## Special Interview

# Expert.ai Offers Benefits of AI for HVAC&R Industry

*Interviewed by **Jacques Gandini**, managing director of Studio Gandini (Italy)*

*The heating, ventilation, air conditioning, and refrigeration (HVAC&R) market has accelerated enormously in recent years, and 5 to 20% average growth is expected annually over the next few years. This is driven in part by the incentives for green technologies in support of low energy or nearly zero energy buildings (nZEB) and the greater overall focus on energy efficiency and environmental sustainability.*

*Achieving this growth will require companies to make two key shifts. First, they will need to adopt increasingly innovative and high-performance technology solutions. Second, they will need to be able to extract the value of the huge amount of natural language data they manage such as phone calls, e-mail messages, etc. This information can support key business strategy areas and improve critical processes such as customer service activities by reducing operating times and costs.*

*In this context, Jacques Gandini, managing director of Studio Gandini in Italy, interviewed Alessandro Monico, vice president of Italy Sales, Corporate Division of expert.ai, a leading artificial intelligence (AI) company focused on language understanding, to explore the opportunities and advanced tools that AI offers for helping HVAC&R companies quickly and accurately analyze the data contained in reports, e-mails, service requests, technical manuals, and internal documentation.*

Alessandro Monico, VP of Italy Sales, Corporate Division, expert.ai

**Jacques Gandini (G): What are the tools and areas where HVAC&R companies can benefit from using AI?**

**Alessandro Monico (M)**: Our AI technology applied to language understanding allows us to extract knowledge from unstructured data, in other words, the free form language that we use to communicate, and to make this data fully available to the company for its own purposes. This is a huge advantage for HVAC&R company processes that depend on the analysis of large volumes of documents that would be impossible to process manually. By understanding the language that underlies text in documents or in interactions with customers or suppliers, AI makes it possible for a company to derive information of interest from any document. This can be applied in a range of areas, from customer service and technical support to after sales management, as well as to marketing intelligence. In general, all business processes that can be streamlined through intelligent automation are the areas where the ability to leverage language really comes into its own.

**G: Many HVAC&R companies already have their own customer relationship management (CRM). For such cases, are you able to interact with existing tools or do you have to install your own CRM?**

**M**: The potential of AI as applied to language understanding and document analysis can be used on its own but is also easily integrated with existing CRM systems and with the most widely used process automation applications, e.g., robotic process automation (RPA) and business intelligence applications, possibly using connectors to speed implementation.

**G: Regarding value-added services, can a customer who buys an air conditioning system also be managed within the after-sales service for technical assistance, warranty, and support?**

**M**: Of course. We have developed a dedicated customer service automation solution that is based on AI and it is used by companies from a wide variety of industries. It makes the interaction between customers and the company more immediate, simple, and accurate, in 24/7, multi-channel mode. The customer who buys a boiler or an air conditioner can thus receive constant support through the tools or channels of their choice – website, e-mail, smartphone, etc., and easily access the best information and technical resources available. These are intelligent systems such as

chatbots, search engines or frequently asked questions (FAQ) management, which allow standard requests to be processed quickly or, for more complex issues, guide customers through first-level support before handing the call over to an operator, ensuring significantly optimized support and faster problem solving.

*G: Can the adoption of AI positively affect productivity and create a real competitive advantage for HVAC&R companies? Can you give some examples?*

**M**: The adoption of AI greatly improves productivity. For example, thanks to the ability to understand and structure information in a rich and up-to-date knowledge base, you can make documentation, such as troubleshooting manuals or installation instructions, immediately available to customers via automated assistance. This will significantly increase the number of e-mails and tickets that the automated service is able to manage. And, it translates into a tangible benefit: with the same number of resources, you can satisfy an even greater number of requests concerning failures, spare parts or malfunctioning parts/products/plants.

For example, when a maintenance technician is faced with a technical problem, before calling the company's technical assistance, he can query the knowledge base to consult best practices on how certain problems have been solved in the past. This reduces the need to escalate the request to more experienced colleagues who are freed up to deal with more complex and higher value activities. This is how AI facilitates remote assistance, minimizing warranty management costs, and onsite operator intervention requests, effectively supporting their daily activities and increasing their performance in the field.



Expert.ai helps HVAC&R companies improve remote assistance and reduce costs

*G: We've talked about improving some services and supporting products. But what can AI do in terms of marketing activities?*

**M**: The ability to analyze a lot of information is a key capability for marketing intelligence activities. Extracting insights from customer opinions about the company's products and services, staying up to date with online news about your competitors, emerging technologies and anything that can impact your company's strategy are some of the areas where AI can support business intelligence.

*G: Finally, assuming that this period is a very busy time for the industry in terms of daily operations due to the pandemic, commodity issues and geopolitical tensions, will the introduction of an AI project add complexity? Does it require specialized roles and long implementation times?*

**M**: Today, AI solutions such as those offered by expert.ai make it possible to optimize processes and workflows. In particular, expert.ai's technology is based on an out-of-the-box knowledge graph that provides a great starting point for enriching domain knowledge and quickly and efficiently customizing solutions to specific project needs. In this way, we can ensure predictable, optimized development costs and significantly improve the total cost of ownership compared with other systems by providing solutions that can be easily used by even the least experienced.

In conclusion, we would say that the HVAC&R industry is expected to derive significant benefits from the use of AI. With recent technological advancements, AI has become increasingly present in our daily lives, and its applications and benefits have become clear to both the industry and to end users. This is also true for HVAC&R where the customer experience is becoming more and more important, and where industry companies are already applying the technology to better manage a range of services, before and after sales for example, and to expand business through more efficient use of marketing actions and more precise lead generation tools.