

Successful AI:

12 considerations for an assured outcome



Abstract

Even as enterprises are increasingly adopting artificial intelligence (AI) to drive their growth and transformation agenda, they also want to ensure that their business is viewed as purpose-centric. AI calls for significant, continued and long-term investment, and before the enterprise commits to such a critical step, it must take into account some key considerations around business, technology, people and processes, and plan for them as well. These considerations cover (a) the need for a cohesive business case, (b) an agreement on measurable KPIs/metrics, (c) acceptable techniques to measure the success of AI initiatives, (d) adoption and adaptation of core and complementary AI technologies, (e) establishing standards for technology and processes, (f) secure usage of data managing the expectations around data privacy, and (g) ensuring sustenance of the AI solutions by ensuring strict regulatory compliance.

These key considerations can be gainfully managed by leveraging the 12-C framework around business, technology, people and processes, which would result in maximizing the return on investment in the AI initiatives. It would also be useful in halting any initiative that is not performing according to expectations to minimize losses and learn valuable lessons to course correct and restart with increased thoroughness and renewed motivation.

The 12-C framework

The 12-C framework encompasses three considerations each from the perspective of business, technology, people and processes.

Business

Being cognizable, comprehensive and compelling are the three critical considerations for business when pursuing AI initiatives.

Cognizable

Businesses leverage AI technology to achieve enterprise transformation and growth, along with cost optimization. It is important that the enterprise is cognizant about the purpose of the initiative, and the specific business requirement. In other words, is the AI solution the right choice from the perspectives of the investments needed, risks involved, hurdles anticipated, and techniques required?

Comprehensive

The use case chosen for the AI solution must be comprehensive in terms of what problem is to be solved, why it is important to solve that problem, what business value will it deliver, how and when will the business value be delivered, and how will it be sustained. All aspects linked to business, business operations and technology must be considered here.

Compelling

Given the nature of the AI solutions, the work must be led by the business units that are also accountable for evolving and maturing the solution. This will happen only when the use case has all the compelling details, such as the value it promises to deliver, the risks it carries, the appetite of the business units to take those risks, and how the units plan on securing the sustained benefits from the solution.

Technology

Coverage, choice and capability are the three key considerations from the technology perspective.

Coverage

While AI technology is continuously evolving, certain disciplines have come to the fore, such as machine learning, natural language processing, perception (vision, speech, tactile), knowledge representation, reasoning, forecasting and planning. The enterprise must prioritize on the disciplines it needs to focus on and invest, for maximum business benefits.

Choice

Choice is crucial for the enterprise, and so are the reasons for it. Choosing where to house an AI solution -- for instance, on-premise or in the cloud -- is driven by the total cost of ownership and the expected sustained business benefits. Similarly, the decision to use commercial AI products to develop the solution or open-source software is driven by the investments needed, robustness of the AI products, time-to-market, and protection of intellectual property rights. Additionally, the decision to leverage third-party service providers is driven by the scale and speed at which the enterprise wants to adopt the new technology, as well as the business risks related to outsourcing.

Capability

Each of these AI disciplines have a rich set of capabilities and features that are getting enhanced every day. However, not all of these capabilities and features are at the same level of maturity and robustness, and thus, the enterprise has to take a well-thought-out call on what will be the must-have, the need-to-have, and the nice-to-have features, so that the AI initiatives can be adopted at optimal investments, and within a reasonable risk appetite.

People

The three vital considerations from the people perspective are commitment, competence and collaboration.

Commitment

The time to reach the desired level of maturity for the AI solution depends on many factors, such as the complexity of business requirements, the complexity of the technologies and the complexity of compliance norms. Consequently, it would need the enterprise to make some definite and clear commitments in several areas, and not just time. This includes commitment in terms of investments around funding (approved budget), people time (business, business operations and technology teams), and resources -- computing resources such as GPU (graphics processing unit) or FPGA (Field Programmable Gate Arrays) are very critical.

Competence

For success and sustenance, democratization of the AI solutions will be necessary to ensure these can be leveraged with zero or minimal involvement of the technology teams. Advancements in AI, such as AutoML or AutoAI (or 'AI for AI') are enabling this democratization of usage. The technology teams need to stay up-to-date across the depth and breadth of the evolving AI technologies to enable this democratization.

Collaboration

Involving both internal and external collaboration, this characteristic is the most crucial one for enterprises. For AI technology adoption to be successful and sustainable, stakeholders across business, business operations and technology must collaborate to ensure that solutions continue to match the dynamic needs of the enterprise. In external collaboration too, the enterprise need to have a well-defined strategy for leveraging the expertise of technology solution providers, business solution providers and infrastructure solution providers.

Processes

The key considerations here are for processes to be clear, compliant and computable.

Clear

There has to be absolute clarity on how the AI initiative will be executed across its entire development life cycle. To gainfully manage this, a well-defined RASCI (responsible, accountable, supporting, consulted and informed) matrix must be in place for all stakeholders to follow, including from business, operations and technology. Additionally, for each activity in the RASCI matrix, there has to be an ETVX model, encompassing entry (as a pre-requisite for starting an activity), tasks (various tasks in an activity), validations (the verification and validation associated with an activity), and an exit (criteria for successful completion of an activity).

Compliant

The most critical expectation from the AI solution is its trustworthiness. Hence the AI solution has to necessarily comply with all the demands of safe, secure and sustainable AI, as well as rational (being explainable), righteous (being fair, ethical, and purpose-driven), reliable (meeting functional and non-functional performance requirements), revitalizing (augmenting human capability), and restrictive (privacy by design) AI.

Computable

For measuring the impact of AI initiatives on the business process KPIs or metrics, which get aggregated to business operations KPIs, and which get further aggregated to business KPIs, it is very critical to first have the agreed measurement methodology and techniques to measure these KPIs. It is also important to baseline them, the as-is state, so that the to-be state can be quantitatively measured. These benefits are in the domain of financials (top-line enhancement as well as bottom-line improvement), customer (retention as well as acquisition), compliance (adherence to internal as well as external compliance norms), and operations (productivity, accuracy, and turnaround time).

Enterprise innovation and the 12-C framework

Leveraging the 12-C framework results in the following innovation impacts on business:

Incremental innovation

Enterprises can start small in adopting AI technologies, with limited investments and risks, and once convinced about their impact, prepare to profitably drive radical and disruptive innovation. For example: use NLP technique for low business impact and low-risk internal process linked to business processing, for confidence in NLP-based content extraction and decision making, involving both deterministic (business rules-based) and probabilistic (case-based) decision making.

Radical innovation

With a quantum leap in the efficacy of business operations, and the scale automation that AI brings in, the enterprise can significantly enhance their business KPIs or metrics to be more competitive in the market. For example: use the proven NLP technique and deploy it in NLP-based content extraction for high business impact; and in high-risk business processing, wherein the composition and focus of the process team changes from data preparation to data analysis, by significantly reducing human subjectivity in a consistent manner.

Disruptive innovation

With newfound capabilities owing to AI, enterprises can launch unique product and service proposition to gain or strengthen their differentiated position in the marketplace. For example: use the proven NLP technique and deploy it in decision-making —both deterministic and probabilistic— for high business impact in high-risk business processing, resulting in straight through processing to change the game.

Conclusion

While the 12-C framework can help manage expectations around assured outcomes from AI initiatives, it must be remembered that AI technologies involve continuous learning. The pace of this learning must match the rapid pace at which AI is advancing—only then will enterprises be able to profitably adopt and adapt to AI technologies.

Awards and accolades



Contact

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