

Making an Effective Business Case for AI

Gabriel Giordano
Ohio University

Subject Area: Business Analytics
Article Type: Viewpoint Article

As we see more digital disruption every year in the business world, leaders in all areas are challenged to identify, understand, and adapt to the next technology-enabled transformations in their industries. Effective leaders must be technology-savvy, however many still continue to resist change - particularly change that could disrupt key practices. On top of this, the number of emerging technologies grows every day, and no expert (or even organization) can truly understand all of them. These opportunities and challenges have led to both irrational excitement and fear related to new technologies (Khan et al.), as well as many strategic mistakes. Arguably the technology that is the best example of this right now is AI. This is evident from the large number of everyday news articles about the potential (both good and bad) about AI, as well as AI being represented as much as any other technology at the top of Gartner's Hype cycle of emerging technologies over the last few years. This placement on the hype cycles reflects that AI is at the top of the business world's mind, and that while there is huge potential for the area, there are also irrational expectations (see "Understanding Gartner's Hype Cycle" in the references).

It is completely understandable where these expectations come from. AI has long been sold as the future of business computing, and even as a key part of the future of the world. Business thought-leaders regularly share stories of how the world's top technology companies are separating themselves from the rest of the pack by leveraging AI (Iansiti and Lakhani 2020). Benefits in other industries are also already being recognized - in areas such as parts optimization, pricing and promotion, customer service analytics, and sales and demand forecasting (Balakrishnan et al 2020).

However, the AI age is still young - AI technology is still emerging, it is costly, and it carries a number of business risks. Because of this many leaders are simply frozen and don't know how to approach and move forward with AI. Many are also fearful of the business change it might bring (McKinsey 2020). Most organizations do have technology leaders that recognize the potential of AI and have developed some type of AI strategies (Ransbotham et al 2020). Although, even if there are proponents of AI in an organization, they often struggle to sell AI ideas across the organization (Funahashi et al). In the end only 10% of companies fully implement AI and recognize financial benefits (Ransbotham et al 2020).

To overcome the skepticism and fear that some have with AI, proponents need to inspire and speak the general language of business to get others on board for AI. This means making a business case and presenting it in an inspirational way. However, this might require a different business case approach than most organizations use for their more traditional technology projects. Sau et al (2018) recognize that AI projects are not like many other business IT solutions because potential is not clear - making ROI difficult, if not impossible to estimate.

AI requires a business case approach that is more focused on helping the business understand how AI will change the way the business works, on non-quantifiable benefits as much as clear financial benefits, and on inspiring others about the potential of AI as much as the implementation details for an AI project. Ward et al (2008) present a different business case approach that focuses on all types of benefits, and on organizing benefits into business change categories (that can be quickly understood by business leaders). The approach maintains rigor by incorporating plans for measures for all benefit areas, even if data or methods do not exist yet.

The approach starts with a process of trying to (exhaustively) identify all benefits. It asks us to think of “new things” we will be able to do as a business with this technology, as well as “things we can do better”, and even “things we will stop doing”. It encourages us to think of the commonly identified financial benefits, but also other non-financial quantifiable events - benefits for which we can already provide non-financial estimates, measurable benefits – benefits for which we can already measure but we do not have estimates for yet, and even observable benefits - benefit areas for which we have no measures.

Degree of Explicitness	Do New Things	Do Things Better	Stop Doing Things
Financial	By applying a cost/price or other valid financial formula to a quantifiable benefit financial value can be calculated.		
Quantifiable	Sufficient evidence exists to forecast how much improvement/benefit should result from the changes.		
Measurable	This aspect of performance is currently being measured or an appropriate measure could be implemented. But it is not possible to estimate by how much performance will improve when changes are completed		
Observable	By use of agreed criteria, specific individuals/groups will decide, based upon their experience or judgement, to what extent the benefit has been realised.		

Benefits Reporting Table from Ward et al (2008)

It then encourages us to think of how we plan to measure all of these. The authors give a number of ideas for how hard-to-measure benefits can be quantified. Some of these are difficult with AI - such as “simulation” and using “internal evidence”. Simulation is very difficult as the learning process of AI always comes with a high level of uncertainty. With AI there often needs to be an existing example to get quantified estimates - but these can come internally or externally. Externally, benchmarking is a great solution if there is another similar situation in another setting. Internally, this would require experimentation (or piloting). By experimenting in a very focused or approachable way with AI, evidence can be gathered that can be used to produce more rigorous estimates.

Early costs and risks can be looked at in a similar way – although they too will be largely incomplete at this stage with an area like AI. Risks can be linked to each benefit area to improve clarity. And since costs will be incomplete, having a range (optimistic vs pessimistic) makes sense.

Degree of Explicitness	Do New Things	Do Things Better	Stop Doing Things
Financial			
Quantifiable			
Measurable			
Observable			

Methods of quantifying benefits from Ward et al (2008)

A last critical part of making the early business case for AI revolves around hooking and inspiring those that need to buy-in for an initiative to happen. This is critical when there may be people fearful of a new technology or new way of doing things. The way the business case is presented affects this. The key to inspiring skeptics and getting them to listen is a story (see HBR, “The right way to present your business case”). A story can be thought of as a flow of ideas that keeps people’s interests - it can be as simple as “outlining the need, impact, and solution”. However, the story context should be something that is relatable to these you are communicating to, and their concerns need to be addressed up front (O’Hara 2014). Other elements that can kill an early business case are “overwhelming slides with needless detail or trotting out tired visuals”.

The executive summary is also key. A good practice is to make the entire early case as much like an executive summary as possible. This means clearly summarizing, separating individual ideas into distinct paragraphs/sections, and eliminating acronyms (Harvard Kennedy School Communications Program - www.hkscommprog.org). Lastly, being visual with ideas helps. The quicker and easier information can be absorbed by skeptics the better. Again, this is why the business case methodology presented makes so much sense. It encourages benefits to be summarized in a simple table organized by high level business change areas.

To summarize, to make an effective business case for AI, proponents need to take a new approach to the business case and focus on all the benefits (including those that can’t be initially quantified), communicating in the clearest, most relatable way possible, and inspiring skeptics. This will open the door to experiments that could lead to the next great transformation for their organization.

REFERENCES

Balakrishnan, T., Chui, M., Hall, B., Henke, N. (2020) Global survey: The state of AI in 2020. McKinsey and Co. Available at <https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/global-survey-the-state-of-ai-in-2020>

Berruti, F., Nel, P., Whiteman, R. (2020) An executive primer on artificial general intelligence. McKinsey and Co. Available at <https://www.mckinsey.com/business-functions/operations/our-insights/an-executive-primer-on-artificial-general-intelligence>.

Funahashi, T., Lucini, F., Nevala, K., Lundberg, A. Adopting AI: Ensuring Business Readiness. MIT SMR Connections Webinar. Available at <https://sloanreview.mit.edu/connections-webinar-adopting-ai-ensuring-business-readiness/>

Gartner. Understanding Gartner's Hype Cycle. Available at <https://www.gartner.com/en/documents/3887767>.

Harvard Kennedy School Communications Program. How to Write an Executive Summary. Available at www.hkscommprog.org.

Iansiti, M., Lakhani, K. (2020) How machine intelligence changes the rules of business. Harvard Business Review, January–February 2020. Available at <https://hbr.org/2020/01/competing-in-the-age-of-ai>.

Khan, N., McCarthy, B., Pradhan, A. Executive's guide to developing AI at scale. McKinsey and Co. Available at <https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/executives-guide-to-developing-ai-at-scale#intro>.

O'Hara, C. (2014). The Right Way to Present Your Business Case. Harvard Business Review online. Available at <https://hbr.org/2014/07/the-right-way-to-present-your-business-case>.

Ransbotham, S., Khodabandeh, S., Kiron, d., Candelon, F., Chu, M., LaFountain B. (2020) Expanding AI's Impact With Organizational Learning. MIT Sloan Management Review and Boston Consulting Group, October 2020. Available at <https://sloanreview.mit.edu/projects/expanding-ais-impact-with-organizational-learning/>.

Sau, M., Andrews, W., Duncan, A. (2018) Seven Factors That Make Business Cases for Artificial Intelligence Projects Different. Gartner. Available at <https://www.ibm.com/blogs/systems/read-gartners-seven-reasons-why-ai-isnt-like-any-other-project/>.

Ward, J., Daniel, E., Peppard, J. (2008) Building Better Business Cases for IT Investments. MIS Quarterly Executive: Vol. 7: Iss. 1, Article 3. Available at: <https://aisel.aisnet.org/misqe/vol7/iss1/3>