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Designing a Winning A.I. Strategy

The Artificial Intelligence (A.I) Hype Escalates

The hype around A.I. is reaching fever levels in some parts of the world. The rise of the machine has not only arrived but has been embraced in some countries in very unprecedented ways. In Saudi Arabia, the robot known as "Sophia" was recently awarded citizenship of the country.[1] Saudi is the first country in the world to have granted a humanoid robot the same status reserved for human citizens. Not only is this a world first, but what makes this even more interesting is that citizenship in Saudi Arabia is reserved for people born from Saudi nationals only. The citizenship of a humanoid may have been more about raising awareness for the larger investment announcement made by Saudi Arabia for the creation of an entirely new city inspired by the value generated from artificial intelligence and high technology. The US$500 billion investment in Neom[2] is perhaps the grandest undertaking at establishing a futuristic city powered by A.I. on the edge of the Arabian Peninsula.

The United Arab Emirates government also launched its A.I. strategy for the country in October 2017.[3] The strategy is designed to cover all government sectors and provides the blueprint for government agencies to incorporate A.I. into their operations to improve both efficiency and standards of quality of their services to citizens. This world-first government-led strategy aims to utilise A.I. to elevate government performance standards and drive economic value by creating new markets.

Other countries making significant progress in A.I. includes the USA[4], China[5], Russia[6], India[7], and Iran[8]. The race to become dominant players in the global A.I. marketplace has seen some significant financial investments in the sector[9]. While there are some positive developments of A.I. in many industry sectors there is still a major undercurrent of A.I. being used to strengthen political and economic positions on a global basis for dominance. The widespread use of A.I. in the Defence industry is expanding and raises

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[1] http://www.businessinsider.com/sophia-robot-citizenship-in-saudi-arabia-the-first-of-its-kind-2017-10

[2] http://discoverneom.com/

[3] https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/uae-strategy-for-artificial-intelligence

[4] https://www.forbes.com/sites/louiscolumbus/2017/07/09/mckinseys-state-of-machine-learning-and-ai-2017/#9ee2d9675b64

[5] https://www.economist.com/news/business/21725018-its-deep-pool-data-may-let-it-lead-artificial-intelligence-china-may-match-or-beat-america

[6] https://www.wired.com/story/for-superpowers-artificial-intelligence-fuels-new-global-arms-race/

[7] http://money.cnn.com/2017/08/21/technology/future/artificial-intelligence-robots-india-china-us/index.html

[8] http://surenahumanoid.com/

[9] McKinsey: Artificial Intelligence, The Next Digital Frontier? Discussion Paper, June 2017

concern for countries not adopting A.I. defence capabilities.[10] The relationship between dominance in A.I. and geopolitical influence is not supported by hard evidence, but the correlation does appear to exist. Should the relationship be proven over time then some countries currently not making the investments in A.I. could end up compromising their future growth and prosperity. The hype around what A.I. can offer has led many organisations to start making investments into the implementation of A.I.

A.I. Strategic Considerations

Many organisations have begun their journey into A.I. by undertaking exploratory research and developing strategies for the deployment of A.I. in their organisations. The danger of incorporating A.I. into the organisation lies in not properly evaluating the various strategic elements that need to be considered before implementation. A recent report by technology market research firm Vanson Bourne and data analytics provider Teradata[11]identified that 91% of the executives surveyed from organisations planning to implement A.I. expected to face major challenges in the deployment of A.I. and achieving the expected Return on Investment (ROI).

The first starting point to reduce the risk of failure is to consider who will lead the A.I. strategy. The Chief Technology/Information Officer is typically the person who will be given the responsibility of deploying the strategy. However, unlike other technologies the impact of A.I. on the organisation and its customers is significant. A.I. has the potential to disrupt the entire business model of the organisation and displace people. The strategy for the deployment of A.I. will need to include all the business units to be impacted and the key areas affected by disruption. The areas to consider are complex and multi-faceted. The Vanson/Teradata report identified that many organisations have begun to create a new C-Suite role in addressing the challenges of A.I. deployment across the organisation. The new role is being termed Chief A.I Officer (CAIO).

The second major consideration is to determine what the organisation would like to achieve from the deployment of A.I. This question cannot be answered unless there is a resource in place to advise the organisation about the potential areas of impact. This person needs to have the necessary knowledge of A.I. from a technology and business perspective (first strategic consideration). The report identified three key areas of investment being made by the organisations surveyed: 62% to improve the customer experience, 59% for innovation and product development and 55% for operational excellence. These broad categories require further analyses to determine specific areas of pain that A.I. can help remedy. There

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[10] http://nationalinterest.org/feature/america-cant-afford-lose-the-artificial-intelligence-war-21960
[11] Survey of executives at 260 large enterprises worldwide, October 2017.

needs to be a business need, and this should be articulated in numbers. For example, a highly manual process could be costing the organisation $5M a year, but with the implementation of A.I. automation software, the cost could be reduced by 70%. These simple business cases are an important step towards the development of the strategy. The methodology to identify these pain points in the organisation should be undertaken using a customer lifecycle review. This review should identify the current "as-is" situation and then a future desired version should be documented. By taking a customer approach to improve the customer experience, the organisation will be able to identify not only the pain points impacting customers but the underlying business processes and technologies that A.I. can remedy to achieve a greater experience, reduce operating costs, and streamline existing processes. This approach will lead to a better business case for the deployment of A.I. and expected ROI across the organisation.

The final major strategic consideration will be to identify the key enablers required to make the deployment of A.I. in the organisation a success. The key barriers identified in the Vanson/Teradata report from those surveyed included: 40% claimed IT infrastructure was an issue, 34% said getting the right A.I. talent, 30% identified lack of budget and 28% identified complications in changes to policies and regulatory issues. The enablers required to make your strategy work can only be properly identified once the process is completed for determining how the organisation will utilise A.I. to address certain business challenges.

The People Equation

Any successful A.I. strategy will need to carefully consider the impact on people in the organisation. Often this is an overlooked part of the equation but one that we feel can severely influence the results achieved from A.I. for the organisation. Internal stakeholders who fear A.I. because it can replace them are likely to resist the change and potentially undermine its deployment. A.I. will inevitability replace some workers and this is why it is a critical aspect when designing an A.I. strategy. Thought needs to be given to the people likely to be replaced and how they will be treated. Replacing workers without a plan is disruptive for all workers. Consideration needs to be given to retraining and redeployment of displaced workers to ensure cooperation and acceptance of A.I. as a benefit rather than a doomsday plan.

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