Total Quality Logistics (TQL) is one of North America's largest freight brokerage and third-party logistics firms. Within the logistics landscape, we are deliberately different than our competition. Yet, like our competition, our Software Development Team previously focused on creating perfect legacy programs within siloed application aligned teams. For much of our history, we used this proprietary technology to oversee the entire freight movement process and focused our efforts on teaching customers to use the software, rather than adapting the software to customer needs. For TQL—and logistics as an industry—our "customer" refers to three different groups: the carrier (transportation providers like trucking companies, rail and steamship lines), the shipper (businesses with freight to move) and employees (end-users of our internal software).

Logistics is a dynamic field, changing constantly and demanding flexible processes that change equally fast. We realized our approach to software development did not allow our processes and platforms to be adaptable and resilient to the changes in our field. As a result, we developed the "TQL Product Model" initiative, which is the reason we are being nominated for this award. This model restructured our Software Development Teams to engage customers in the process of development, embed Product Teams into business operations, respond quickly to changes in customer needs and utilize agile ways of working to create spaces of shared accountability and incremented value. Our goal in creating this initiative was to shift our focus from *inside-out*—business instincts and internal thinking are used to design applications—to *outside-in*—customer insights, needs and feedback are used to design product lines. Applying this model provided us the flexibility and speed to handle unmatched supply chain disruption brought on by the Covid-19 pandemic.

Your Firm's (Or Organization's) Business Strategy

Constant and drastic change is business as usual in the logistics industry. Without flexibility, growth and success are hard to come by. Traditionally, human-led customer service is how we provided agility to our carriers and shippers. Our software was not always as fast and adaptable as it is now, so it played second-fiddle to human-led service. Until four years ago, our software development was conducted in siloed teams using a traditional cycle: Ideation, Requirements, Design, Development, Testing, then Launch.

We had the opportunity to address our lack of flexibility in 2018 when we embraced a "High Tech, High Touch" strategy after Team Nitro—one of our Software Development Teams—restructured into an agile scrum team to quickly develop software to support our newly launched Less-than-Truckload (LTL) line of business. This structure allowed the team to conceive, engineer and launch our TQL TRAX LTL product within 18 months, improving customers' experiences by providing shippers the ability to track, book and pay for loads in real-time.

The success of this initial team inspired us to restructure the rest of our Product Development Teams with similar agile ways of working. This shift created a new cycle for our software development: Empathize, Define, Ideate, Prototype, Test, then Implement.

The objective of this new strategy is to first connect with each type of customer and then use those insights within the scrum framework to create value in increments through sprints of development. These teams share accountability with the results of the product, giving them ownership of the results. This structure makes our tech nimble in responding to market changes and increases pressure on our competition.

Your Technology Strategy's Customer-Obsessed Execution

Explain in detail how your future fit tech strategy is enabling your firm's customer obsession. How is this strategy enabling your firm to become customer-led, insights-driven, fast, and connected?
   a. How is your future fit tech strategy enabling your firm to become more customer-led? **(200-word limit)**

To understand why customers choose to do—or not do—business with TQL, our Customer Experience (CX) Team asks them. TQL utilizes a variety of feedback mechanisms including primary research in the form of direct one-on-one interaction; user focus groups; social listening; reading reviews; vlogs and digital diaries; surveys and application reviews on our software.

We use this research to build User Personas. Each Persona gives us a generalized "type" of user: carrier, shipper, or employee. We then build User Journeys and Empathy Maps of each Persona, outlining what they think, say, do and feel about our products as they use them to better understand why each user leaves or grows with TQL.

Finally, we take each Persona through a Customer Journey—actual paths the user takes through the product and company—identifying pain points in the interactions with our products through data analysis applications alongside research conducted for our User Personas and Empathy Maps. Identified problems are addressed using Design Thinking practices and solutions are presented to users before we develop any product. Then, we constantly engage with users during the development process to ensure we understand and create what users actually want, not what we think they want.

   b. How is your future fit tech strategy enabling your firm to become more insights-driven? **(200-word limit)**

Using the data our CX Team acquires via the methods examined above, our Software Teams use a test and control method of development to produce new features relevant to each

type of customer's needs. To remain responsive to CX insight, these teams release A, B, C and control versions of a software to users and observe usage through data analytics applications alongside data from customer reviews and focus groups. Product Teams then implement features that stick and remove those that do not.

We also invest in data analytics and reporting to keep all customer data both secure—only available for TQL employees—and visible to relevant teams. Our Software Leaders structured dashboards to accommodate business teams' customizations. This allows teams to choose what customer data is truly relevant to their place in the development cycle and take full advantage of the insights that data provides, instead of leadership providing reports for teams based on what data they think each team would need. This makes insight not only more effective within each team, but also frees time for leadership to provide support and feedback on individual development cycles.

c. How is your future fit tech strategy enabling your firm to become fast? **(200-word limit)**

Last year we developed our "Speeds Innovation," realigning our focus from application alignment to product alignment. Instead of building teams to create finished applications, we implemented agile ways of working into business product lines to quickly develop features on existing platforms using our Design Thinking cycle: learn from user point of view, ideate solutions, then build using a cadence of short sprints and feedback to create incremental value for users. This cycle allowed us to quickly create apps and portals that adapt to customer needs and any outside influence, like that of a global pandemic. Our teams constantly adjust the software to improve user experience based on how the customers use the products and how they respond to them based on insights from Business Insights and CX Teams.

Our Software Leadership Team used our platforms' flexible architecture to create space for Product Teams to quickly develop, test and iterate new innovative solutions. One example of this is building features onto our Carrier Dashboard to give our carrier base more self-serve capabilities.

d. How is your future fit tech strategy enabling your firm to become more connected? **(200-word limit)**

We restructured our Product Teams into agile ways of working and aligned with business teams to quickly listen and respond to user needs. With teams actively involved in customer engagement, they create customer journeys through the products and develop an ecosystem of technology partners.

These scrum teams took ownership of their products, developing a culture of trust and joint accountability between leadership, software teams, business teams and customers.

To ensure alignment between business and technology stakeholders, a product line governance process committee was implemented using the following groups and roles:

Product Review Board – Accountable for product alignment to company objectives and approval of product roadmaps and major feature requests

Product Owners – Accountable for business product roadmaps and strategy, prioritizing backlogs and establishing and evolving product line vision

Product Manager – Accountable for Tech product line results, including implementing and communicating product line vision to stakeholders and ensuring TQL products remain competitive in the industry

Product Architect – Accountable for product line technology and architecture, technical standards and technical leadership

Tech Strategy Execution — Platforms

Please explain in detail the role that technology platforms play in your organization's future fit tech strategy — and the impact that has on the overall business strategy.

    e.   Provide your definition of technology platforms and how they enable the success of both the technology and business strategies. **(250-word limit)**

Within our Tech Strategy, our Product Teams built three primary platforms for each type of customer: employee, carrier and shipper. These platforms—like our business—move beyond simple transactions, seeking to strengthen existing partnerships and provide excellent customer service. Inside our Load Manager, TRAX and Carrier Dashboard, we implement user behavior data analytics to provide insight into which features engage users. Then, we structure these platforms to provide customers with one, simplified space to find what they are looking for and design our solutions based on which features they use.

Our new product aligned organization, flexible architecture and data analytics strategy allow us to adapt responsively, integrate new platforms for scalability and adding or removing features to improve customer experience. Our strategy allows us to use add-ons through our partners to accelerate value delivery.

This system architecture and ecosystem of restful APIs simplifies our processes by allowing scalability and flexibility with building solutions. We catalogue our APIs and utilize a strong technology community which allows for API visibility and lines of communication throughout the organization. As a result, our APIs can be reused as building blocks for delivering new and better solutions for our customers while our product model adoption gives ownership of APIs to the teams. This deepens team knowledge of products and improves our time to market.

Tech Strategy Execution — Practices

Please explain in detail how your technology organization is changing its technology planning, delivery, and operating practices to support its future fit technology strategy — and the impact that has on the overall business strategy.

TQL caters its software development practices to bite-size features so they're available in a sprint. Implementing scrum framework, our Product Teams utilize a cycle of user empathy, ideation and prototyping, then use a series of sprints and feedback to build features. Throughout this process, we remain customer-obsessed through continual feedback. As a result, the cycle of our product development continually tests and integrates new features into our platforms, creating value for the user.

The goal of this cycle was to shift our focus from revolving around Applications, choosing instead to revolve around Products and Product Lines. Where our previous structure was inflexible, reactionary, inconsistent and did not give Product Teams ownership in the results, our focus on Product improved organizational scalability and time to market of features and capabilities for our shippers and carriers. This allows TQL to focus on evolving our product and service offerings, not on managing applications.

We then aligned our Product Teams with Marketing to create more engagement with internal and external partners. For our internal customers, we developed short, instructional feature videos to show users our newest features at a quick glance. Much like popular TikTok videos, these clips successfully gain our users' attention and share information in an engaging way. For our external customers, we utilize tiles in our interface to advertise new features and push notifications to alert users of important updates. Through updating customers on these features, we engage them in a feedback loop for input to quickly address concerns and suggestions.

Tech Strategy Execution — Partners
Please explain in detail how your tech organization is leveraging third-party partners to support its future fit technology strategy — and the impact that has on the overall business strategy.
g. Explain the role of these third-party partners and how they enable the success of both the technology and business strategies. **(250-word limit)**

For much of its history, TQL had the preference, luxury of time and expertise to build all our features in-house. However, rapidly expanding business and the dawn of more SaaS logistics companies changed our approach to invest more in strategic partnerships. We use cloud partners for hosting and access to innovative capabilities, allowing us to quickly add new features to our software in real-time.

We look for the appropriate balance of developing in-house versus leveraging strategic partnerships, constantly assessing which would provide the most value to each type of user: carrier, shipper and employee. We consider the experience our partners have in their fields alongside our teams, customer insights and time to market when making these assessments.

We partnered with Apprenti and MAX Technical Training to begin our in-house Tech Apprenticeship Upskill Program. This is a cohort based bootcamp that takes internal candidates interested in learning software development and trains them through a 14-week curriculum. This partnership improved our ability to drive software development from insights, as these new members of the team moved from software users to creators, able to provide features and suggestions they had experienced on the other end of the product.

People Strategies

Please explain in detail how your technology and overall organization invest in your employees to foster a healthy, diverse, and adaptive workforce.

    h.   Please focus on the people-related changes that your organization/firm has made — and their relative priority — to drive a cultural change, focused on fostering characteristics like innovation, collaboration, and accountability. (250-word limit)

Our Tech Leadership teams invest in innovation, collaboration, and accountability through multiple groups and events like:

3 For 3 – Every Tech leader must spend three days every year shadowing an employee who is an end-user of our tech and come up with three new features or ideas to improve the software for users. This helps keep the products relevant and the experience user-friendly and functions as an important step in our Design Thinking cycle.

Tech Hackathons – We host a 48-hour event in which Tech employees form into teams to rapidly develop software-based solutions for issues and then present them to a cross-functional group of executive leaders. Winning ideas have been implemented.

Upskill Apprenticeships – TQL invests in incumbent non-tech employees by sponsoring a coding bootcamp and then placing graduates on the Tech Team as an apprentice to receive on-the-job training for 12 months.

CAP Program – The Tech CAP program accelerates the careers of top performers that have voiced an interest in Tech leadership. The two-year program focuses on marrying soft and tech skills and ends with a capstone presentation to Tech leadership.

Tech Showcase – On a monthly basis, employees are invited to present innovative concepts to a multi-disciplinary committee of leaders, including our Chief Information Officer. From brand-new concepts to improvements on existing ideas, the Showcase is an opportunity for good ideas to get the limelight they deserve. Concepts that gain traction are then sponsored by a leader and enter the formal Architecture and Project Review Board process.

The Role Of Business Benefits/Outcomes

    i.   Explain how business objectives and key business results are impacting your tech organization's execution of its future fit tech strategy. **(250 word limit)**

By implementing Design Thinking and agile ways of working, our software development strategies aligned more with business OKRs. Our shift from inside-out to outside-in thinking allowed our customers to engage more effectively with our products and help create shared value through their insights, changing our measure of success to customer experience rather than cost of production or short-term fixes. By adopting agile ways of working, we gained flexibility and resilience, two traits vital to an industry that experiences constant change driven by macroeconomics, weather, infrastructure and global events.

As a result of our shift in software development strategy, we were able to meet the needs of the pandemic supply chain crisis as they arose, growing our freight management platforms and business arm to flex with the changing market. Once we started to see a rapid increase in transaction volume, we scaled our systems horizontally to meet the demands of our customers.

When the pandemic arrived and the supply chain entered crisis, our customers looked to us for support in other modes of transportation, which created a spike in shipments Through the use of platforms, our tech scaled with the rapid growth of the company.