envative
SMARTER SOFTWARE SOLUTIONS
WEB MOBILE IoT

WHITEPAPER

THE PRESCRIPTION FOR CHANGE:

How AI is Fixing Healthcare's Biggest Bottlenecks

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The healthcare industry faces unprecedented challenges, including rising costs, staff shortages, inefficient legacy systems, and a growing demand for personalized care. These issues are compounded by the complexities of managing vast amounts of patient data, navigating intricate regulatory landscapes, and dealing with revenue cycle management inefficiencies. While healthcare providers are searching for modern, adaptable solutions, large EHR providers like EPIC continue to rely on rigid, outdated systems that fail to keep pace with evolving technological trends.

Over the past two months, I had the opportunity to interview over 20 healthcare leaders tasked with addressing these challenges. Their insights reveal a widening gap between the healthcare sector's needs and the capabilities of entrenched EHR giants. Many expressed deep frustration with large EHR vendors like EPIC, citing high licensing fees yet a continued reluctance to innovate. Despite repeated requests for better AI-driven decision support, enhanced interoperability, and workflow improvements, these vendors prioritize profitability over responsiveness to healthcare providers' needs. The slow pace of innovation within these legacy systems has left many organizations searching for custom software solutions that can provide real-time adaptability, efficiency, and better patient outcomes.

While AI, machine learning, and custom software are enabling cutting-edge efficiency and patient care improvements, **EPIC and other legacy providers remain slow to adopt these advancements, stifling industry progress.**

THE BIGGEST CHALLENGES FACING HEALTHCARE

1. RISING COSTS

Healthcare costs continue to escalate due to expensive treatments, administrative inefficiencies, and outdated software systems that add complexity instead of reducing it. Providers are under immense pressure to deliver high-quality care while remaining financially viable. Large EHR vendors like EPIC charge exorbitant fees for implementations, upgrades, and integrations, adding to the financial strain on hospitals and clinics.

2. STAFF SHORTAGES & BURNOUT

A global shortage of healthcare professionals is stretching hospitals and clinics beyond capacity. Reliance on manual processes, excessive documentation, and cumbersome EHR interfaces contribute to physician burnout. EPIC's outdated user experience forces medical staff to spend more time on data entry and administrative tasks than patient care.

3. DATA OVERLOAD & INTEGRATION ISSUES

The explosion of healthcare data from wearables, telehealth, and patient monitoring systems has created massive interoperability challenges. While AI has the potential to extract valuable insights, many providers are locked into closed-system architectures like EPIC that resist seamless data integration with third-party applications and emerging AI-driven solutions.

4. REGULATORY COMPLIANCE & SECURITY CONCERNS

Healthcare providers must comply with strict regulations like HIPAA, GDPR, and other global data protection laws. However, many large healthcare IT systems prioritize compliance over usability, creating overly complex and fragmented workflows that slow operations instead of streamlining them.

HOW AI, ML, AND CUSTOM SOFTWARE SOLVE THESE PROBLEMS

1. ADAPTIVE AI-DRIVEN CARE PATHS

Unlike EPIC's rigid decision-support tools, AI and ML-driven solutions analyze real-time patient data, genetic profiles, and predictive analytics to recommend highly tailored care paths. This approach reduces unnecessary tests and procedures, optimizing treatment while cutting costs.

2. ENHANCED OPERATIONAL EFFICIENCY & AUTOMATION

Custom AI-driven software streamlines hospital operations, from patient scheduling to resource allocation. Predictive analytics can forecast admission rates, helping facilities manage staffing needs and equipment usage more efficiently. EPIC's outdated scheduling tools fail to provide real-time adaptability, leading to inefficiencies in patient flow.

3. AI-POWERED DATA INTEGRATION & INTEROPERABILITY

Unlike EPIC's closed architecture, custom-built AI solutions can seamlessly integrate with multiple EHRs, telehealth platforms, and diagnostic systems. This allows real-time data sharing, better analytics, and AI-assisted clinical decision-making, leading to faster, more informed care delivery.

4. SMARTER, AI-ENHANCED DIAGNOSTIC TOOLS

AI-powered imaging and diagnostic tools surpass the capabilities of legacy EHRs, helping radiologists and pathologists detect diseases earlier and with higher accuracy. Custom AI-driven platforms can flag abnormalities, recommend follow-up tests, and improve diagnostic efficiency, whereas EPIC's diagnostic capabilities remain basic and rule-based, lacking true AI integration.

5. PERSONALIZED PATIENT CARE & PREDICTIVE ANALYTICS

ML algorithms analyze patient history, wearable data, and lifestyle factors to create highly personalized treatment plans. AI-powered platforms can identify at-risk patients before critical health events occur, whereas EPIC's traditional rule-based alerts are often overwhelming, inaccurate, or ignored by clinicians due to alert fatigue.

CASE STUDY:

ENVATIVE'S WORK WITH RADIUS CARE

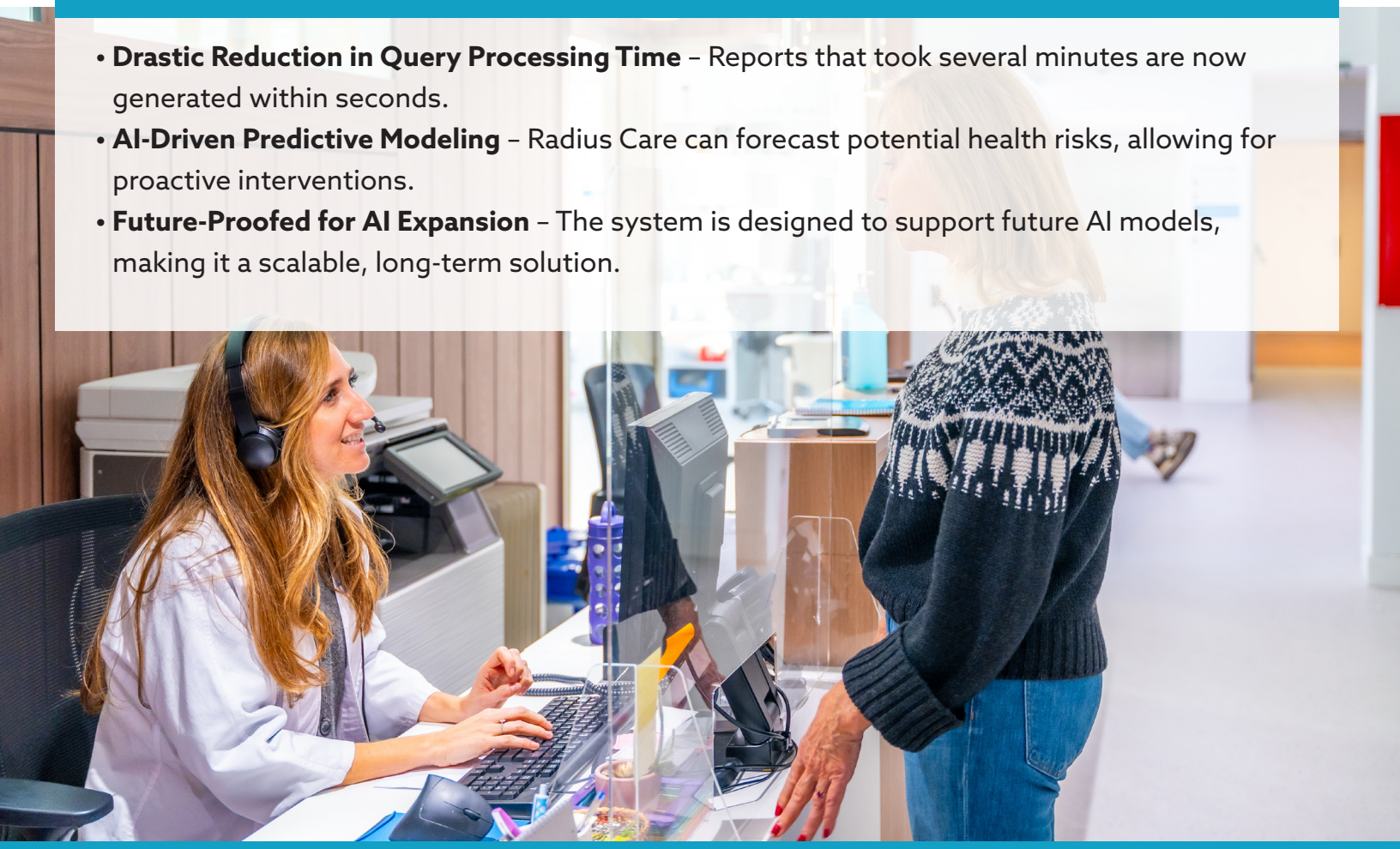
CHALLENGE:

Envative developed a comprehensive AI-powered data lake using AWS Glue and AWS Athena, allowing Radius Care to:

- Process terabytes of healthcare and insurance claim data in real time.
- Utilize machine learning models to detect patterns in patient health trends and optimize treatment recommendations.
- Seamlessly integrate federal healthcare data and multiple external data sources.
- Implement automated dashboards and reporting tools to provide real-time insights for providers and patients.

THE IMPACT

- **Drastic Reduction in Query Processing Time** – Reports that took several minutes are now generated within seconds.
- **AI-Driven Predictive Modeling** – Radius Care can forecast potential health risks, allowing for proactive interventions.
- **Future-Proofed for AI Expansion** – The system is designed to support future AI models, making it a scalable, long-term solution.



WHY EPIC & OTHER LEGACY EHRS ARE HOLDING BACK INNOVATION

- Slow AI Adoption – EPIC lags in embedding actual machine learning-driven decision support, making integrating AI enhancements difficult.
- High Implementation & Maintenance Costs—Healthcare organizations spend millions on EPIC upgrades and customizations, making them cost-prohibitive for many smaller providers.
- User-Unfriendly Interfaces—EPIC's complex, outdated UI forces clinicians to spend more time on administrative work than on patient care.
- Limited Customization – Custom software solutions offer flexibility tailored to provider needs, whereas EPIC's system is one-size-fits-all, often requiring workarounds and manual processes.

HOW ENVATIVE IS LEADING THE WAY

Envative has extensive experience developing custom software solutions tailored to the healthcare industry. Whether enhancing operational efficiency, optimizing AI-powered predictive analytics, or creating seamless interoperability between systems, we help healthcare providers modernize their workflows, improve patient care, and reduce inefficiencies.

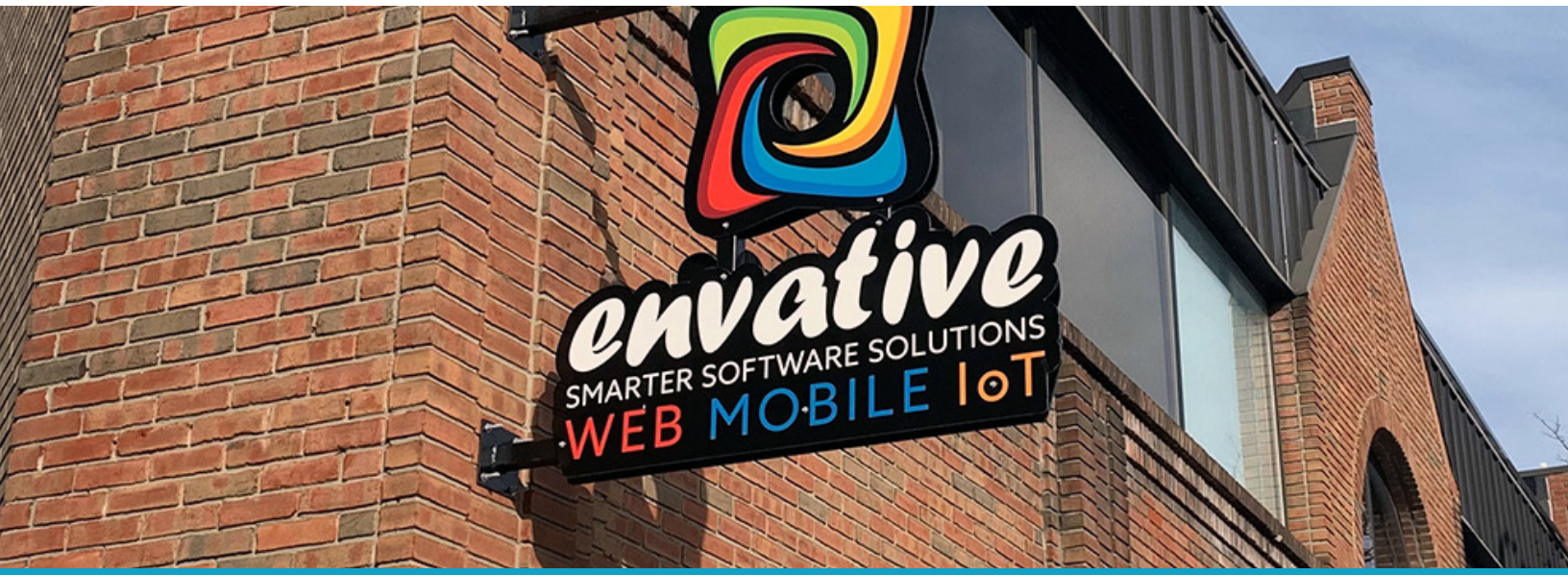
Unlike legacy EHR vendors, Envative prioritizes adaptability and real-time innovation, ensuring that hospitals, clinics, and healthcare providers have the tools they need to succeed in an AI-driven future.

Are you ready to move beyond the limitations of legacy EHRs? Contact Envative today to explore how our custom AI and software solutions can revolutionize your healthcare operations.

CONCLUSION

Healthcare is at a technological crossroads. While large legacy EHR vendors like EPIC continue to dominate, their reluctance to adopt AI-first, flexible, and cost-effective solutions is holding back innovation. In contrast, custom AI and machine learning applications transform care delivery, operational efficiency, and data-driven decision-making in ways that EPIC and similar systems cannot match.

For healthcare providers seeking scalable, cutting-edge solutions, investing in custom AI-driven software is no longer a luxury but a necessity. The future of healthcare is not locked into outdated legacy systems but somewhat shaped by adaptable, data-driven, and AI-powered innovation.



WE'D LOVE TO HEAR FROM YOU!

Thank you for exploring this white paper and diving into the insights and examples shared. We'd be delighted to connect if you have any questions, want to discuss the topics covered or consider how similar solutions could benefit your business.

At Envative, we specialize in designing and implementing custom software solutions tailored to the unique needs of industries like food and beverage production. Whether you're looking to optimize your operations, explore IoT or AI opportunities, or address a specific technical challenge, our team is here to help.

LET'S START THE CONVERSATION!

Contact Craig Lamb at clamb@envative.com to schedule a call or meeting. Together, we can identify ways to turn your challenges into opportunities for innovation and growth.

We look forward to collaborating with you!