Centralized customer communication in the EnBW Output Factory:

Managing personalized communication with customers faster, more efficiently and at the same time in a more flexible manner

EnBW can manage personalized mass communication with customers for a wide brand portfolio from a centralized location, create automated content and distribute it over multiple channels.

EnBW Energie Baden-Württemberg AG has created a software platform for communication with customers to further digitalize the creation and sending of letters and documents. With the EnBW Output Factory, it is possible to create and customize letters and documents in a central location in an automated and interactive manner based on default templates and then send them to customers over a variety of digital and physical channels.

This is a new IT service directed toward all areas and divisions of the company and is also offered to external customers as a service. During 2024, more than 82 million documents with a total of more than 204 million pages were prepared with the system.

From a classic energy provider to a sustainable infrastructure company

With more than 29,000 employees, EnBW Energie Baden-Württemberg AG is one of the largest energy companies in Germany and Europe. It supplies approx. 5.5 million customers with electricity, gas and water as well as with energy solutions and energy services. Within the framework of its realignment from a classic energy supplier to a sustainable infrastructure company, EnBW is following a growth strategy that is focused on the development of renewable energy as well as distribution and transport networks for energy, gas and hydrogen.



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Sectors: Infrastructure, Utilities, Energy Industry

Application: Customer communication management, output management

Solution components of the EnBW Output Factory

- Infinica Stack: Process Engine, Repository, Workplace, Template/ Process Designer
- Compart Stack: Pilot with considerable in-house development, Mill+ as standard, DB Delta
- Doxee Cloud (under development)

Initial situation and challenges

- Search for a modern, combined solution for Customer Communication Management (CCM) and Output Management, where data can be input faster and more flexibly from the source systems
- Maintain the connection to the old system (downward compatibility)

Comprehensive brand portfolio

The group includes the EnBW AG as the parent company as well as 256 fully-consolidated companies. EnBW has a market-leading position in Baden-Württemberg and, together with its various subsidiaries, is active in Germany as well as selected foreign markets. To be able to cover the various markets and regions, EnBW has an extensive brand portfolio. In Baden-Württemberg these include not only the EnBW AG but also other subsidiaries such as EnBW mobility+, Netze BW, plus 37 municipal utility shareholdings and 41 leased network operators. In Germany, subsidiaries such as Yello, VNG AG, Stadtwerke Düsseldorf, the solar and storage supplier SENEC, the TC supplier Plusnet as well as ONTRAS are known brands. Brands in foreign markets include, for example, shareholdings in the area of renewable energies as Energiedienst in Switzerland, SMARTRICS in Austria and PRE in Czech Republic.

Centralized, digitalized solution for customer communication and output management

From the point of view of the extensive brand portfolio, digitalized offers as well as efficient, bundled customer communications are important components of the success of EnBW as well as its subsidiaries.



The EnBW Output Factory is the central system for digital communication in our company.

Jochen Deusch Team Leader of the Output Management area

The original idea for the Output Factory dates back to 2016, when EnBW decided to replace the system used up to that time. The goal was the operation of the new scalable and expandable on-premises solution (in on-site servers) for group-wide digital communication. This makes it possible, for example, to react quickly and efficiently to changes in the market or to new statutory requirements, thereby speeding up time to market.

Originally, the group wanted to replace a few utility systems with more modern alternatives. The new as well as existing systems should still have the ability to create customer communications. This resulted in the search for a central, independent solution for customer communication that has Customer Communication Management (CCM) functions as well as an Output Management System (OMS). “A special requirement of EnBW was and is that we always consider these two tasks as interrelated – as two sides of the same coin”, says Thomas Boch, Software Architect in the Output Management area, Energy Related Business Solutions.

- Departure from paper-supported communication
- Centralized solution
- Digital communication

Challenges and goals

- Flexibility regarding the input systems as well as output channels
- Establish standards that can be used group-wide (industry independent templating solution)
- Scalable
- Expandable
- Accelerated time to market

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Economic and technical advantages

- More efficient processes
- Time and cost savings
- Performance
- Very stable system

Further developments and plans

- Fulfilment of the statutory requirements for the e-invoice as well as the EU provision on barrier-free communication (PDF/UA)
- Migration (daily operations)
- Connection of new clients
- Development of the EnBW Output Factory Cloud

Boch started working there shortly after the system was implemented at EnBW, and today is responsible for the operation and further development of the system.

In 2017, after an EU-wide call for tenders, EnBW decided to implement the CCM solution from Infinica. In order to fulfil the specific requirements of EnBW, the manufacturer (taken over in 2023 by Doxee) acted as the general contractor and a technical partnership was established. The CCM solution was supplemented by a solution offered by Compart, which was used in the Output Management System for the rendering of the content as well as its distribution.

The system has been productive since 2017, and has been continuously further developed by the Output Management area, with the addition of many functions.



The great flexibility and extensibility of our platform as well as its connection to the input system as well as to the output channels was one of the deciding factors when we were making our decision and today is one of its advantages."

Thomas Boch Software Architect in the Output Management area, Energy Related Business Solutions

Today, the data fed into the system originates from more than ten utility/source systems with very different technologies, such as SAP S/4HANA and MS Dynamics, for example. Currently, more than 100 clients (e.g. brands, companies, group divisions) are connected. They include Netze BW, electricity, water and gas divisions, subsidiaries such as SENEC and brands such as mobility+. The documents can then be used on up to ten output channels – including email, SMS, archive, workplace printer, print server, ZUGFeRD, e-invoice, file share.

Established standards flexibly implemented enterprise-wide

"Establishing standards that are used group-wide" is a focal point for the expansion and further development of the Output Factory according to Boch. Currently, more than 1,000 communication templates have been created. Each template has up to 20 variants. It is important to implement fundamental, industry-independent systems and tools in order to create templating solutions that can then be adapted to the specific needs of the respective brands and clients.

The degree of digital customer communication among the various brands is very different. While for example many municipal utilities still send the majority of their contract documents and invoices to customers on paper via the platform, the proportion of digital communication for brands such as Yellow is above 80%. mobility+, for example, communicates almost exclusively online with its customers – with one exception: customers receive their charging card in a letter.

EnBW en route to digitalized customer communication
In 2024, the proportion of digital formats processed in the EnBW Output Factor was 65%, and for analog letters it was 35%. In 2019, the ratio between digital communication formats and analog letters was the exact opposite (35% digital as compared to 65% analog).

Quick reaction to statutory requirements

Currently, it is necessary to fulfil the statutory regulations regarding new output formats such as e-invoices as well as barrier-free access to digital documents. Furthermore, industry-specific regulations must be followed. For example, in the case of price adjustments for electricity contract billing specific requirements must be complied with, concerning when and how these price changes must be communicated to end customers. The respective EnBW brands can react quickly and flexibly to these types of requirements.

Depending on for which brand or which municipal utility the communication is to be sent, customers receive a customized message as an element on their invoice – regardless of if it is on paper, via email, etc. Another example of how the Output Management team quickly implemented solutions based on statutory provisions was the emergency communication prepared for key accounts as a result of the Ukraine war. In the case of impending supply gaps, key accounts must be informed that end customers will be prioritized for supply in the event of supply shortages.

Save time and money with more efficient processes

As the processes on the platform are more efficient, time can be saved in general, which has an impact in many areas and in the end results in shorter, accelerated time to market. “It is now possible for us, for example, to implement the communication and documentation for new products, changed electricity rates or charging rates in a few hours instead of a few days”, says Boch. “We always ask ourselves: ‘How much time do we need for the product?’, and always maintain an overview over the entire process. If we would like to put the product on the market tomorrow, the communication and documentation for the customers must be finished the evening before.”

Further operational advantages of the Output Factory can be seen in various ways enterprise-wide as well as in individual areas. Standards can be introduced group-wise, which can then be flexibly adapted to the needs of the brands. Letters can be sent through the platform both in digital format as well as in print versions without any problems. Due to the continuously growing proportion of digitalized customer communication, less paper is needed, thereby reducing costs for paper consumption.

> *We now have a solution that delivers what we need. Its functional scope has been multiplied, the performance level is optimal and the system is super stable. The group is very satisfied.*
>
> **Jochen Deusch Team Leader of the Output Management area**



Further developments as well as future research with the EnBW Output Factory Cloud

Further development and expansion of the EnBW Output Factory is also planned for the future. The statutory requirements for the e-invoice must be implemented (by April 2025) and the EU requirements for barrier-free access to digital documentation must be fulfilled, for example. Furthermore, one of the ongoing tasks of the Output Management team is to connect new clients. As for example Netze BW wants to switch to SAP S/4HANA, this will create many new requirements and tasks that concern daily operations.

Furthermore, according to Deusch, they want to conduct future research with the EnBW Output Factory Cloud, which is currently under development, “in order to test in which direction the platform could go”. The initial focus of the Output Factory Cloud is to offer an ad-hoc solution for smaller teams in EnBW’s specialist departments, as they have different requirements as well as shorter-term goals that they cannot fulfil with the Output Factory On-Premise solution: First of all, create their own templates, set up simple and quick connections from the Cloud as well as do as much as possible on a self-service basis, and therefore manage the entire connection on their own. A usage example is when exactly one component is changed in a contract by the concerned specialist department. In this case, for example, the legal department could independently modify one specific item to be changed in the General Terms and Conditions. “The concept of the Output Factory Cloud is to combine the strengths of a cloud solution with those of the Output Factory”, says Deusch.

doxee

Doxee is a multinational high-tech company and a recognized market leader in Customer Communications Management (CCM) and Customer Experience Management (CEM).
The Doxee Platform® – a cloud-native solution based on modern multi-cloud architecture – enables companies to manage their entire customer communications and all cross-channel interactions, thus driving impactful digital transformation.

Doxee offers secure, scalable, and customizable solutions that sustainably enhance customer communications, primarily for the enterprise market and the public sector. Doxee has invested around 20% of its revenue in research and development for over ten years, demonstrating its clear commitment to strategic innovation objectives in product and process development.

As an innovative mid-sized company, Doxee is proud to be both a Benefit Corporation and B Corp-certified – a testament to its commitment to sustainability, social responsibility, and long-term value creation.
With a comprehensive range of advanced digital products, Doxee operates across Europe, with a particularly strong presence in Southern Europe and the DACH region (Germany, Austria, and Switzerland).

More than 300 customers

More than 300 companies have already chosen Doxee to make a technological leap forward.

By adopting our solutions, they've simplified internal processes, improved communication workflows, and accelerated digital transformation. From large enterprises to public institutions, our customers rely on Doxee to deliver secure, efficient, and future-ready customer communications-every day.

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Discover how Doxee is driving sustainable innovation. From reducing paper use through digital communications to optimizing cloud resources, our commitment to sustainability runs deep.

We believe technology should not only empower businesses but also protect the planet.
Learn more about our ongoing efforts to create a more responsible and eco-friendly digital future.

The Doxee Advantage

Our customers don't just choose a product—they choose a partner for long-term digital transformation. With a focus on innovation, security, and sustainability, Doxee empowers organizations to enhance communication, streamline operations, and deliver real impact.

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