

The Value of Practical AI

Introduction

Assessing the business value of AI is notoriously tricky for an executive. This post tries to build a simple framework to help you make AI related business decisions that leverage our knowledge and experience in implementing hundreds of practical AI applications. Specifically, our experience is based on the Natural Language Understanding (NLU) segment of AI, but most of what is included in the post can be extended to general AI adoption.

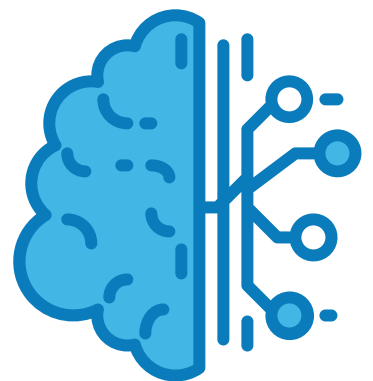
It's Just Software

Although nuances can come into play, your AI deployment decisions shouldn't differ from those you make regarding the implementation of other IT technologies. AI, as any other software, is a means to an end, and therefore a correct ROI calculation together with sound expectations in terms of performance, should be at the core of these decisions. You, as an executive, should be informed on how to frame the evaluation correctly without being influenced by the hype and incorrect assumptions that, unfortunately, are surrounding the sector today.

The Real Costs of Implementing AI

When it comes to making an AI investment, various scenarios are likely to occur. For example, a buyer might ask for a minimum level of performance that is disproportionate compared to investments in more traditional software technologies. It is not rare to see organizations rejecting AI investment opportunities because the system doesn't achieve a 90+% accuracy while having no metrics in place to measure the accuracy reached by their employees doing the same activity.

Some buyers may also find it difficult to accept that, as with any other technology, AI requires development, configuration, and maintenance work.





The Machine Learning and Open Source Misunderstanding

The words “machine” and “learning” have perhaps created the expectation that there is no need for human intervention; that, by definition, intelligent machines should be able to “learn” and “adapt” by themselves. This pre-emptive rejection of the idea that, as with any software, some work will be required to obtain the expected results causes many companies not to pursue an AI investment or to look for out-of-the-box solutions that, as we will see, limit the actual overall value of the investment.

In similar terms, the words “open” and “source” can often create the expectation of a “free lunch” scenario when it comes to software. However, it’s important to note that license costs, especially for AI, are only one factor of the cost of implementing the software and that often complexity, and a lack of support and tools, can increase the costs way beyond the cost of a commercial license.

The Message of Known Vendors

In their attempt to democratize AI and to capture the imagination of business leaders, leading vendors have inundated the market (from the general public to the business audience) with messages that hype the wonders of AI and downplay, if not completely omit, the skills required to tune and turn this complex technology into production without making available the right tools such as the AI and NLU platforms we’ll introduce later.

The (Bad) Memories of the Past

Businesses have spent hundreds of thousands of dollars, if not millions, on implementation and maintenance of traditional enterprise software solutions that, more often than not, have required more time to complete than expected, with higher costs than what was originally estimated.

It should come as no surprise then that, when it comes to new technologies like AI, decision makers like yourself are often afraid of being forced into the same trap of costs and slow implementation. But this conservative approach can put you at risk of not building, as Gartner defines it, AI maturity inside the organization. The impact of which will be more visible when reviewing the return part of the ROI equation.



As with any other technology or software investment, evaluating the investment required is easy if you ask the right questions. Here is what you should be aware of:

- **Any AI-related solution requires an investment in developing and training the system.** This often requires both time from the vendor and time from the company itself.
- AI systems are not “set it and forget it” systems. They **need maintenance to align the system to changes in the conditions.** A thorough ROI analysis would factor this into the solution cost and not see this as a failure of AI.

The fact that AI has the above characteristics and cannot completely self-learn **is not a reason to shy away from AI.** Just make sure you include these costs in the ROI calculation.

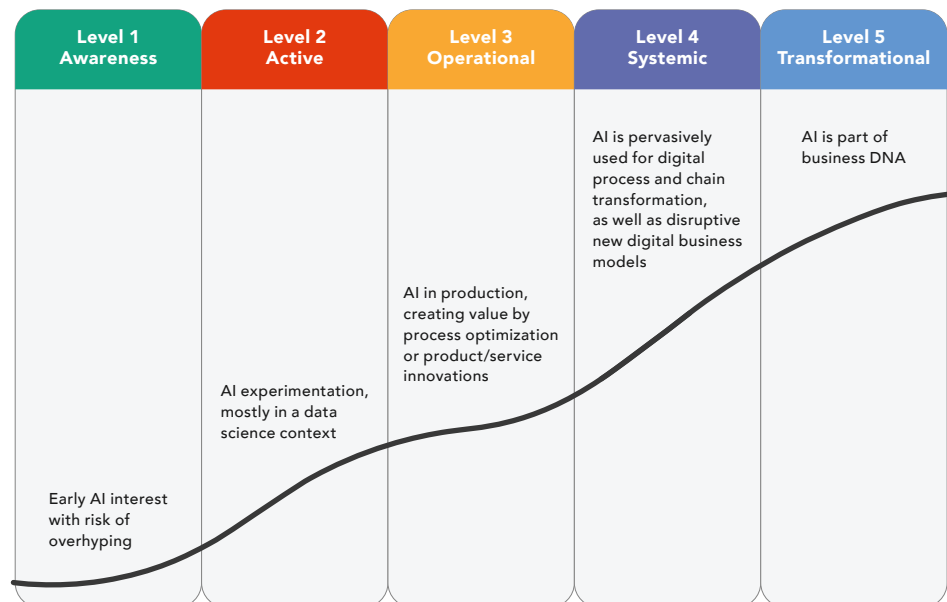


The Real Return of Implementing AI

The correct evaluation of the “return” part of the ROI equation should be considered an important aspect of your AI investment. An investment in AI software could also have a systematic and transformational impact on your organization. Gartner calls it the AI maturity, in which maturity is measured as the ability to adopt AI across the organization.

As you can see in the diagram below, any AI implementation that moves the organization toward systematic and transformational AI maturity, generates a value for the organization that is significantly higher than the ROI of the specific use case addressed.

GARTNER AI MATURITY MODEL



Source: Gartner

However, it is important to note that when working with pre-trained out-of-the-box AI solutions (e.g., AI SaaS-like products), essentially no AI maturity is developed as the organization is only a user of the solution. This means that although the investment itself might provide a return, usually measured in terms of efficiency (lower operating costs), the lack of AI maturity growth will not create the conditions for higher returns from future implementations.



Contrarily, AI platforms are specifically designed to simplify in-house design, development and operations of AI solutions in order to enable the less-technical folks in an organization to engage with AI projects. This results in a broader AI fluency and adoption for the organization as a whole.

For these reasons, AI platforms play an important role in increasing an organization's AI maturity. There are many ways for organizations to adopt an AI platform. They are often eased into adoption by working with vendors or consulting firms that work with your resources in the first implementation while training them to start using the platform independently.

In this way, organizations like yours, can reach a level of systematic or transformational AI maturity that enables them to leverage AI for simple productivity gains while also changing their way of doing business through new business models and revenue sources.

Of course, in order for AI platforms to be effective for systematic and transformational adoption of AI in an organization, they must to offer the following characteristics:

- **Flexibility** to support multiple use cases in different functions.
- **Scalability** to support also the more resource demanding use cases.
- **Capability to easily integrate** with other technologies and applications already in use in the organization, for smoother implementation.
- **Explainability and openness** to mitigate the risk in adopting AI and to simplify the adoption inside the organization.

In the specific case of NLU, there is another critical factor that can increase both your AI maturity and platform adoption: the knowledge graph. Whereas the platform has the objective of simplifying the design, development and operations of an AI solution, the knowledge graph instead creates a single shareable understanding across the company that further increases your organization's AI maturity. With knowledge graphs, your organization can decrease implementation and operational costs for additional use cases, ensuring an even higher return on your strategic AI initiatives.



Conclusions

AI is just another form of software so, when evaluating AI investments, you should simply refer to established ROI calculation best practices and be realistic in terms of your objective's minimum acceptable performance.

Just like any other software, AI, independently from the technique adopted, has implementation and operational costs. Make sure you ask the right questions and understand all these costs (HW, SW, People, etc.) when making your tabulations.

The return of the adoption of AI should not be limited to the savings of a specific use case. Increasing the AI maturity of your organization enables and multiplies the return of future implementations by extending the value of AI from simply lowering costs to creating opportunities for higher revenue.

Adopting scalable, flexible, easy to integrate and explainable AI platforms while leveraging reusable knowledge across the organization, not only increases your organization's AI maturity, but business value as well.



About us

Expert.ai is the premier artificial intelligence platform for language understanding that augments business operations, scales data science capabilities, simplifies AI adoption and provides the insight required to improve decision making throughout organizations. The expert.ai brand is owned by Expert System (EXSY:MIL), that has cemented itself at the forefront of AI-based natural language solutions across Insurance, Banking, Publishing, Defense & Intelligence, Life Science & Pharma, Oil Gas & Energy, and more.

 www.expert.ai  info@expert.ai

©expert.ai 2020