



CUSTOMER STORIES

# Multinational Company Builds Automotive Measurements Application Using Dynamsoft Barcode Reader SDK

Dynamsoft™

# Snapshot

The company is a multi-billion dollar business and leading global supplier of technology and services. It employs nearly half a million people worldwide. One of its divisions was developing an application for use in an automotive welding application. With this application, the user scans a data matrix code (DMC) from a metal plate that contains welding spots. The user can then add meta information for the whole plate or select single spots to add specific information.

To save on development time and costs, the developer team went looking for a barcode reader SDK. Ultimately, the team settled on using [Dynamsoft Barcode Reader](#). They found Dynamsoft's SDK to offer easy integration and therefore a fast time to usage. They also found the SDK had a lot of configurable options to adapt it for the specific use case they needed. After their prototype testing, they planned to industrialize the application for potential customers inside and outside the company.

## INDUSTRY

Automotive

## PRODUCT

Dynamsoft Barcode Reader SDK

## TECHNOLOGY

JavaScript, Web, Direct part marking codes

## KEY REQUIREMENTS

- ▶ Required a JavaScript Barcode SDK to scan Data Matrix Codes (DMC) in browsers on tablets
- ▶ Needed an optimized algorithm suited for decoding difficult Direct Part Marking (DPM) codes
- ▶ Called for flexible pricing options suited to building a prototype vs. commercial application

# About The Company

This company is a leading global supplier of technology and services. It employs nearly half a million people worldwide. Operations include vehicular and industrial technology solutions. It operates in more than 50 countries. This includes employing more than 25,000 software engineers.

**400,000**

Associates  
worldwide

**440**

Subsidiary and  
regional companies

**60**

Countries

# A Technology Need

A division within the company was developing an application mainly used in the automotive industry. The focus of the automotive application began as a research prototype in the field of resistance welding. It would be used to gather measurements and meta information for testing.

The overall goal was to create a fast, easy, and consistently reliable way of gathering measurements and additional metadata surrounding automotive resistance welding. The application would also provide its users with an overview of the current state of projects, for example how complete the meta information is and which measurements exist.

The application is ideal for manufacturers and test engineers, both internally and externally. In addition to process experts, data analysts in the field of welding will find the application to be a useful tool.

Consistency and reliability of the data is very important in the application. So, a mapping between the materials and measurement had to be traceable at all times. To do this the software developer group team turned to barcode technology.

In a typical scenario, a user scans a data matrix code (DMC) from a metal plate that contains the welding spots. Then the application will visualize a digital plate with the corresponding information from the database. The user can then add meta information for the whole plate or select single spots to add specific information. There might be several hundred metal plates to do. So, not all measurements can be done at one time. The application would allow a user to come back to the plate via a DMC scan at any time.

To get the best possible results for a typical scenario, the team had two specific needs for the barcoding software to perform:

# 1

## **Scan Data Matrix Codes in Web Application**

The company built a web application running on a tablet. For the barcode scanning function, the team started with a hardware barcode scanner. But they found it would be simpler to use the integrated camera of a tablet. This would be a more fluent approach for a typical user. So, the developer team began to search for a browser-based barcode SDK that scans data matrix codes from live video streams.

# 2

## **Optimized for Reading Codes on Metal**

The data matrix codes are stamped on welded aluminum plates and look like white dots from some angles. An obstacle here was that the standard libraries available are good at scanning perfectly printed data matrix codes but not codes on metal plates. The developer team needed a barcode reader that is optimized for direct part marking codes (DPM codes) as they are amongst the most difficult to scan.

# Getting Going with a Solution

Roughly eight team members were involved in contributing to the overall application. One developer did the specific frontend with the DMC barcode application. In addition, some colleagues from other departments contributed. A first prototype that included conducting a DMC barcode scan was finished in around one month.

Because DMC barcode integration was just one capability of many that needed development, creating their own DMC reader was not an option. It would simply require too much effort and additional time. So, the developer team went looking for a barcode reader SDK. They came across one other SDK vendor. However, the licensing model did not meet the needs specific to their application.

They also considered the freely available zebra crossing (zXing) library. However, they found the solution to be only good at scanning simple DMCs and not so good at scanning ones on metal plates.

Ultimately, the team settled on using **Dynamsoft Barcode Reader**. Dynamsoft's SDK enables developers to efficiently embed barcode reading functionality in their web, desktop or mobile application using just a few lines of code.

This can save teams months of added development time and extra costs. With the barcode SDK, programmers can create high-speed and reliable barcode scanner applications to meet demanding business needs.

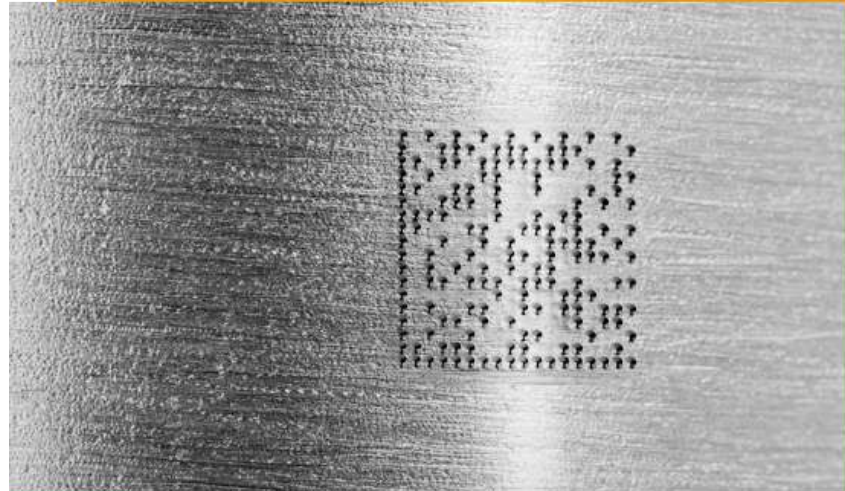


*“ We found Dynamsoft's Barcode Reader to be very good at scanning DMC barcodes and the company provided good support. In addition, Dynamsoft's SDK was useful in meeting our needs to get up and running quickly. ”*

*— the technology manager  
from the company*

# Advantages Gained

The company found Dynamsoft's SDK to offer easy integration and therefore a fast time to usage. They also found the SDK had a lot of configurable options to adapt it for their specific use case. Web based engineering tools, such as this SDK, offer the advantage of install-free use and flexible application opportunities to run on all common mobile and desktop platforms.



One end goal for the application was to ensure an intuitive and easy user interface. Another major requirement was to use a modular approach because it is critical for fast prototyping and integration of new features. These were both solved with Angular's service-based architecture. Dynamsoft provided good samples for Angular which helped improve the company's integration process.

The software team found Dynamsoft's technical support very helpful. For example, developers encountered some difficulties with Dynamsoft's documentation for DMC barcoding. The Dynamsoft support team was quickly responsive in addressing it.

The team plans to expand the application. It is currently used only as a prototype in one department. If the prototype is successful it may be industrialized for potential customers inside and outside of the company. Dynamsoft's flexible licensing will help with the expansion at a reasonable cost.



# About Dynamsoft Barcode Reader

The Dynamsoft Barcode Reader SDK enables developers to efficiently embed barcode reading functionality in their web, desktop or mobile application using just a few lines of code. programmers can create high-speed and reliable barcode scanner applications to meet demanding business needs.

The SDK provides support across common platforms: Android, iOS, JavaScript, Linux, and Windows. It has support for most 1D and 2D barcode symbols.

LEARN MORE ABOUT DYNAMSOFT BARCODE READER

