5 Enterprise AI and Automation Predictions for 2023

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My Top 5 Automation Predictions for 2023

“AI” and “Automation” are once again the hottest words in the enterprise space, with unprecedented adoption rates. Gartner forecasts worldwide AI software spending will be over $60 billion this year, increasing at over 20% YoY. Similarly, PwC found that 86% of the respondents think AI will be mainstream technology in their organizations.

So what does 2023 hold for companies and their increasing investment in artificial intelligence, automation, modernization, and transformation?

Here are my top five predictions for the year ahead.

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Interim CEO

01 Onshoring Drives Labor Productivity Increases

The early part of this century brought with it rapid globalization: Supply chains crossed borders; trade agreements surged; exports and import volumes rose; the U.S., China and other countries aggressively invested in other regions; and companies sought out low labor cost regions.

The times of rapid globalization are over—*for now.*

Over the last decade, we saw early but widespread concerns about globalization. The onset of the pandemic flipped the switch on these concerns, destroying global supply chains and pushing people's thinking onshore. At the same time, China and the U.S. dialed up their pace of innovation for the AI Arms Race, with each country looking to protect its Intellectual Property and bring as much hardware and software development back home. As a final example, the energy crisis in Europe has forced countries and companies to actively assess their geographical dependencies.

There will be more pressure on CEOs and leadership teams to bring as much back onshore as possible in 2023—data, IP development, supply chains and critical workforce members will all be part of this call home.

Further, this onshore push must be paired with labor productivity increases to offset the cost of labor changes, making it a perfect time to leverage AI and automation. Software and machines provide an excellent solution to get more done with the same (limited and expensive) workforce.

02 The Reign of the Augmented Employee

For a long time, article after article I came across asserted that robots would eventually take our jobs. The prediction has been tossed around for over 100 years. I believe we are decades, even centuries, away from a reality where we don't have enough work for people to do. Every time that prediction rears its head, jobs are displaced and changed, but more jobs and work are ultimately created. When the day comes when we can all sit on the beach and have robots do the work for us, it'll be a day for a long celebration.

Outside of the ebbs and flows of the economy, the job market has only had more participants over time. In the last 30 years alone, the US has gone from about 100 million to 130 million employees. This trend will continue. Even now, as we face a looming recession, there is a shortage of employees in most industries with more work to be done than people available.

2023 will mark the end of the widespread thinking that "robots will **replace** humans at work" and shift towards "robots will **augment** humans at work." An article in *The New York Times* by Farhad Manjoo, "In the Battle With Robots, Human Workers Are Winning," started talking about this change in sentiment this month. Manjoo argued that machines and software would aid human work, not replace it, best summed up with this line: **"Radiologists who use A.I. will replace radiologists who don't."** Technology can detect common diseases better than the best radiologists, and healthcare organizations and doctors embracing this software will see more business than those not.

Human and machine collaboration is the way forward and is the best way to increase labor productivity and outcomes.

Jobs do change, often referred to as job displacement. These tend to change far slower than people think. The answer and prediction for 2023 is an investment in human capital alongside the investment in software and machines. One job area that will grow within companies is the MLOps (Machine Learning Operations) teams, where jobs to do basic data entry might fall by the wayside. We may see entire teams and departments emerge to design, build, and optimize ML models. If the machine is learning, people must be teaching. Our teams should be upskilled, trained, and increasingly working on less mundane parts of the value chain—the machines don't mind picking up dull and mindless work tasks.

03 The Year of Return-On-Investment

Pick up a pen. Draw a 2x2 matrix where the vertical axis is Short Term ROI and the horizontal axis is Long Term ROI. Plot every single AI investment you have made on this chart.

— **Bottom Left:** Kill these initiatives immediately
— **Top Right:** Invest, invest, invest
— **Top Left:** Limited investment for urgent needs only
— **Bottom Right:** Develop clear milestones and track investment like a hawk

2023 will mark the year of investments that pay off both in the short and long term. To date, it's been hard to benefit from both.

Robotic Process Automation (RPA) has been a big trend among enterprises. It has often been used as a Band-Aid, stitching legacy systems together. As it is most often used it's only a short-term solution. In the long run, RPA if not managed well can make things worse. RPA can make it more challenging to rip out a piece of legacy software or even do a basic update, for example. The bots break—and create a mess doing so.

Until recently, any promise of long-term payoff has meant 2-5 years of time-intensive and sometimes painful efforts to work with a system integrator and re-engineer processes.

In the context of a recession and a need to modernize for the long term, leaders need to prioritize software that has short term ROI and that is future proof with long-term payoff too.

ROI can come in the form of lower costs or increased revenue. For me, increased revenue is more important, although both matter. McKinsey's 2021 The State of AI Survey found that one-third of companies saw more than a 5% increase in revenue driven by AI technologies and that around 10% of customers saw more than a 10% decrease in costs caused by AI technologies.

04 The Year of Narrow Applications

Let's look at the recent evolution of AI with some recent milestones.

1997
Software beats World Chess Champion. In 1997, IBMs Deep Blue won against a world chess champion, Garry Kasparov.

2011
IBM Watson wins at Jeopardy.

Siri, a voice assistant, is first released.

2012
Software can identify cats using picture recognition technology.

2017
was the dawn of the satirical app "Not Hotdog," which identified Hot Dogs and Not Hot Dogs.

2016
AlphaGo defeated Lee Sedol, Go world champion.

2018
Autonomous Vehicles complete their first paid journeys in Phoenix (with human co-pilots).

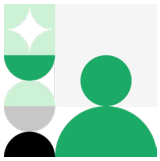
2022
Robot runs 100 yards in under 25 seconds.

I hear this a lot: "AI has turned a corner." It has turned many corners. But while AI has developed remarkable skills, they are specific and non-transferable.

DALL·E created the artwork below—it's an AI software designed by OpenAI that turns descriptions into images using Natural Language Processing. I typed in "Human and software collaboration in the style of Hopper ". It is no actual piece of Edward Hopper art, but it is pretty remarkable that a piece of software could create it in a few seconds.

But it is specific. DALL·E cannot take its learnings from creating art based on unstructured sentences typed into a box and apply them anywhere else. As smart as algorithms are getting, they are still very narrow in what they can solve. General human intelligence allows us to take learnings from one area and apply them in entirely different settings—we do not start from scratch whenever we want to learn something new.

While these are all phenomenal steps forward, they are all single-use case achievements. Computers cannot use learnings from one use case and apply them to another—that would imply some degree of general-level intelligence of AGI. 2023 will be the year of applying ML models and automation software to specific, focused use cases.



05 The Arrival of Regulation

Not much has been done for AI regulation, with little talk of its ethical use. In 2023, that will change. It's something that is being increasingly surfaced by Hyperscience's customer base and a core reason why we established an AI ethics committee earlier this year.

You may have seen the U.S. White House Office of Science & Technology Policy released its Blueprint for an AI Bill of Rights. It includes many suggestions for developers, businesses, users and lawmakers to follow to reduce AI's potential harms. Over the next year, several areas of debate will spark surrounding (A) bias in data and (B) the push for AI to promote social good and prevent social harm. For example, six major robotics companies recently signed an open letter pledging never to allow or pursue the weaponization of their general-purpose robots. The non-binding letter was signed by Agility Robotics, ANYbotics, Boston Dynamics, Clearpath Robotics, Open Robotics, and Unitree Robotics.

Regulation will likely come at a country-by-country level, with the two major AI powerhouses (US and China) taking very different approaches.