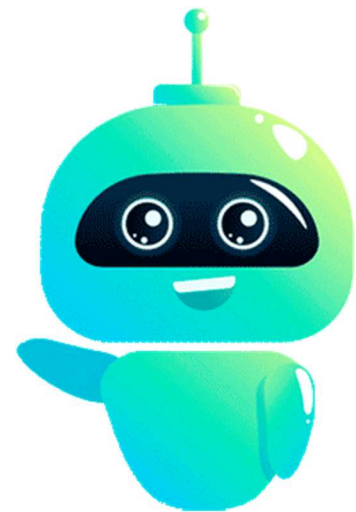




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Robots and People Working Together: How AI Can Make Our Economy Stronger. Examples from Healthcare.

The integration of AI agents into U.S. healthcare systems is catalyzing a strategic shift toward reshoring critical administrative, diagnostic, and patient-care functions previously outsourced offshore. These technologies address labor shortages, reduce operational costs, and improve care quality by automating repetitive tasks, enhancing clinical decision-making, and enabling scalable domestic workforce solutions. This transformation is driven by AI's ability to augment human capabilities while aligning with ethical, economic, and regulatory priorities, positioning the U.S. healthcare sector for a more resilient and patient-centric future.



"DEE"

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The Offshore Legacy in Healthcare Operations

Business Process Outsourcing

For decades, U.S. healthcare organizations offshored administrative and technical roles to countries like India and the Philippines to reduce costs. Tasks such as medical billing, claims processing, and data entry were outsourced, with offshore workers handling 22% of U.S. healthcare administrative expenses—a \$89 billion market in 2023. While this model lowered short-term costs, it introduced challenges like communication delays, time zone mismatches, and quality-control inconsistencies. The COVID-19 pandemic exacerbated these issues, exposing vulnerabilities in fragmented global supply chains and spurring demand for localized solutions.

Offshore Models: Hidden Bottlenecks

Offshoring, while initially cheap, created operational problems. Consider revenue cycle management (healthcare accounts receivable). Offshore errors in claim processing have cost US healthcare providers on average \$25 per claim, with 10-15% of claims initially denied. Language and cultural differences also hindered patient-facing tasks like prior authorization and follow-up calls, impacting patient experience:

- **Communication Problems:** Accents made agents difficult to understand, hindering issue resolution.
- **Limited Technical Skills:** Agents often lacked deep technical knowledge, resorting to basic scripts like “reboot your computer” instead of real solutions.

AI Agents as Catalysts for Reshoring

AI Agents

An AI agent is an autonomous system that processes information, makes decisions, and takes actions to achieve specific goals. These agents operate independently, adapting to their environment through reasoning, learning, and proactive behavior. A good analogy is the Roomba robot vacuum, which autonomously maps a room and determines the most efficient cleaning path without human intervention. Similarly, AI agents use a combination of heuristics, logic, and probabilistic reasoning to complete assigned tasks effectively. The advent of Generative AI has significantly enhanced these capabilities, acting as a 100X multiplier for reasoning and decision-making efficiency.

Economics of AI Agent Pricing

Traditional software pricing models (e.g., pay-per-user) are not suitable for AI agents because these systems act as independent workers rather than tools. Here are three emerging pricing models:

1. **Pay-Per-Conversation (Value-Based):** Pricing based on completed tasks or interactions. For example, Salesforce's AgentForce charges \$2 per customer interaction, aligning costs with tangible results.
2. **Flat Monthly Fee (Unlimited Usage):** A subscription model offering unlimited usage for a fixed monthly cost, often paired with performance guarantees like resolving 85% of inquiries.
3. **Consumption-Based (Pay-As-You-Go):** Pricing based on usage (e.g., per minute), which can be cost-effective for low-volume users but unpredictable during peak demand.

Some vendors adopt hybrid models, such as charging \$1,000 for 250 interactions plus \$2 for each additional one.

AI Agent vs. BPO Pricing

A BPO (Business Process Outsourcing) entity like EXL Services, GenPact, and Sutherland typically provides services like customer support from offshore locations like India, Philippines, and Mexico at reduced costs compared to U.S.-based operations. For example, if a U.S. call center agent costs \$25/hour, a BPO might charge \$12.50/hour due to lower operational costs.

AI agents are even more cost-efficient:

- They are priced at approximately 50% of BPO rates (e.g., \$6.25/hour for our example above).
- Due to their speed and accuracy—300% to 400% faster than humans—the effective cost can drop significantly. For instance, if an AI agent works 400% faster, the effective rate becomes \$1.56/hour, achieving up to a 94% reduction compared to U.S. labor costs.

ROI Calculation

Return on Investment (ROI) for AI agents can be calculated using examples:

1. **Pay-Per-Conversation:** If a human agent handles 50 calls/day at \$25/hour over 8 hours, the cost per conversation is \$4. An AI agent charging \$2 per conversation offers significant savings.
2. **Flat Monthly Fee:** A human agent working 40 hours/week costs \$4,400/month at \$25/hour (there are 176 hours in a month on average). An AI agent priced at 25% of this cost should be priced at no more than \$1,100/month while delivering similar or better performance.

These pricing models highlight the transformative economic potential of AI agents in replacing traditional human labor in repetitive tasks while delivering superior efficiency and cost-effectiveness.

AI Agents need Human Co-Workers

Agents excel at routine tasks but struggle with complex situations, typically handling up to 85% of assigned work effectively. The infamous Roomba pet waste incident perfectly illustrates this limitation - when confronted with unexpected scenarios, AI can worsen problems rather than solve them. Just as a Roomba spreading pet waste across a carpet demonstrates a catastrophic failure in judgment, AI agents can similarly falter when encountering situations outside their programmed parameters.

This "85% rule" is particularly significant in business applications. While AI can efficiently process standard customer inquiries, schedule appointments, or manage routine data tasks, the remaining 15% often represents the most critical situations requiring human intervention. These scenarios might include:

- Complex customer complaints requiring empathy and creative problem-solving
- Unusual requests that fall outside standard operating procedures
- Emergency situations requiring quick, adaptive thinking

Bottom line, we need humans whenever we use AI Agents.

AI handles the high-volume, routine tasks with speed and precision, while humans manage the complex, nuanced situations that require judgment, and problem-solving skills. It doesn't make sense to use offshore labor for these tasks due to linguistic challenges and lack of complex problem-solving skillset with the normally used offshore labor force. We need to use local human agents.

Case Study: A Healthcare Business's Hybrid AI Agent and Human Workforce

- **Client:** Healthsystem Alpha.¹
- **Industry:** Healthcare - Federally Qualified Health Center² (FQHC).
- **Location:** Southern California.

Challenge: Healthsystem Alpha, a large FQHC serving a population of 125,000 patients in Southern California, faced operational challenges within its 75-person call center. The call center was responsible for appointment scheduling and insurance authorization for specialist services (in English and Spanish) and operated with an annual budget of \$7.8 Million.³ This represented a significant cost and an opportunity for optimization.

Solution: To address these challenges and explore potential cost savings and service improvements, Healthsystem Alpha issued a Request for Proposal (RFP) to both Business Process Outsourcing (BPO) providers with operations in Mexico and AI-powered Agent companies. The goal was to evaluate alternative staffing models and technologies to enhance call center efficiency and patient experience.

Evaluation and Results: The RFP responses provided a clear comparison of different workforce models. Healthsystem Alpha analyzed the costs and potential benefits of human-only agents (both US-based and BPO), and a hybrid model incorporating AI Agents alongside US-based on-site personnel. The key findings are summarized below:

Cost and Staffing Model Comparison:

Agent Type	Number of Agents	Cost per Hour	Annual Budget (USD)	Notes
Human Agents (US On-Site)	75	\$25.00	\$7,800,000	Current model. High cost.
Human Agents (Mexican BPO)	75	\$12.50	\$1,950,000	Lower cost, potential concerns regarding service quality and complex issue handling in US healthcare.
Hybrid (US On-Site & AI)	US On-Site: 15 AI Agents: 60 Total: 75	US: \$25.00 AI: \$6.25 Average: \$14.38	\$1,560,000	20% Cost Savings compared to BPO, and significantly lower than current model.

Key Benefits of the Hybrid AI Agent Solution:

- **Cost Reduction:** The hybrid model using AI Agents demonstrated a 20% cost reduction compared to the Mexican BPO option, and a substantial reduction compared to the existing US-only human

¹ This is a composite case based on two actual business cases.

² A Federally Qualified Health Center (FQHC) is a community-based healthcare organization that provides comprehensive primary care and support services to underserved populations.

³ \$25 per hour per agent, with each agent working 2080 hours annually.

agent model. This was achieved through the lower hourly cost of AI agents and a reduced need for full-time human agents for routine tasks.

- **24/7 No-Wait Service:** AI Agents provide immediate, around-the-clock availability for routine tasks such as prescription renewals and appointment requests, eliminating patient wait times and improving convenience.
- **Improved Handling of Complex Situations:** The on-site US personnel, reduced in number but selected to be highly skilled, can focus on complex patient issues and situations requiring nuanced human interaction.
- **Bilingual Support:** AI Agents can be programmed to provide services in both English and Spanish, maintaining the current language accessibility.

Workforce Integration:

A key to integrating the Hybrid and Human Task Forces were two hybrid workforce collaboration capabilities provided by the AI vendor's software:

1. **Conversation Console.** The system transfers calls in real-time to human agents with complete patient information and conversation transcripts, integrating with existing call management systems. An example of its use is when the patient is not satisfied by an appointment slot offered by the AI Agent and wants to speak with a "human."
2. **Escalation Console.** Escalation Console is a ticketing system. When human agents are not available, e.g. off hours, or the issue doesn't involve a human calling in, the system creates a ticket and places it into the appropriate queue for action during business hours by a human. An example of its use, an AI Agent is attempting to create a referral to a specialist but finds an error in the provider's notes that prevent it from creating the referral.

Conclusion

In summary, AI agents are revolutionizing the U.S. healthcare landscape by enabling the reshoring of critical operations and bolstering economic strength. The hybrid AI-human workforce model offers a potent solution, delivering substantial cost reductions, 24/7 service, and improved handling of complex issues. As exemplified by Healthsystem Alpha, this approach not only surpasses traditional offshoring in cost-effectiveness and quality but also fosters a more resilient and patient-focused healthcare system within the U.S. The strategic partnership between AI and human expertise is paving the way for a stronger, more efficient, and domestically rooted healthcare economy.

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