



Babtec.WM

Take Control of Field Data With Warranty Management

In innovative sectors such as the automobile industry, systematic methods are implemented to monitor the quality of the products during the normal **service life in the field**. The goal is to identify hitherto undetected hazards and risks at an early stage while the products are being used and to initiate **effective corrective actions**.

Manufacturers of modern and complex products are today more than ever dependent on feedback from the field in order to remain competitive and strengthen their market position. Accruing **warranty claims** on the other hand represent a substantial risk. Use the Babtec module for Warranty Management to fulfill your market monitoring obligations and take advantage of the potential of field data.

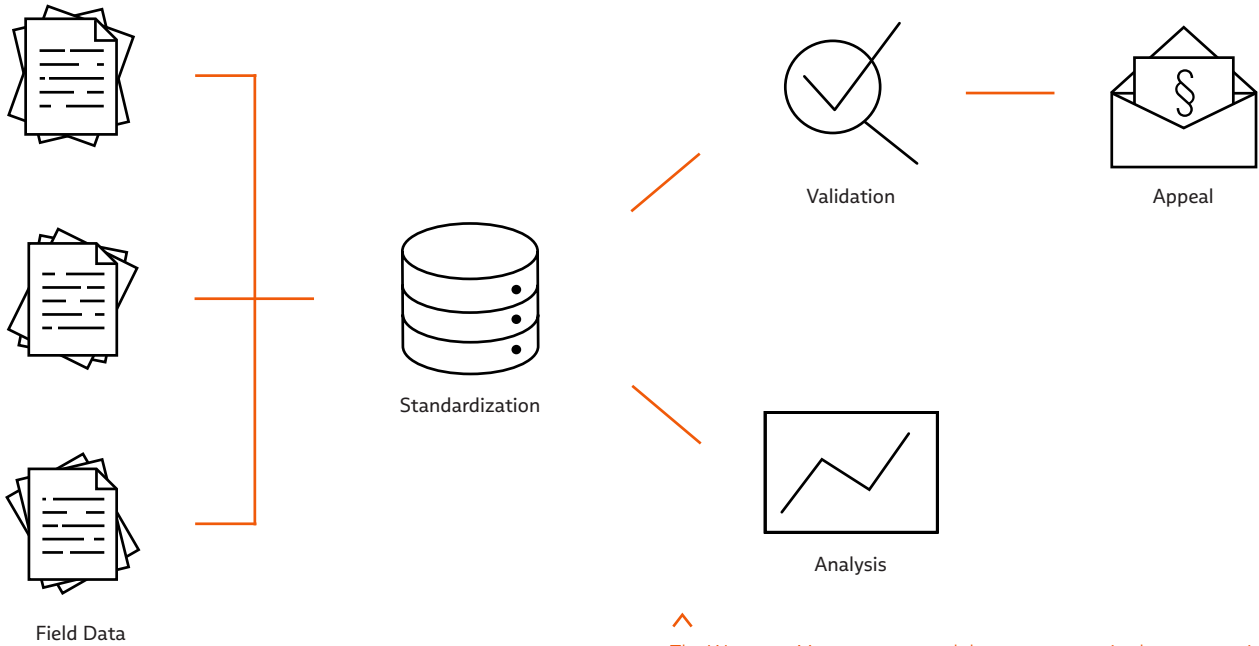
As a supplier to the automotive industry, you receive useful data from the field automatically in conjunction with the warranty claims of your customers. **Collecting and analyzing** this field data are the main tasks of an effective warranty management system.

Automobile manufacturers have established their own portals for communication and the exchange of data with their suppliers. Here the manufacturers also report **complaints from the field** and the warranty claims resulting from them. These claims are reported with reference to the products affected and are usually made available in the form of Excel files.

Standardizing Customer Data

Your challenge: The **warranty claims** must first be checked against the contractual agreements – within the applicable **time period for filing an appeal**. Because your customers work in various data formats, this review of the differently

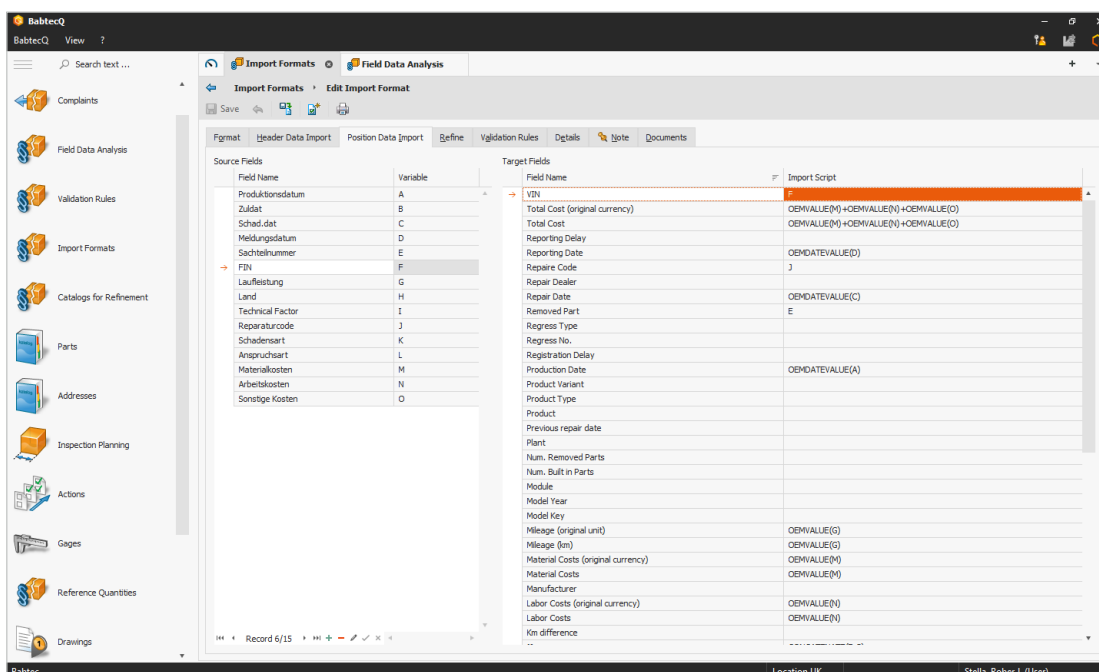
formatted documents has until now involved a considerable amount of manual work. In the future, you can leave these **time-consuming routine activities** to the Babtec software and invest your time instead in the technical analysis process.



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The Warranty Management module supports you in the systematic processing of your field data - from standardization to validation to analysis.

With Babtec.WM, you **automate** the review of the data provided. The standardization of the varied customer data and, at the same time, the creation of a unified database for the analysis of the included field data serve as a basis for this.

With the help of freely **configurable templates** (import formats) for all relevant customer formats, the data are imported directly into your CAQ database using a **uniform format**. For this purpose, you assign the data provided by the customer to the corresponding fields of your target data field within your import format template. These templates are **defined only once** and are subsequently used for each data import. If a customer format should change, you can easily make the necessary adjustments yourself.



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The templates for the import of various customer formats can be freely configured.

Checking Warranty Claims

The review of the imported customer data takes place with the help of **validation rules**, which you can **flexibly set** according to your needs. You can, for example, detect at the touch of a button whether the failures are even within the warranty period or whether the agreed-upon acceptance rates for calculating claims have been taken into account.

The application of the validation rules ensures a **rapid and secure** review of the reported warranty claims. The validation results are reported immediately to you clearly and with reference to the imported item. For supporting your internal **appeal procedure**, a report is also available, in which all items relating to an appeal are listed. All reports can of course be adjusted to your individual requirements (Babtec.RPT).

The screenshot displays the Babtec Field Data Analysis software interface. The main window shows a table of warranty claims with columns for Pos. No., Valid., Appeal, Not Plausible, VIN, Mileage (km), Built in Part, Built in Part (Part No.), Acknowledgment Rate, Production Date, Repair Code*, and Repair Date. Below the table is a 'Results' section with an 'Error Log' table showing validation messages.

Pos. No.	Valid...	Appeal	Not Plausible	VIN	Mileage (km)	Built in Part	Built in Part (Part No.)	Acknowledgment Rate	Production Date	Repair Code*	Repair Date
11	\$			WWVZZZ1BZ4W005307	3,872.00	BR000SN2	100/4864/503	80.00	1/1/2004	Exchange	1/31/2006
30	\$			WWGZZZ1CZ4W003806		BR000SN1	110/2020/003	70.00	3/1/2004	Wastage	3/31/2005
41	\$	✓	✓	WWGZZZ1CZ4W003393	10,358.00	BR000SN1	110/2020/003	70.00	1/1/2004	Wastage	1/5/2006
155	\$	✓		WWVZZZ1BZ4B005170	214,416.00	BR000SN1	110/2020/003	70.00	1/1/2004	Exchange	8/15/2007
161	\$			WWGZZZ1CZ4W003969	56,381.00	BR000SN2	100/4864/503	80.00	1/1/2004	Wastage	7/16/2006
174	\$			WWGZZZ3AZ4D004574	5,975.00	BR000SN2	100/4864/503	80.00	1/1/2004	Exchange	4/12/2004
190	\$			WWVZZZ1BZ4P005252	12,566.00	BR000SN1	110/2020/003	70.00	1/1/2004	Service	12/16/2005
383	\$			WWVZZZ1BZ4B005193	37,623.00	BR000SN1	110/2020/003	70.00	2/1/2004	Exchange	2/10/2006
575	\$			WWVZZZ1BZ4B005126	126,843.00	BR000SN2	100/4864/503	80.00	4/1/2004	Wastage	12/2/2006
638	\$			WWVZZZ1BZ4B005160	77,990.00	BR000SN2	100/4864/503	80.00	1/1/2004	Wastage	12/25/2005
1095	\$			WWGZZZ1CZ3W002725	244,659.00	BR000SN1	110/2020/003	70.00	2/1/2004	Wastage	8/22/2005
1114	\$			WWGZZZ1CZ3W006635	190,203.00	BR000SN2	100/4864/503	80.00	2/1/2004	Service	12/7/2004
2328	\$			WWGZZZ1CZ3W002597	77,489.00	BR000SN1	110/2020/003	70.00	8/1/2004	Exchange	7/29/2006
7351	\$			WWG7771C73W007128	87,986.00	BR000SN2	100/4864/503	80.00	8/1/2004	Exchange	7/23/2006

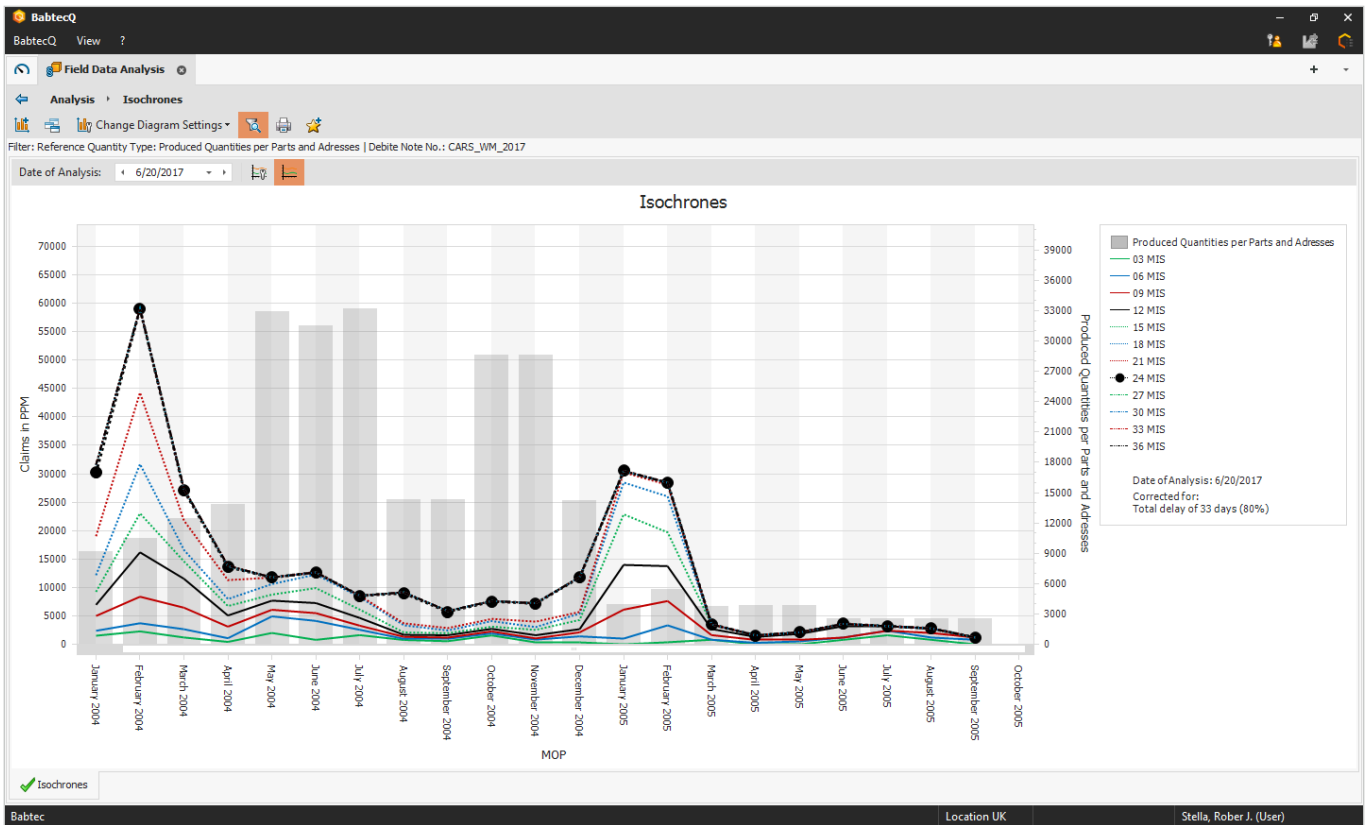
Pos. No.	Message Type	Validation Instruction	Message Type Name	Time	Description
11	?	send market	Appeal	4/26/2017 4:20:07 PM	The repair did not take place in the agreed market.
41	i	Milage above the threshold	Hint	4/26/2017 4:20:07 PM	The mileage is above the estimated plausible mileage.
41	!	repair date not plausible	Appeal	4/26/2017 4:20:07 PM	Das specified repair date is before the first registration date of the vehicle.
155	i	Notice: out of warranty	Appeal	4/26/2017 4:20:07 PM	Hint (USA): 36 month, Current: 43 month
155	i	Milage above the threshold	Hint	4/26/2017 4:20:07 PM	The mileage is above the estimated plausible mileage.
161	i	Notice: out of warranty	Appeal	4/26/2017 4:20:07 PM	Hint (DEU): 24 month, Current: 30 month

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Appeal or not? The results of the validation are available at the touch of a button.

Creating a Reliable Database

The imported field data offer, among others, information about when a vehicle was produced, licensed, and repaired, as well as which component or part triggered the claim. For a comprehensive field data analysis, it is necessary to interpret the imported data corresponding to your own standards and to augment the data with additional information. Furthermore, implausible field data can be excluded from the analysis.

With the help of **dictionaries**, you can translate specific customer information such as information about country, damage type, or model into **your own corporate language**. Using refinement rules, you can also determine within the import format template how the field data should be supplemented by information such as product type, product variant, or damage category based on the transmitted data. Depending on your uniform target format, you determine which **catalogs** you need for standardizing customer information, e.g., countries, types of damage, damage categories, or product types.



^ Isochrone curves: failure rates per production month depending on the age of the vehicle.

Analyzing Field Data

The primary goal of the field data analysis is to identify at an early stage the **failure behavior** of your products. With Babtec.Q.Agent, you can be notified regularly and automatically by e-mail about current failures and **failure rates**. You determine the **main failure areas** and frequencies with the help of flexible pivot analyses.

You use these results to organize the required **defective part appraisals**. You investigate defective parts from the field for possible deviations from the stipulated specifications, also determining which causes were responsible for them. For planning and carrying out necessary inspections as part of the appraisal, the Sample Inspection module (Babtec.MP) offers you structured inspection planning and intuitive inspection data acquisition.

In addition, the Complaint Management module (Babtec.REK) supports this analysis process and ensures a complete documentation of the analysis results. You can track and edit identified **corrective actions** using the central Action Management (Babtec.MM).

Meaningful **isochrone curves** inform you about the failure behavior of your products depending on the age of the vehicle. Based on the known failures and using **statistical forecasting methods**, you can predict how the failure behavior will develop up to the end of the warranty period and depending on the quantities produced.

Use the field data analysis also for **planning your production of replacement parts** or forecasting expected **warranty costs**. An effective Warranty Management helps to minimize economic risks for your company.

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At a Glance



- Flexible configuration of templates for importing customer specific-data formats into your default format for field data
 - > with header and item data
 - > including definition of specifications for standardizing and refining the imported field data
 - > with assignment of validation rules
 - > export and import function for import formats
- Import of field data (e.g., purchased parts specification list) in the CSV format and management of the imported processes
- Automatic refinement (standardization and completion) of the imported field data with the goal of creating a uniform and reliable database
- Creation and management of dictionaries and catalogs for transferring customer-specific information into a uniform company-wide language use (e.g., countries, types of damage) as part of the refinement process
- Automated content-related and contractual review of imported field data with the help of validation rules
- Clear presentation of the validation results related to the imported item
- Support of the internal appeal process with
 - > identification of items pertinent to the appeal
 - > creation of a report with all items pertinent to the appeal
 - > monitoring of appeal deadlines
- Individual definition of validation rules incl. export and import function
- Management of external part information as well as part-specific and customer-specific acceptance rates with indication of period of validity
- Meaningful notification with regard to data integrity in case of errors and warnings while importing, refining, and validating
- Import and management of reference quantities for determining failure quotas, failure probabilities, and forecasts (e.g., quantity produced for each part and month)
- Automatic dissemination of information – communication and reporting via Babtec.Q.Agent (e.g., notification by e-mail of current main failure areas)
- Flexible pivot analyses for
 - > carrying out focal point analyses
 - > determining failure frequencies and trends
 - > analysis of warranty costs
- Field data analysis as a basis for the organization and implementation of defective part appraisals (Babtec.MP, Babtec.REK, Babtec.MM, Babtec.AM)
- Analysis of the failure behavior depending on the age of the vehicle based on meaningful isochrone curves
- Determination of failure probabilities and use of statistical forecasting methods (e.g., Weibull analysis according to the “sudden death” method)
- Export of imported and refined field data items to Microsoft Excel

- Designing company-specific reports and forms using the report designer (Babtec.RPT)
- Expansion of standardized target data formats with company-specific extra fields possible via customizing



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