can help you extract valuable insights from your web and mobile applications. Working with your product and marketing teams, we function as a true extension of your company to create and execute measurement plans that tie intelligence and analytics collected from mobile and web usage into making the best possible customer experiences.

Continuous Delivery and Challenging the Status Quo

At TechFabric we are devoted to very strict agile software development methodologies, building products by constantly engaging with business owners and project leads. We ensure the business challenges are being paired with the best technology solutions available. We’re humble in our approach, and we believe in failing fast and early because this improves the success of the overall end product or business application. Approaching these in a continuous delivery manner offers profound benefits and is the glue that can tie all of these initiatives together.

Automation in TechFabric Application Development

TechFabric has developed many cloud-native applications for our clients in the automotive industry including applications for Financing/Re-financing loans, eCommerce, Auctions, Remarketing, Lease Grounding, etc.

Typically, a company comes to TechFabric, when they are ready to move away from troublesome, largely manual processes. One piece of a TechFabric customer implementation included a rules-based auto response driven by lender and rate that automatically responds to a lead, displaying for the customer the rate or loan amount for which they are eligible. The new functionality dramatically improved efficiency for this initial piece of the buyer journey.

Another provided integration and automation between communication platforms (phone, text, email) directly within the application. For example, if a customer sent a text message with their driver license number, the system automatically uploaded it to a customer profile. If an email arrived with license and registration, content and images would be parsed out and automatically saved to their profile as would any other email attachments. The result was one central profile where many disparate pieces of information aggregated in one central profile vs. multiple locations.

The ROI is simple – by automating a majority of processes, you're able to process more loans, sell more cars, accelerate deal closings and create happier customers. Perhaps the most important outcome achieved is that by automating processes, TechFabric is able to eliminate human errors that inevitably occur in outdated, manual processes.

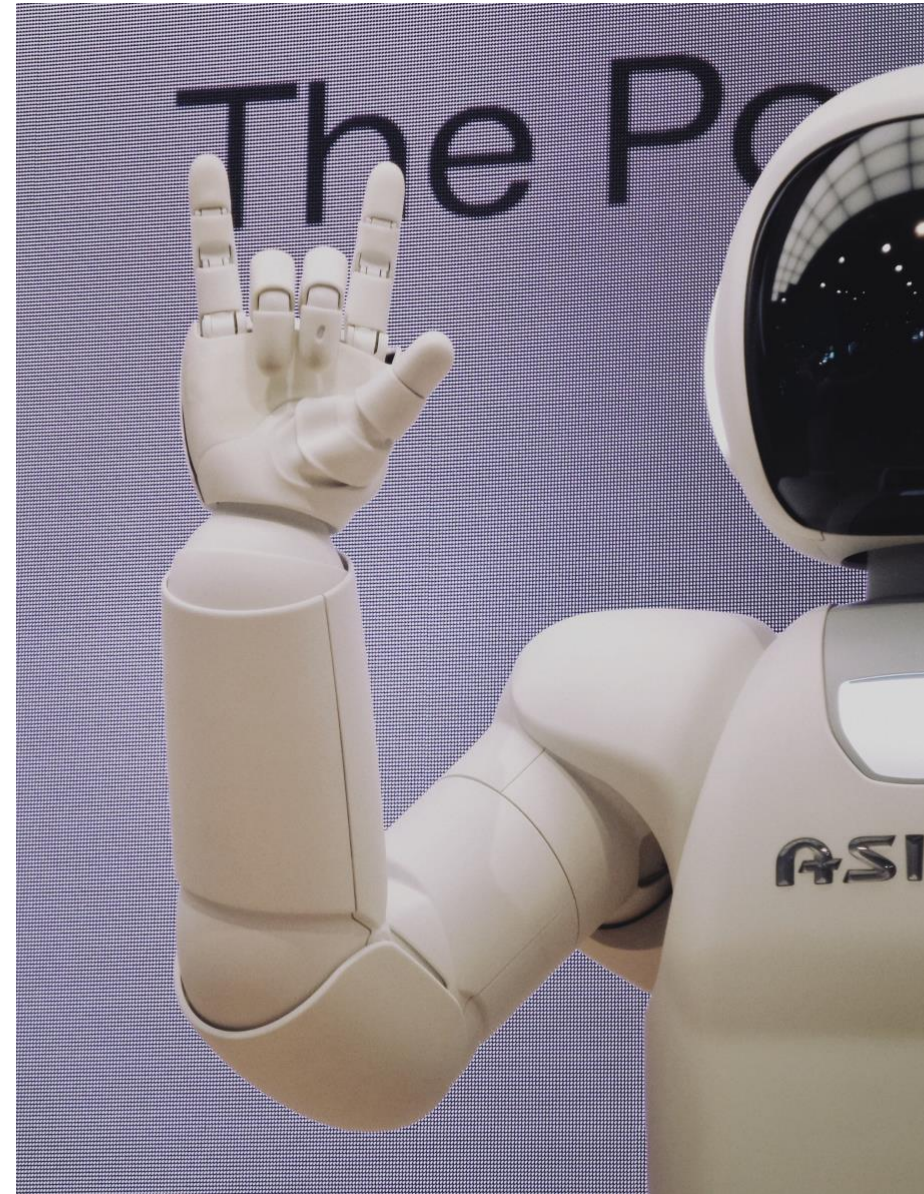
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Machine Learning and AI Revolution

Machine learning is a data science technique that allows computers to use existing data to forecast future behaviors, outcomes, and trends – today it's even helping to detect fraud. By using machine learning, computers learn without being explicitly programmed.

In the automotive industry we expect machine learning to deliver huge opportunities for advancement, risk reduction, and an acceleration in innovation. For example, Fleet Management companies can better track their vehicles and do predictive maintenance. Unlike conventional vehicles, connected vehicles can do more than alert you with check-engine lights, oil lights, and low-battery indicators. You can monitor hundreds of sensors and detect problems *before* they affect vehicle operation. By monitoring thousands of data points per second, AI can spot minute changes that may indicate a pending component failure – often long before the failure can cascade into a catastrophic event.

Tech Fabric is uniquely positioned to help companies in the Automotive space leverage Machine Learning and Artificial Intelligence to build applications that can predict patterns and deliver actionable results.



Summary

Automation, Artificial Intelligence, Advanced Analytics and Machine Learning are creating new opportunities for banks, fintech lenders, rideshare pioneers, even auto manufacturers. As consumers continue to drive innovation, the potential for improvement in the overall customer purchasing experience and the creation of new revenue streams in the automotive industry is huge.

TechFabric doesn't just build applications, it builds long-term relationships with customers (and staff) to become a true partner in the development of innovative new products, services and business models. We do this by delivering high value projects on time and on budget with no surprises.

Let TechFabric help you bring your ideas to life and build products that will put you ahead of the competition with today's time strapped, increasingly mobile and tech-savvy consumers.

We're here to help on your next project. Get in touch with us today



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