

# STRATEGY TO INCORPORATE ARTIFICIAL INTELLIGENCE TECHNOLOGY INTO A CLOUD-BASED ELECTRONIC HEALTH RECORDS OFFERING



## IN A NUTSHELL

### Basic client question:

Can we maintain/improve competitiveness by incorporating artificial intelligence (AI) technologies into our existing electronic health records (EHR) offerings?

### IMPACT recommendation:

The client should integrate natural language processing (NLP) into its EHR offerings to enable health care providers to improve efficiency in administrative tasks (e.g. scheduling), clinical workflows (e.g. alerting systems), and, eventually, clinical solutions (e.g. predictive diagnostics). NLP will allow the client to keep up with competitors who are already moving in this



## EXECUTIVE SUMMARY FOR PROSPECTIVE CLIENTS

The client hired the IMPACT team to provide guidance on how they could leverage AI to make their EHR more efficient for health care providers. Specifically, they asked for a comprehensive review of AI offerings by the major EHR solutions across hospital and ambulatory markets, insights into AI development roadmaps by major EHR solutions, overall market view into the AI functionality most in use, and insights into provider perception of AI. The team found that many competitors have already laid the foundation for AI integration, with an eye toward future expansion and revolution in their offerings. They advised the client to build their AI foundation by first incorporating natural language processing (NLP), which allows machines to understand and derive meaning from written and spoken language. The team argued that NLP has a shorter implementation timeline compared to other AI solutions, has already enjoyed high industry adoption rates, and would enhance the client's value proposition around ease of use, data quality, and structured data collection. They recommended to the client that they build AI capabilities via partnerships. Lastly, they recommended that the client focus its initial efforts on NLP in charting and coding modules that would allow providers to spend more time with patients and less on records management, all while enabling the client to enhance its datasets to prepare for future AI enhancements.



## BACKGROUND

Health care costs per capita in the US are nearly twice the average for developed countries, with administrative costs per capita at four times the average. Administrative activities for doctors and nurses occupy up to 80% of their time, leaving very little for patient interaction. This staggering misbalance is a primary cause of burnout among health care providers. The primary goal of cloud based EHR solutions is to allow health care providers to deliver better, faster, and more cost-effective care. However, the design and requirements of a given system can be as laborious and time-consuming as the old fashion paper chart approach. The client, a leading EHR company, is looking for ways to dramatically improve its EHR offerings to help health care providers be more efficient, freeing up time for patients, and to prepare for the future, which is changing rapidly thanks to these same technologies. They hired the IMPACT team to help them understand what their competitors are doing in the AI space and to advise them on which AI technologies they should focus on in the near-term.





## RESEARCH & ANALYSIS

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The team used a three-phase framework for AI adoption among competitors – foundation, expansion, and revolution – and found that two major competitors had just begun the revolution stage, while another five were well into the expansion stage. They reviewed the attractiveness, cost savings, and time savings of various AI technologies and determined that natural language processing (NLP) was the best first step for the client to begin building its foundation. NLP enables providers to spend less time on repetitive tasks and more time with patients. It also boasts faster implementation and ease of use than other options. Importantly, it would allow the client to improve data quality in preparation for future AI phases.



## SUMMARY RECOMMENDATIONS

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The client should partner with an NLP company to incorporate the technology in its charting and coding modules as a first step to building an AI foundation that will improve the provider experience and serve the client well in the future.

