

# Transforming care for elderly with AI-powered insights

Benete harnesses IBM watsonx® to deliver AI-driven insights for elder care



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< Business challenge Transformation Outcome

## The burden of manual data entry and insight generation

Benete, a Finnish company and IBM partner specialises in providing care services to elderly patients. One of the biggest challenges faced by Benete in its quest to revolutionize how caregivers and nurses deliver top-tier care to elderly patients is the lack of digitalization, overwhelming manual data entry. This also complicates the detection of early character decline, especially in older individuals who live a sedentary lifestyle. Subtle changes in daily activities may be missed, leading to delayed care.

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Benete's BeneCare solution addressed these challenges by leveraging technology and intelligent algorithms to remotely monitor and analyze clients' well-being to provide a holistic view of their health. The system generates diverse data points around subtle changes in behavior, movement, sleep patterns, hygiene, food intake, and more. These data points also helped caregivers detect potential issues earlier. The dashboards provided caretakers and nurses with a clear, concise, and manually analyzed and derived insights from. However, the manual process hindered thorough analysis and translation of the data into actionable reports and summaries. The manual process of analyzing large volumes of valuable data, risking oversight of critical health indicators and their impacts on the quality of care. Benete, recognizing the need to automate the creation of summaries to optimize BeneCare's usability and maximize the efficiency of their contribution to better patient outcomes, set out to develop this capability.

## 90%

reduction in patient data interpretation time, down to 1 minute from 10

## 5 seconds

Easy-to-consume summary reports in less than 5 seconds

## 5 languages

Accurate, tone-appropriate and on-demand translation of summary reports into 5 languages

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“The BeneCare platform's LLM-based summaries, powered by IBM watsonx.ai, transform elderly care by providing caregivers with quick and accurate insights, enabling timely and preventive care.”

**Kari Bäckman**

CEO

Benete

## Enhancing care by boosting caregiver efficiency

Benete and [IBM® Client Engineering](#) embarked on a four-week pilot to enhance the functionality of BeneCare dashboards—by leveraging [IBM watsonx.ai®](#). With access to large language models (LLMs), specifically Llama and Mistral, Jupyter Notebook and the watsonx.ai Python software development kit, Benete saved valuable time in documentation procedures, enabling caregivers to focus more on patients.

By creating prompt templates in watsonx.ai, Benete sourced variables, data and tasks from [IBM Cloudant®](#), a scalable JavaScript Object Notation (JSON) database. This database not only stored insights from IoT sensors and findings and summaries but also queried the data and :

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Benete tracked the development process and monitored various LLM metrics within the prompt templates generated with Jupyter Notebooks. These prompt templates were then tracked using AI factsheets created by [IBM watsonx.governance®](#) to monitor

and evaluate the different AI models. Additionally, these AI factsheet-tracked prompt templates were saved separately so that Benete could log the number of tokens used by the care unit and track their costs—a valuable feature in an embedded solution. These prompts were then deployed in watsonx.ai to become endpoints where data is transformed into understandable insights and integrated into BeneCare.

By integrating all these components, Benete successfully created and automated user-friendly summaries from its data using watsonx.ai, which can also be translated into various languages despite time and language constraints. The BeneCare dashboard continuously monitors key care metrics and generates data 24x7. Summary reports, which were previously generated and interpreted manually, are now instantly generated in less than 5 seconds using this data, empowering care professionals to make informed decisions and provide the best care possible. Llama and Mistral were the LLMs chosen to be deployed on watsonx.ai due to their size, cost benefits and positive evaluations of the way reports were written to best address Benete’s needs. Having tested the efficacy of both models, Benete is able to keep the functionality model-agnostic, allowing for flexibility in LLM development.

“By leveraging AI-driven innovation, we're shifting the paradigm in elderly care from resource-intensive to smart, effective, preventive care, empowering individuals to live longer, healthier lives in their preferred environments.”

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**Kari Bäckman**  
CEO

# Pioneering preventive care bolstered by intelligent analytics and AI-generated data summaries

The IT transformation has yielded substantial benefits for Benete. The LLM-based summary add-on in BeneCare helps caregivers understand their elderly clients' condition and capabilities easily, prompting tailored, preventive care and attention, while the alerts enable timely intervention. This helps elderly individuals remain in their homes for as long as they wish, as care providers can offer preventive care while also managing a growing number of clients. The solution also helps Benete with report localization, generating translatable and tone-sensitive content that facilitates seamless communication across multicultural care environments. With such easily translatable reports, caregivers from diverse backgrounds can share a unified understanding of client needs, improving care quality.

With the transformed solution in place, Benete's day-to-day operations run smoother and are more streamlined. Care teams are freed from manual data extraction and interpretation thanks to rapid access to summaries, saving time and boosting efficiency. Notably, there's a 90% reduction in the time taken to understand client data, as nurses now take just one minute—not ten, like before—to understand charts. This reduction translates to 30 minutes of daily time savings per nurse, as this exercise is performed three times a day per client.

What Benete needed was not a chatbot to address queries, but the automation of a complex, time-consuming task, freeing up users to focus on their core competencies—elderly care and support. With the transformed BeneCare, LLMs to accelerate qualitative data interpretation and content that is readily customized as needed, ensuring that information is in a decision-ready format.

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In a traditional, labor-forward industry, Benete is a front-runner, utilizing a critical solution to interpret data and derive insights for an expedited reporting process. Now, after the successful pilot, Benete can provide a platform capable of being customized based on the unique needs of end-users. Benete's ultimate goals are to further enhance patient outcomes, provide better preventive care and ease administrative burdens on care staff.

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## About Benete

[Benete](#) (link resides outside of ibm.com) is a Finland-based software company specializing in technology for efficient senior care, providing timely and accurate data to organizations and individuals for personalized care. Its services include cost-saving preventive care models, enabling high care efficiency and improving the quality of life of the elderly.

### Solution components

<a href="#">IBM® watsonx.ai®</a>	→	<a href="#">IBM watsonx.governance®</a>	→
<a href="#">IBM Cloudant®</a>	→	<a href="#">IBM Client Engineering</a>	→

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Unlock efficient elder care

The IBM® watsonx® portfolio of products helps improve caregiver efficiency, enhancing the quality of elder care

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Examples presented as illustrative only. Actual results will vary based on client configurations and conditions and, therefore, generally expected results cannot be provided.

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