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Business process outsourcing autonomics
Show me the money!

Autonomics offers a potential solution where technology replaces human resources to perform the outsourced work.

From the 1977 *Star Wars* movie character C-3PO and KITT from the 1982 TV series *Knight Rider* to the 2013 *Her* movie character Samantha, we have envisioned "artificially intelligent" technologies that enhance human life by learning the human way of performing tasks and requiring no intervention. Autonomics, the new buzz word among automation enthusiasts, may help bring us one step closer to that dream.

For almost two decades, outsourcing served as a means for companies to standardize their non-core processes across geographies to promote operational efficiency. A primary benefit of outsourcing was financial savings due to labor arbitrage. However, this advantage is depleting due to lack of available skilled resources or increasing wages for skilled labor in existing "outsourcing havens." Companies are now being forced to either move back or relocate to another country — both ineffective approaches in the long term.[1]

Autonomics offers a potential solution where technology replaces human resources to perform the outsourced work. This can have multiple benefits – decoupling of business growth from labor requirements and freeing human resources to focus on more innovative and value-added work. The question is, is it real or hype?

Autonomics — a new era in outsourcing?

The term "autonomic" describes systems which are designed to perform routine tasks and operations performed by humans. The technology interfaces with existing applications for processing transactions and triggering responses.

In the context of outsourcing, autonomics refers to automation where a computer drives existing enterprise application software in the same way that a trained user does. This means that unlike traditional application software, autonomics is a tool or platform that "observes" the way a trained user resolves issues and replicates the same "decision making" process to troubleshoot similar issues in the future, thereby eliminating the need for a human operator.

Autonomics can be impactful in back-office centers running high volume, rules-based work. It can perform these tasks round the clock at a fraction of the cost of a human resource without any manual errors maintaining or mitigating processing risk.[2] Industry analysts predict this technology will completely transform the business process outsourcing (BPO) industry.[3]

A number of companies have hyped this technology, and have developed early incubated software platforms with hopes of improved accuracy, enhanced service levels, and reduced costs. In 2013, a humanoid named Eliza[4] was created by IPsoft as a virtual service desk employee to enable back office process automation with no human intervention: Some reports say it could answer up to 100,000 emails and 67,000 phone calls per day.[5] Blue Prism, a U.K.-based firm, enables business users to create software robots to automate rules-driven business processes. According to Blue Prism's website, its robot full-time equivalents (FTEs) can be scaled up to any number based on demand instantly and cost a third of offshore human FTEs. Blue Prism already has many large clients.[6]

[1] Harvard Business Review. "Restoring American Competitiveness."
(https://hbr.org/2009/07/restoring-american-competitiveness/ar/1, 2009)

[2] Outsourcing Center. "Adding Autonomics to Outsourcing."
(http://www.outsourcing-center.com/2014-06-adding-autonomics-to-outsourcing-63251.html, 2014)

[3] CIO.com. "Virtual Engineers Could Transform IT Outsourcing."
(http://www.cio.com/article/2600329/outsourcing/virtual-engineers-could-transform-it-outsourcing.html, 2014)

[4] Livemint. "Meeting Eliza." (http://www.livemint.com/Industry/v4FOP20RTBJKE5ucqsqhKO/Meeting-Eliza.html, 2013)

[5] Times of India. "'Blond humanoid' Eliza might take over low-end BPO work."
(http://timesofindia.indiatimes.com/tech/computing/Blond-humanoid-Eliza-might-take-over-low-end-BPO-work/articleshow/22643548.cms, 2013)

[6] CIO.com. "IT Robots May Mean the End of Offshore Outsourcing."
(http://www.cio.com/article/2390305/outsourcing/it-robots-may-mean-the-end-of-offshore-outsourcing.html, 2012)

A look under the hood reveals how this technology could work

Early autonomic platforms combine both back-end and front-end automation to enforce logic and imitate the human decision making process. Simply put, it controls the engine and the driver of a car.

The platform goes through two phases — learning phase and execution phase — as it learns to solve incidents. The below table summarizes the steps in these two phases.

Iterative "learning-execution" process

Phase 1 (learning phase)	Phase 2 (execution phase)
1. **Identify** an incident that has been reported	1. **Identify** an incident that has been reported
2. **Observe** the engineer solve the problem	2. **Recognize** the error and check for saved "subroutine"
3. **Save** the solution in a "decision tree format"	3. **Implement** the "Sub-routines" to solve the incident
4. **Optimize** the solution and create a sub-routine	4. Incident **resolved**

Autonomics is poised to disrupt the BPO market

Autonomics could be the next wave to shake the BPO market at its roots, with technology at the heart of the revolution. Early adopters, those now thinking about using this technology could realize cost reductions in the range of 60% in contrast to 15-30% offered by the conventional approach (that relies on labor arbitrage).[2] Autonomics landscape is nascent with only a handful of autonomics technology players in the market. However, as these players continue to develop their products and new players enter the market, the potential of autonomics to be a market disrupter is significant. It would be prudent for the outsourcing market players to carefully scrutinize developments over the next few years in order to plan for changes in revenue streams, avoid cash flow erosion, and ride the autonomics wave in style.

Conclusion

Autonomics has the potential to be a disruptor in the outsourcing industry, particularly altering the conventional approach to BPO. However, due to the lack of sufficient number of industry use cases, stakeholders are waiting to witness how the large scale implementation of autonomics will pan out. It is important to remember that successful automation of complex services is as dependent on the orchestration of diverse initiatives and proper service delivery as on the technology itself. It remains to be seen if autonomics will vastly transform the industry in the near term or is a technology with a lot of potential whose time is yet to come.

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