How Investments In Third Wave AI Are Generating 5x Returns Today

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Al is killing a generation of businesses, while those making Al investments are seeing a 5x return – *positioning them for first mover market dominance*.

Companies can use Third Wave AI to build low cost prototypes that reduce operational costs and quickly build AI capability.

Artificial intelligence is no longer a technology of the future. It is here, and is disrupting businesses - regardless of whether or not those businesses are ready to be disrupted.

Yet, what you think you know about AI may be as outdated as magnetic storage. While the general public may think of AI in terms of Siri, Alexa, and self-driving cars, advances that are not yet consumer facing are far more capable. These "third wave" AI technologies can be deployed without extensive training, and can deliver an immediate ROI with an initial spend an order of magnitude less than the smallest capital equipment campaign.

Forward-looking firms are seeing benefits from Third Wave AI today.

# Just as Blockbuster and Borders underestimated the impact of the Internet, a new generation of businesses are starting to feel the impact of underinvesting in AI.

#### The Old Generation

Briggs & Stratton, a manufacturer of gasoline engines, was one of many companies filing for bankruptcy in 2020, citing losses in revenues due to supply chain problems stemming from COVID-19.

Quibi, a startup spun out of Hollywood, spent more than \$1B on high quality, custom short form content targeting mobile screens. Quibi has had less than 2M subscribers

operation.

in its first year of



Insurance companies,

while showing interest in the application of AI, have been slow to adopt the technology. Traditional insurers have grown by 5-7% year over year in the period between 2015-2020.



The Al Generation **riskmethods** is an Al based tool that some companies have used during the pandemic to avoid spending "months on the phone" calling suppliers, as these companies reshaped their supply chains. **TikTok**'s user generated content costs TikTok nothing. TikTok's AI shows users clips based on past viewing patterns, creating an addictive experience. The company has more than 500M active daily users.



Lemonade customers can submit claims within 90 seconds and, in some cases, have their claims processed within 3 minutes. Lemonade, which is using Al to automate underwriting, is now valued at \$1.4B.

## Outdated perceptions about Al are holding back Al investments. These perceptions are no longer true.

A survey of CIOs revealed that most didn't believe their organizations were ready for AI, or that they had the skills in-house to implement a program - especially - those focused on a core business that was not software oriented, such as manufacturing or heavy industry.

Remember though, organizations that are investing in AI today are seeing 341% improvements in productivity today. What initiatives in your business yield similar results?

#### Why CIOs don't implement AI solutions Common Misconceptions





#### NOT INVENTED HERE

Most organizations using AI did not build the solutions themselves. More than 95% used outside assistance to develop their solutions.

<sup>[1]</sup> McKinsey, Global Al Survey, 2019.

# A new Third Wave of AI technology has been dramatically improving the effectiveness of AI as a tool for <u>today</u>.



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### Third Wave AI mitigates the need for extensive training data by relying on expert knowledge.

Earlier generations of AI learned through trial-and-error. With no understanding of the link between inputs and outputs, they required large data sets in order to accurately describe objects through computer vision, audio fingerprinting or other forms of perception. Training these models required users to create massive datasets finding thousands or millions of relevant data points and labeling them accordingly. Even then, when the system would encounter input that strayed too far from the model - results could be unpredictable, as early adopters of Siri and Alexa can attest.

Third Wave AI includes expert decision making and intelligent frameworks so that systems can be established and trained in a fraction of the time of older algorithms. Relying on this expert knowledge also makes them more accurate and robust.



DASL, a Third Wave AI technology from SRI International, uses both data and expert knowledge for its machine learning models. Here DASL applies commonsense knowledge to a visual relationship detection task to determine if a person is riding a bike.

Reference: https://www.sri.com/wp-content/uploads/2020/07/2003.07344.pdf

## Companies implementing Third Wave AI projects have been achieving a 5x ROI on those projects within three months.

Comparative to other process improvement initiatives, companies are finding that AI systems can be developed, trained and deployed in 10-12 weeks. In contrast, physical automation can take months or years of refinement.

Where AI has been implemented successfully, companies have found that:

- Every dollar invested in AI generated a \$5 return.
- Domain experts led to rapid implementation and training of models.
- The company saw a 13% increase in EBITDA without reducing headcount.

#### Case Study

# TATA STEEL

Tata Steel implemented advanced AI to increase automation at a single steel manufacturing facility in Europe, and described their findings in a case study.

Overall, the facility went from using 23,000 FTEs to produce 3 million tons of steel to producing 7 million tons of steel with only 9,000 FTEs. The rejection rate improved by 95% in just three months.



<sup>[1]</sup> Partnership on Al, Tata Steel Europe: Case Study, 2018.

# Third Wave AI is being put to use in almost every industry.



**Pending.ai** and other **chemical product** companies are able to predict the properties of novel compounds without physical synthesis.



Advanced manufacturers including Siemens are reducing lost time incidents by detecting safety hazards before they cause accidents.



**Food and beverage** producers, such as **Benson Hill**, use AI can detect out of spec products, even in highly variable meat and produce products.



**Highmark Inc.'s** Financial Investigations and Provider Review (FIPR) department used AI to generate over \$260 million in savings associated with **fraud, waste, and abuse** in 2019.



**HS2** and **similar Infrastructure** providers are drawing conclusions automatically from hours of drone inspection data.



**IBM** estimates that it has realized "almost \$1 billion in savings" since 2011 by integrating AI and other modernization efforts in its **HR** department.

# Companies can start using Third Wave AI to build low cost prototypes by selecting an appropriate Third Wave AI platform.



Which is right for your business? **PreScouter's AI professionals have thousands of hours of experience** designing and deploying systems used in factories, educational institutions and facilities around the world. Contact us for advice on which platform might best suit your operation.

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Although Third Wave AI is here today, every business is different, **and determining which of the available solutions is right for your organization is a challenge**. Vendors will try to recommend a specific approach to promote lock-in, and in-house development can be slow - especially if the right team isn't in place.

If you aren't sure how to take the next step in deploying Third Wave AI technologies to solve your business challenges, <u>contact PreScouter</u>. We'll arrange for a free consultation where you can describe a business challenge to one of our AI experts and get some candid feedback and recommendations - with no obligation to purchase.

Through PreScouter's global network of 4000+ subject matter experts, clients gain access to technologies and expertise not available in-house.

"The reason why I like to work with PreScouter is their customer focus: their almost relentless focus on making sure they (and us!) understand what we do and do not want. They do this by asking questions and iterating on what is found."

**W.D. Shingleton**, Technical Lead, GE Healthcare



"Once we started the project, we realized that we were learning a lot of interesting things. PreScouter produced very valuable results."

**Gary Click**, Technical Director, Voestalpine Nortrak



