



#### CLIENT

Aramid Technologies

#### INDUSTRY

Supply Chain

#### CATEGORY

Digital Transformation

#### DELIVERY

SaaS product called SmartCert (Web application, Mobile Optimized with Mobile App coming in v2)

#### LAUNCHED

Jan. 2021  
(Early Adopter Phase)

#### EARLY ADOPTERS

AIM Testing Laboratory,  
Parker Fasteners,  
PenCom

#### PRODUCTS & SERVICES

- Azure DevOps
- SQL Server Database
- Azure Blob Storage
- Azure Fuzzy Search
- Application Insights (APM)

With a history in aerospace and sailing, Aramid Technologies set out to shake up the supply chain marketplace with a platform of products that will do what aramid materials did for many industries: improve strength, performance and effectiveness without having to revolutionize the systems and processes they already have in place. With Aramid's deep experience in the Supply Chain Industry and TechFabric's fresh, clear-eyed approach to agile application development, the team was able to masterfully yet simply tackle one of supply chain's thorniest and most expensive issues.

Managing paperwork had become one of the single largest factors slowing down global supply chains where each leg of the journey holds the potential for delay due to missing, damaged or incorrect certifications. Consider too that some supply chains have a dozen "tiers" of suppliers, and sub-suppliers, and you can appreciate how easily paperwork might go missing along the way. Together, Aramid Technologies and TechFabric created a simple, elegant and flexible solution using existing, mature and tested technology in a novel way; using QR Codes and Microsoft Azure technologies to digitize and

improve upon supply chain's status quo. The solution is designed as a SaaS-based subscription service that connects required documentation and certifications, COC's, ISO's, AIC's, etc. to parts as they move along the supply chain.

*“We chose the Microsoft Azure platform because we knew it would allow us to build SmartCert in a slick, modular way with the ability to create a library of APIs to connect with common key systems (ERPs like SAP and Epicor to Quality Management Systems). That approach saved time and money for all stakeholders and makes SmartCert available to literally everyone in the supply chain.”*



Lyndon Lattie, SmartCert Co-Founder

# **Aramid Technologies & TechFabric Team Up to Introduce SmartCert® using Microsoft Azure to Conquer a Source of Costly Supply Chain Pain**

The world is connected by an intricate network of supply chains with numerous touch points along the way where necessary documents and certifications are required to continue each shipment's journey. Aramid Technologies was a small team with a big vision for the global supply chain marketplace. They partnered with TechFabric, a Microsoft Gold partner with a reputation for innovative use of Microsoft technologies, to reimagine a more efficient, flexible method of transferring required documentation across the supply chain. "We chose TechFabric and the Microsoft Azure platform because we knew it would allow us to build SmartCert in a slick, modular way with the ability to create a library of APIs to connect with common key systems (ERP, Quality Assurance, etc.) That approach saved time and money for all stakeholders and makes SmartCert available to literally everyone in the supply chain," said Lyndon Lattie, SmartCert Co-Founder.

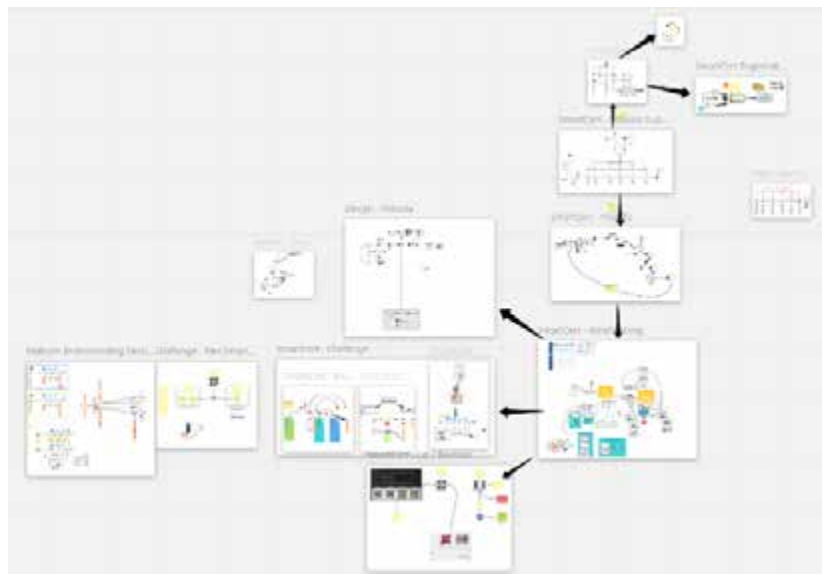
Now in the early adopter phase, the expectation is that those companies adopting SmartCert will significantly reduce time spent tracking and tracing documentation and that SmartCert will soon become an essential tool to an increasingly digital future for a more agile supply chain industry.

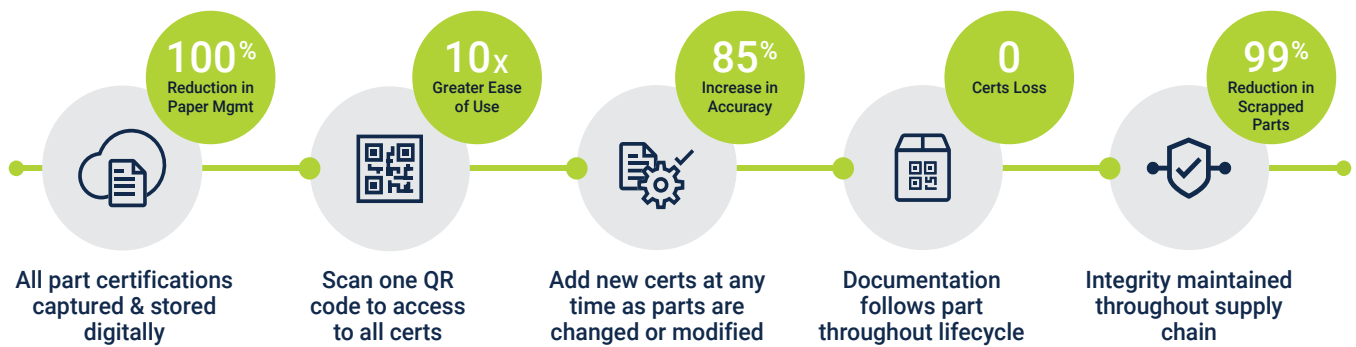


## Rethinking Certification Delivery

It was clear that SmartCert needed to be simplistic in use, so any business could implement it without replacing their current processes. SmartCert needed to have ease of use, speed, flexibility and accessibility. TechFabric analyzed the current processes for transferring documents along the supply chain and designed a solution using Quick Response (QR) codes to eliminate the fragile, paper-based certification methods.

A product such as SmartCert would dramatically transform the documentation transfer, creating an opportunity to digitize and attach critical documents directly to packages and parts as they move throughout the supply chain. Bi-directional access from originator to destination would be crucial allowing authorized users who find a discrepancy to quickly apply a fix at any point along the supply chain. After the team captured all requirements and refined priorities, Microsoft Azure DevOps was utilized for project management, tasks tracking, repository, pipelines for project building and user story backlog and a high-level development approach while prioritizing features for a successful viable product.





*“The real excitement and enthusiasm is around integration - enabling any system to interact with SmartCert. If 2020 has a silver lining, I think it would be that businesses that work with antiquated systems and have complex documentation requirements were forced to think about working smarter. COVID-19 moved up the timeline to go digital and with that, SmartCert becomes not only a painless starting point, but an important area of differentiation. Customers can see that if they build a stronger and more trusted communication channel, it can earn them more business.”*



Lonni Kieffer, SmartCert Co-Founder

## **Smarter, Faster, and Stronger Supply Chain, Instantly**

In a typical scenario, an important shipment for a key customer leaves the warehouse and at the last minute, additional COC's are required by the customer but weren't able to be attached prior to leaving the warehouse. Normally the shipper would contact the customer and submit the document via email to a customer service representative or a direct contact, asking the customer to make sure the documentation is attached once the shipment has been received. So many things could go wrong under this scenario. SmartCert would solve the problem instantaneously by allowing the user to login to their SmartCert environment, find the correct shipment, and upload or change the documents required.

SmartCert automates the certification procedures by electronically binding certifications (certs) to the original packaging. SmartCert connects manufacturers, buyers, and sellers with access to required documents in one secure location making it easy to scan and identify



incorrect or missing certifications when shipments arrive at the warehouse. TechFabric and Aramid view SmartCert as a competitive advantage, unifying all businesses and parts of the supply chain.

Users realize immediate cost savings, efficiencies and exponential ROI by eliminating the need to quarantine or scrap parts. (Everybody loses when parts have to be quarantined or scrapped, and once a company's reputation and trust is called into question, it's much harder to recover.)

## Consider

Average US Sales

**\$14M - \$100M**

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**0.6% - 1.0%**

of inventory is scrapped

A distributor with \$30M in gross sales could lose up to

**\$300k Annually**

resulting in \$1.5M over  
5 years

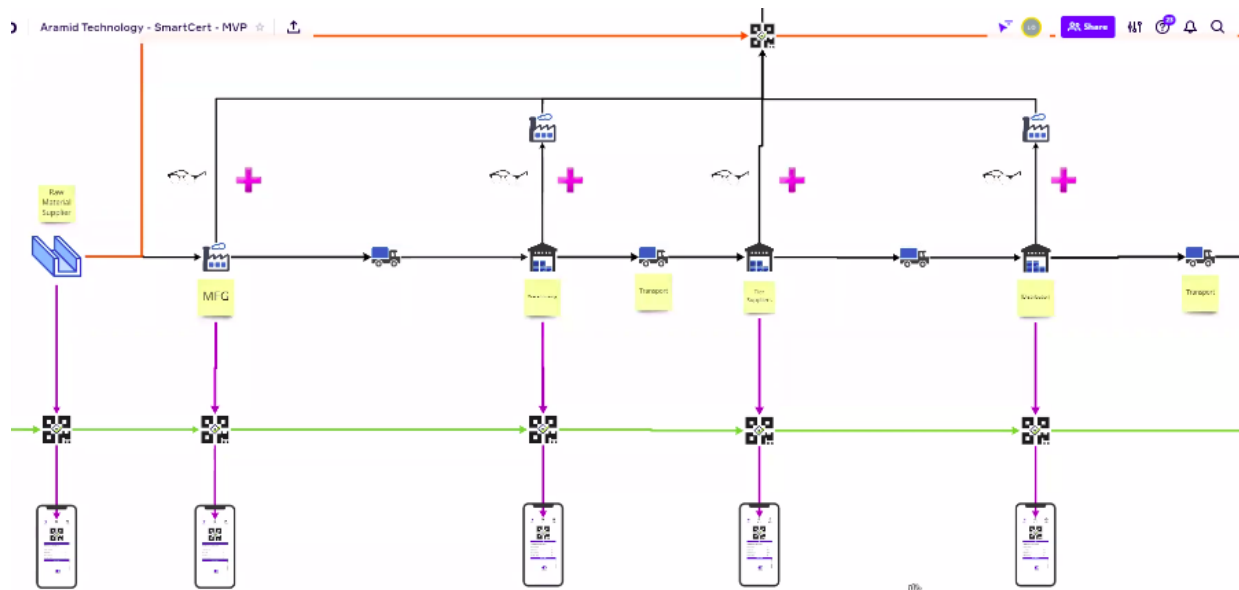
## **SQL Server Database as SmartCert's “Beating Heart”**

Data is central. SmartCert needed to have a secure environment where data can be safely stored but flexible enough for swift and easy access by any number of authorized users. Azure's SQL Server Database provided a very fast and stable platform for both data entry and extraction. An additional advantage was the scalability; costs could be kept lower in the startup phase with all other Microsoft products working seamlessly with the platform for further roadmap feature enhancement. The moment a user decides to generate a SmartCert they can easily populate the SmartCert by attaching documents to it which will then be stored in Azure blob which allows unstructured data such as audio, video and/or images, an important added benefit.

## **Microsoft Azure Blob Storage – “The Brains” Behind SmartCert**

One of the most important capabilities that Microsoft Azure provides is the agility to migrate to different

storage options if required. TechFabric used Azure's blob storage as the "brains" of SmartCert because of its excellent flexibility and usability. It is one of the most important functionalities because it enables the ability to transfer documents in a split second with supply chain partners around the world enabling a shipment's journey to continue unimpeded.



“Storage of files for distributed access was one of the key goals for SmartCert,” said Preetham Reddy, TechFabric Founder and CEO. “Microsoft Azure Blob storage allows us to serve images and/or documents directly to the browser. Being cloud-based is a key advantage over any on-premise solutions.”

## **Using Azure Search as “Eyes and Hands” to Find Elusive Certs**

Azure Fuzzy Search was selected to allow SmartCert to suggest results based on only partial information if a QR code is damaged, further speeding missing/incomplete certification resolution because the better the search results, the shorter the delay.

In this regard, SmartCert Search serves like the application’s eyes and hands. The moment a shipper or receiver doesn’t have the complete number of a smart cert, or unique identifier – perhaps they have only a fragment, the user can input what they have and the application will deliver suggested results to help find the specific cert in question to expedite the shipment to its destination.

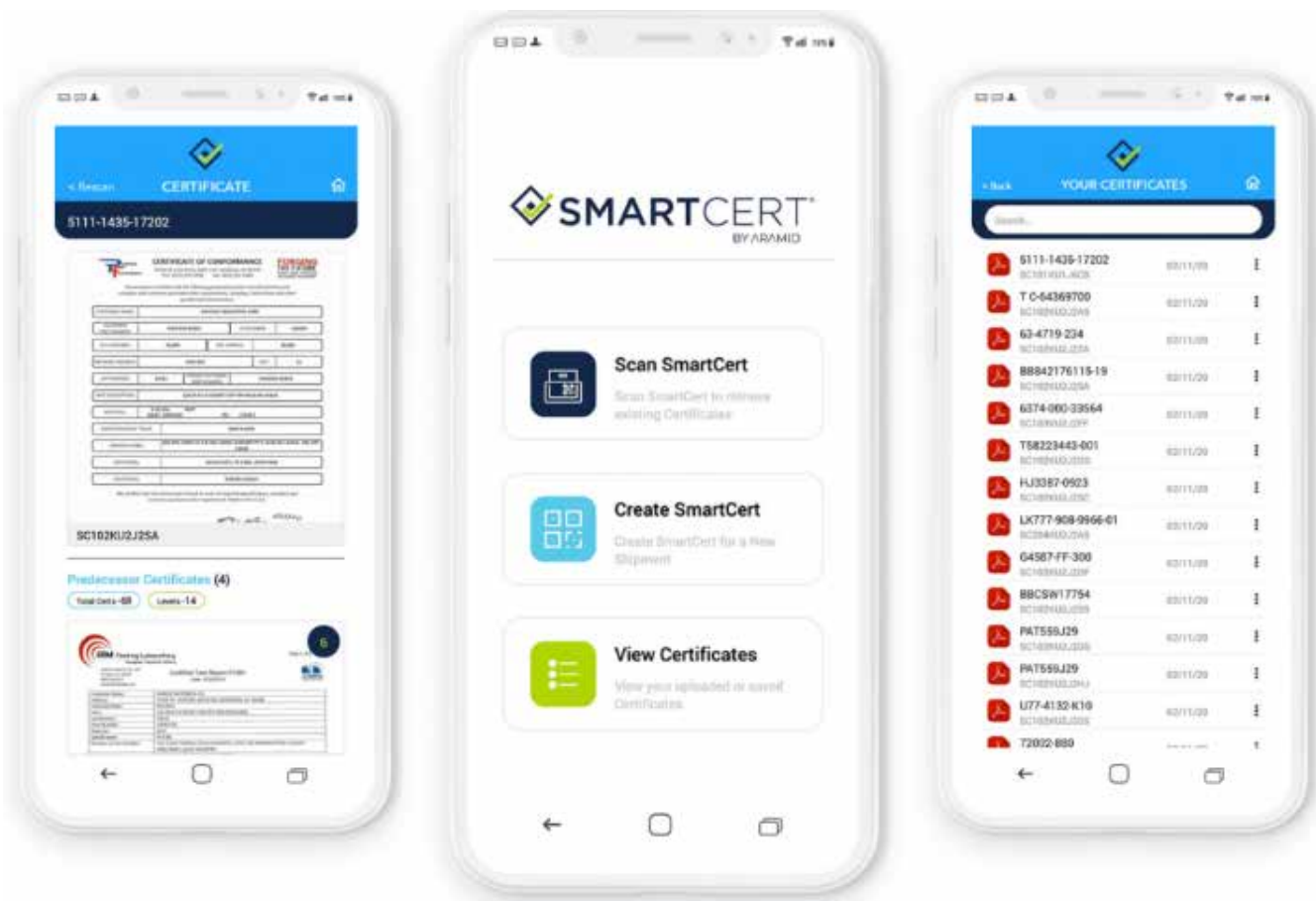
## **Azure Insights**

User friendliness is a must on the SmartCert platform and this is where Azure Insights comes in from a backend perspective. The Azure Application monitor

gives developers and DevOps professionals the ability to monitor applications live allowing anomalies to be easily detected and solved, and offers a host of strategic insights that contribute to continuous improvement on the platform. The overall package and technology used allows for scalability and extensibility in the long term with the use of Azure Insights powerful REST APIs & SDKs.

## **The Future: Continue to Innovate and Adapt**

Supply chain management strategies tend to evolve slowly, but if 2020 had a lesson to teach it's that as businesses prepare to reorganize for a post-COVID-19 world, forward-thinking organizations are recognizing the importance of digitalization exploitation in order to remain competitive in the fast-paced world of global business, commerce and e-commerce.



“It’s all very ‘back to the future’ when you think of it,” said Lattie. “QR codes are 25 years old, computers are old, and smart phones are rather old as well. We’re putting all of those together and solving this persistent, expensive, and annoying choke point in the supply chain with tools we already have – literally in our pocket; and using technology that has already been proven and tested. It’s a cutting edge solution built on mature technology.”

Digital Transformation is an evolution – a journey that never really ends. As markets develop and customers' needs change, organizations must consistently invest in their digital technology to build and maintain customer-centric experiences to remain competitive. By leveraging Azure's development and cloud storage services TechFabric is helping Aramid Technologies transform how supply chain partners document and certify everything from crucial aerospace or automotive parts, to raw materials, and even crucial medical supplies – like vaccines.

Sometimes a simple solution can have a profound impact.

SmartCert is simple, smart, and here now.



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