

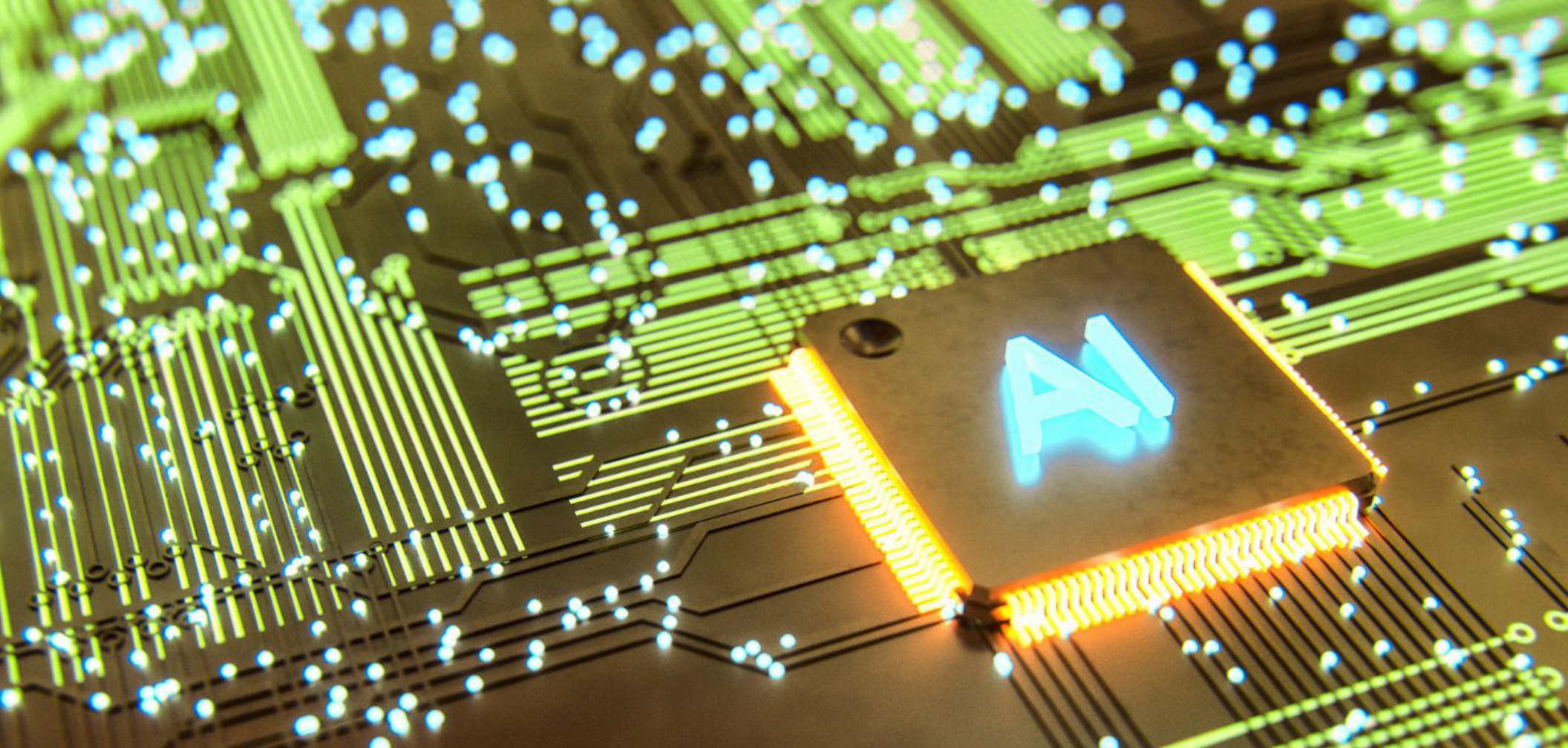


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# Guide To AI: Navigating the New Era





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# INTRODUCTION

*Welcome to the new era of computing. No matter where you look, AI dominates headlines in the tech space and beyond. With this wave (or tsunami) of attention, hype, and new tools, navigating this new landscape can be overwhelming – and the cost of action, or inaction, could be critical.*

*To begin this journey, we must take it back to basics. What is AI? Artificial Intelligence, also defined as on-human intelligence, is loosely defined as a technology which can perform tasks that normally require human intelligence, such as visual perception, speech recognition and interpretation, large-scale analysis, and (to a limited degree) problem solving.*

# Opening Notes

## Old and New

AI, as a concept and as an innovation, is both decades old and still in its infancy. Algorithmic computing, data analysis, and language processing have seen rapid developments since the 80s, including prominent incidences of Artificial Intelligence appearing to surpass human intelligence<sup>1</sup>. Despite this rapid advancement, AI still remains a new and relatively undeveloped technology. Up until very recently, AI has most prominently been in the form of mobile phone technology, smart devices, automation and data analysis software, website chatbots, and text predictions in word processing tools, to name a few common examples<sup>2</sup>. While these innovations are amazing in their own right, they don't seem to warrant the excitement being felt across the scientific, social and business communities across the globe. So why the hype?

## A New Era

In November of 2022, OpenAI released its inaugural beta version of their chatbot AI program ChatGPT. This new-fangled chatbot distinguished itself from other status-quo chatbots on the market in two major ways<sup>3</sup>:

1. Its advanced capability to interpret human language queries (called natural language processing), generate comprehensive results, and communicate the results back in plain language, creating hyper-customizability and thoroughness of results.
2. Its ability to learn from past queries to improve results and make them better over time (machine learning).

These two notable AI innovations, popularized by ChatGPT, took AI to a new level of public attention. The rapid computing, sophisticated communication, low barrier to public use (low cost and no technical language/coding skills required), and self-improving capabilities of ChatGPT opened up many doors for technical and personal use of the technology, and kickstarted the AI boom that has resulted in a plethora of new tools for purposes of marketing automation to research to content creation to startup business planning.

## Your AI Compass

With the landscape of AI changing nearly every week (if not every day), it can be an incredible challenge to remain caught up on the developments, let alone knowing what applications of AI should be explored and implemented.

To address this challenge, TEC Canada, in collaboration with some of the most up-to-date thought leaders on the topic, have put together this comprehensive AI guide addressing the types, opportunities and uses, risks and limitations, and practical next steps for SME leaders to orient themselves on the topic and make better decisions on the smart, safe, and effective implementation of AI strategy within their business.

## AI Types & Terminology

You may have heard many different terms thrown around to describe different types of AI. The two most common (and most relevant) types of AI referred to are Artificial General Intelligence (AGI), and Artificial Narrow Intelligence (ANI or just AI)<sup>4</sup>. Artificial Narrow Intelligence is AI that can be used to solve one specific (or a set of specific) tasks or problems and is generally procedurally driven. All of the current AI technologies in use fall under the category of ANI. Artificial General Intelligence refers to AI that is capable of higher-order thinking, contextual comprehension, and abstract thought (in other words, multi-use and complex intelligence, similar or synonymous to that of humans).





*While Artificial Narrow Intelligence is the widespread technology currently available, the concept of Artificial General Intelligence is the one that generates the most attention – producing both existential fear and revelatory excitement. Despite the rapid advancement of current AI tools, and the often-unexpected sophistication and novelty of results, AI is likely still very far from the type of general intelligence that will rival humans. **Dwight Mihalicz**, President of Effective Managers and TEC Canada Chair and AI Speaker, sums up why fears of AI posing an intellectual threat to humanity are misplaced:*

### **Artificial General Intelligence**

*AGI, Artificial General Intelligence, sometimes referred to as General Artificial Intelligence, describes a form of intelligence that would be indistinguishable from human intelligence. It is this that we as a human race should fear. A machine that truly has AGI would be capable of using judgment to make decisions within its own rationale. That might not be good!*

*The day of AGI is not coming in the foreseeable future.*

*And here is why.*

*AGI requires that a machine can replicate in human capabilities of diagnostic problem solving.*

*To date we have only seen machine intelligence that can follow procedures, based on finite (perhaps very great but still finite) information.*

*For example, ChatGPT uses deep machine learning to predict, based on a question, the most likely responses to that question. ChatGPT uses LLM (Large Language Model) to determine the most likely order of words that would be related to a question asked. Because of the size of the models, a database of over five hundred billion words passed through 175 billion parameters for ChatGPT, the answers sound very human-like.*

*But that answer is based on the existing knowledge that it has been trained on. Moreover, that information is a year or more old.*

*ChatGPT answers will always be slightly out of date – not that this always matters.*

*The more important aspect is that ChatGPT can never draw conclusions based on the data that is available to it in order to come up with something new. It simply cannot.*

*This is true for all artificial intelligence systems. They can be extraordinarily good at gathering and feeding back information. They can identify patterns that humans may not see. They can process information faster than we can and provide information that is helpful to our decision-making.*

*But they cannot create knowledge.*

### **Human Capability**

*Here is an example from human decision-making processes that can help with clarity.*

*As a management consultant, my work includes helping my clients put in place systems that will help hiring managers match the capability of people to the complexity of work.*

*The most common mistake in hiring is made when the most successful front-line employee is promoted to be the manager of the team. For example, the sales manager of a sales team leaves the organization. The common assumption is that the best salesperson should manage the team because that 'magic' will be used to transform the remaining team members to be better salespeople.*

*That best salesperson doing entry-level sales may have been ideally suited to following the sales procedures. But they may not have the diagnostic capability to creatively solve problems that have an array of infinite solutions. If*

*they do not have this diagnostic capability, they will not be successful as the manager of the team.*

*Managing a team of front-line workers is more complex than doing the front-line work.*

*This human capability – I call it problem solving capability – describes how one processes information to successfully work at higher levels of complexity in organizations.*

*The level at which one can successfully solve problems is attained through a maturation process that all humans go through.*

*Each of us at any point in our lives has the capability to solve problems at a certain level of complexity. To solve problems in a higher order of complexity our brains must mature in their ability to be able to solve problems at that level.*

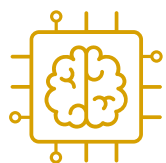
*We cannot be taught to successfully work at a higher level of complexity. Just as we cannot decide how tall we will be, we cannot simply decide to solve problems at a higher order of complexity. The clerk in the mailroom may mature over time to have the capability to run the company, and this does happen. But not all clerks can become CEOs.*

*The best salesperson may not be successful as the team manager this year, but next year they may be. It is a matter of maturation (and, of course, many other factors that we are not discussing in this guide.)*

*If we cannot train humans to work at higher levels of complexity, how can we write an algorithm that will enable a computer to work at higher orders of complexity?*

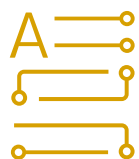
# Essential Terminology

*Outside of the categories of Narrow and General AI, there is a sea of other terminology and classifications flooding the scene. Some other key types and terminology for AI that are most relevant include<sup>5,6</sup>:*



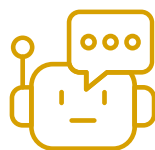
## Neural Network

a computer or algorithmic system designed to function similar to that of a human brain, primarily by analyzing statistical patterns.



## Large Language Model (LLM)

a type of neural network that learns language-based skills by analyzing large amounts of text.



## Chatbot

an AI program designed to interact and communicate with humans through text or voice, with the intention of simulating a human conversation.



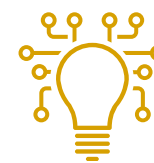
## Machine Learning

Algorithms that help AI programs improve their output by learning from new data, without any input or programming from a human being.



## Natural Language Processing (NLP)

the ability of an LLM to process, understand, and generate human language.



## Generative AI

AI that produces content such as text, videos, images, and code. Generally used to help solve qualitative business problems.



## Predictive AI

AI that produces predictions and forecasts of the future by analyzing datasets. Generally used to help solve quantitative business problems.



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# AI Opportunities

*While we are still a long way from a world with General AI, an abundance of opportunities exist within the current innovations available on the mass market. There are a plethora of uses of current AI technology, however most fall into two overarching areas of business impact: operational efficiency (human resources, accounting, production, IT, etc.) and business generation (marketing, sales and business development). Operational efficiency involves improving the effectiveness of running a company, business generation is about generating more effective and streamlined growth.*

# Operational

**Arguably one of the most significant (and controversial) operational impacts of AI is on workforce planning. Dwight Mihalicz offers a perspective on the role of AI in your workforce:**

## **The Complexity of Work**

*The starting point is that work can be classified by complexity.*

*Entry-level, salaried work is procedural work. It is work that can typically be done on a day-to-day basis. The work is either documented in a procedure, or could be documented in a procedure. This is Level 1 work.*

*Think technical work: taxi driver, laborer, mechanic, baker, assembler, bookkeeper, brick layer, carpenter, call center operator, receptionist, and so on. Of course, the work required by these jobs varies in complexity as well. For example, unskilled work such as day laborer also fits in this category. They all have the common denominator that the work follows a pattern, and can be documented in a procedure. The worker has a finite number of choices to successfully complete the work.*

*The number of choices can be large, but they are part of a decision tree. Think of that big old oak tree – it has many, many branches but there is a path to the end of each. There are a finite number of choices.*

*The next level of work is not concerned with following a procedure. It is concerned with creating and continuously improving procedures. The choices available to the worker are not finite – they are infinite. This is level 2 work.*

*Workers at this level must use their diagnostic capability to identify the information they will draw upon for decision-making, analyze this information, and use their judgment and creativity to find the best solution for their unique situation.*

*This work is carried out by managers of front-line workers and professionals: nurses, doctors, engineers, lawyers, management consultants, people-managers, teachers, architects, detectives, dentists.*

*The science of organization design describes up to eight levels of complexity of work, which can be found in the world's largest, most complex organizations. For our purposes, we need only think about the first two levels, which demonstrate the difference between procedural work with finite choices and diagnostic work with infinite choices.*

*Understanding the science of organization design is important to understanding how complexity of work can be used to create layers inside organizations.*

*To date, AI has made inroads into the work of front-line workers, in other words, work with finite choices that can be documented into a procedure.*

*Many assembly lines that had been staffed with workers doing mindless, repetitive work have been replaced by robots.*

*Much of the highly proceduralized work of bank tellers has been replaced by automated tellers and online banking.*

*Much of the work of data entry has been automated.*

*Are LLMs such as ChatGPT about to now take over work carried out by professionals? This is the big question before us. To answer this, we need to think about the capability of humans to do work.*

## **The Benefits of AI**

*Implemented properly, AI can be a great support.*

*It can replace many forms of proceduralized work. If the same thing needs to be done in a repetitive way in a stable environment, then the work can be automated. What robots are to assembly lines, AI can be to office work.*

*For example, bookkeeping tasks have been increasingly automated over the past few years. Take a picture of a receipt, upload it to your App, and the supplier and amount are entered into your bookkeeping software.*

*We will see increasing inroads into entry level work.*



*AI can also be extremely helpful to the professions.*

*Those repetitive, procedure-driven parts of a profession can and should be automated so that professional services are more readily available and inexpensive.*

*For example, most wills are already available online. But do not forget that the professional expertise of a lawyer is needed for complex estates when there is no straight forward solution.*

*AI diagnostics can help people understand their medical symptoms. Some can be self-treated, but some need the diagnostic expertise of a medical professional if the array of symptoms is not straight forward.*

*An executive in an organization can use ChatGPT to write a draft letter that can then be edited and sent.*

*Any professional can benefit for ChatGPT's ability to answer almost any question. Instead of getting thousands of hits from Google that need to be reviewed and sorted, ChatGPT does the tedious work of sorting through the information for you and organizing it into human-sounding language.*

### **The Reality of AI**

*As powerful as these benefits are, the cold harsh reality is that AI cannot reason. It can imitate reasoning. It can sound human. It can emulate human speech.*

*It does this by analyzing patterns of thought as documented in words, predicting the most likely result based on the language model on which it has been trained, and feeding that back to us.*

*This can be immensely helpful. It can provide us with insights that are new to us. But it can never create something that is new to humanity.*

*AI can be used to replace highly proceduralized front line work. This has been done successfully for decades. Compare a picture of a car manufacturing assembly line from the 1970s to an assembly line today. Machines powered by AI can do a faster, higher-quality job that humans.*

*These machines are always operated and overseen by humans, because only humans can bring the reasoning, judgement and diagnostic capability required to deal with the unknown.*

*Search on YouTube for 'Hotdog Making Robot Fails.' Watch a robot attempt to make the perfect hotdog in a bun – except that the hot dog did not go into the bun - with hilarious results. Even a child would note that something was wrong, but the machine has no ability to use judgement. The result is a failure.*

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## **Dwight Mihalicz**

*President of Effective Managers ,  
TEC Canada Chair and AI Speaker*

# Business Generation



Shifting to business generation opportunities, AI has some incredibly promising uses in Sales and Marketing, particularly in digital marketing. **Thomas Young**, CEO of Intuitive Websites and Vistage/TEC Canada Speaker, shares his insight on some of the many ways AI can transform and streamline your outbound and generation strategies:

## Research Benefits and Risks

ChatGPT makes it easy to research the benefits and risks around your product and services, as well as those of the competitors in your industry.

ChatGPT sources its content from the entire internet, and what is the internet?

The internet is content! The most important content for most companies is content about the company and its products and services.

AI platforms can produce decisive answers from this aggregate and help you guide your messaging. This can drive the most impactful content. The aggregate AI platforms can draw from here includes customer reviews—positive reviews, negative reviews, five-star and one-star reviews, and everything in between—that paint a picture of your company or your competitors at a glance.

## Create First Draft Content and Make Revisions

Many marketing agencies and in-house departments just don't have enough writers on staff or the time to devote to creating all the necessary digital marketing content. For the agencies and in-house departments who do have writers at their disposal, these writers have a problem of their own:

*The first draft is always the hardest thing to write.*

*As a writer, the hardest thing about writing is overcoming the dreaded blank page. All of the grand ideas you have for a new blog post or eBook have a nasty tendency to fizzle out as soon as you sit down at your computer and bring up a brand new document in your word processor of choice.*

*ChatGPT can get you a first draft or an outline that staves off those blank white screen blues and gets you thinking right off the bat! Asking ChatGPT to write a piece of content you have an idea for might not produce exactly what you had in mind (not yet, anyway), but even if it doesn't get close, what it provides can be a great starting point to keep your creative juices flowing right from the get-go.*

*This makes ChatGPT an excellent tool for non-writers as well—just be careful not to post AI-generated content right on your website as-is without any sort of human touch, for reasons we'll get into later.*

## Optimize Your Website Content

*ChatGPT can be an especially useful tool for optimizing the content on your website that already exists. You can use ChatGPT for keyword research, identifying keywords and phrases that your audience is searching for, and then get suggestions on how you can incorporate those*

*keywords and phrases into your existing copy to boost search engine optimization.*

*ChatGPT can also help you take existing content and personalize it to better match prospective customers based on their interests and behaviors—in other words, your buyer personas.*

## Publish Your Content in Multiple Channels

*If you live for content marketing, making new content for your brand—blog posts, eBooks, whitepapers, and so on—is fun! Making the content to support your content—social media posts, email blasts, nurturing campaigns, and so on—is not quite so fun. But it is necessary because search algorithms will always care about your rankings and your brand's authority, which is determined not just by what is on your website but how the “ecosystem” of your brand is spread out across your website, social media posts, guest blogs on third-party industry websites, and so on.*

*With ChatGPT and other AI tools, you can take some of the tedious work out of repurposing content for social media, email, third-party websites, and other marketing channels. Feed ChatGPT content you've already written for new ideas on promoting your evergreen content and getting it seen by more eyes across wider audiences.*



## **Create Checklists, Apps, Tools, Calculators, and Mid-Funnel Content**

Interactive tools and gated content on your website are a great way to move people through the buyer's funnel and become qualified leads, and—guess what?—ChatGPT is great at helping you create those things as well. From checklists and calculators to widgets and other tools and apps to ideas for webinar content, you can use ChatGPT to generate materials for mid-funnel content that enable you to capture emails and build your list of qualified leads.

### **Great Marketing Questions for AI Chat**

Getting the most out of AI platforms like ChatGPT is all about asking the right questions.

A few of the questions you definitely want to ask are:

- What are the benefits of \_\_\_\_?
- What are the risks of \_\_\_\_?
- Can you write an interactive tool for \_\_\_\_?
- How does a company get success in \_\_\_\_?
- What is the ROI of \_\_\_\_?
- What are people searching for, and what are the keywords in \_\_\_\_?

Just put your company name, products, or services into the blank space in each question.

The results you get with AI chat tools are only as good as the questions you ask. Keep in mind your follow-up clarifying questions also drive the best results.

## **AI as a New Sales Funnel Tool**

AI is a life-enhancement technology to make humans better. This includes access to information and the ability to communicate faster and more effectively.

With AI platforms on your side, you also have a new tool for encouraging collaboration between marketing and sales, building connections with customers, optimizing conversion rates, tracking the movement of qualified leads through your sales funnel, and kickstarting the research process with your prospects.

### **Improving Sales Performance**

Using AI chat platforms encourages a radical shift in your mindset toward sales and marketing alignment. ChatGPT is an incredible tool for getting outside of your own head and into your customer's head—helping you ask and answer the questions your customer asks rather than putting the cart before the horse and hoping your customers ask the questions you want them to ask.

This is the key to producing effective content that really matters— that answers your customer's questions, maps to their journey, and demonstrates the benefits they're looking to get from your products and services. And more effective content, as we know from our years and years of understanding search engine optimization (SEO), is the key to getting found and improving your sales performance and marketing results.

### **Performing Competitive Research**

There are plenty of questions you can ask ChatGPT about your competitors to hone in and improve marketing and sales strategies that set your brand apart.

There may be some limitations when it comes to identifying competition in your industry, but there is much you can learn, and this will only expand over time as AI tools get more robust.

What are the strengths of your competitors' products or services? What marketing strategies do they use? ChatGPT can analyze your competitors' websites and social media pages to identify trends in their marketing strategies, product offerings, and pricing strategies that you might have otherwise missed on your own.

ChatGPT can also go through your competitors' customer reviews and feedback just like it can go through your own. In addition to asking ChatGPT what your customers think of your brand, you can also ask what your competitors' customers think of theirs, enabling you to better identify areas where your competitors are excelling or falling short in the eyes of their customers.

Finally, ChatGPT can provide you with high-level industry insights to identify trends, market conditions, and emerging technologies that your competitors may be using to their advantage.

Knowing your competitors is very powerful and essential when developing digital marketing strategies. AI is at the forefront of gaining those key insights.

### **Getting Found and Content Marketing**

At this point in time, ChatGPT and other AI platforms are not often used to find products and services like Google.

How this will happen in the future is not known. However, it only makes sense that over time AI research and content responses will mention companies, products, and services.

There is a high possibility your brand will be mentioned in answers that AI platforms provide about your industry.

This is a version of "AI content optimization" similar to SEO and getting found in Google. This trend will only accelerate over time.

*Go to ChatGPT and type in your company name and start a dialogue. The results may surprise you.*

*Over a hundred million people around the world are using ChatGPT, and the numbers are only growing. How will your brand get found by AI? How will AI become a preferred means of answering questions about companies over search engines?*

*ChatGPT reports their platform is a language model not designed to highlight brands, but this will change, and your brand could very well be highlighted to thousands of users in the near future.*

*Your brand's chances of getting mentioned by AI platforms and getting found by people using these platforms currently depend on the experience, expertise, authority, and trust (EEAT) your online presence has built up, just like it does for SEO. In other words, how well your website ranks and performs, how good your content and your content marketing strategies are, and so on, will drive your brand's reach in AI-based content.*


*It's not just SEO content anymore, but also more expansive content like eBooks, whitepapers, and webinars. Your entire content marketing strategy will help you get ahead of your competitors in AI research.*

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## **Thomas Young**

*Founder and CEO, Intuitive Websites  
TEC Canada and Vistage Speaker*





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# AI Risks & Limitations

*AI, for all its benefits, also poses a variety of risks should it be adopted too quickly without sufficient thought or planning. Many of the risks and limitations associated with AI fall around ethical dilemmas, regulation, reliance, and talent gaps.*



# AI Ethics

***Much of the coming policy, regulation, and use of AI will stem from a mutually agreed understanding around its ethics. Here, Dwight Mihalicz offers a perspective of the ethical dilemmas facing the adoption of AI:***

## **The Dangers of AI**

*You have a problem. You describe it to ChatGPT and ask for a solution. The solution sounds surprisingly good. So, you implement it. All good, right?*

*Maybe yes. But maybe not.*

*The danger comes in what ChatGPT did not say.*

*The answer to the problem will reflect the typical response. Will that typical response apply in your unique situation?*

*More to the point, have you correctly described the problem you are facing, or have you described the symptoms of a problem?*

*This is what root cause analysis is all about. Rather than deal with solving the symptoms, the analysis needs to take into account what is happening beneath the surface to identify causal issues.*

*This is analogous to a person with a fever taking an aspirin. The aspirin will reduce the fever. But has the underlying cause been treated? If not, the fever will return.*

## **The Ethics of AI**

*We need to understand what these tools are and how they can be used. There are tremendous efficiencies that can be gained from the use of this technology.*

*The real fear we should have is about how this extremely powerful technology may be misused.*

*Recently I saw a video where the videographer showed highlights of a lengthy conversation where the ChatBot begin to threaten the author. Remember – a ChatBot cannot produce anything new. It can only reflect that which has been said by humans and that is reflected in the training material. As much as those who select the training material try to keep it clean and helpful, it is bound to reflect to some degree the dark side of humanity.*

*If an author can trigger a threat response from a ChatBot, it is because the ChatBot in its algorithm identified the most likely response to “those words” (an aggravating statement) was “these words” (a threat). The ChatBot is incapable of creating a new thought – it can only generate the most likely response that a human would give based on the training material.*

*Going forward, we as a society need to think carefully about this good vs bad argument.*

*The good or bad of the use of this tool comes down to the ethics of the person using the tool.*

*People are already using information in unethical ways. I have seen many cases where a politician’s interview has been edited to completely alter the meaning. Software exists to put words into someone’s mouth that have never been said.*

*The increasing power of AI will give more ability to these bad actors to do things they should not.*

*We should be worried about ethics in society. We should be able to trust people to tell the truth. We should expect people to do the honorable thing.*

*So yes, we should invest in governance systems around the ethics of conduct. But this is a broader issue than the governance of AI.*

*AI can be a great force for good and can greatly increase productivity and access.*

*It is also one of the factors that is driving the increasing pace of change. It will contribute to increased disruption. This is neither good nor evil. It is the result of new and better ways of doing things.*

*AI can also be an agent for evil if not used ethically. We can be sure that some will use these tools unethically. Therefore, we must have governance frameworks for the ethical use of AI.*

*Finally, we must recognize that it is humanity that has the power of using AI for good or evil. AI has no capability of reason, of using judgment, for creativity or for new thinking on any level. It is not likely to ever have those capabilities no matter how well they are emulated through increasingly sophisticated algorithms.*

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## **Dwight Mihalicz**

*President of Effective Managers ,  
TEC Canada Chair and AI Speaker*



# Regulation

*With AI's advances, the emergence of regulatory measures aimed at addressing the risks associated with AI, such as misinformation, scams, plagiarism, and privacy concerns, may potentially limit its widespread use, impacting businesses that have built systems and processes around AI implementation.*

## Challenges and Considerations for AI Integration

As AI rolls out across the globe, governing bodies and regulators are quickly trying to react to AI's rapid development. Despite its proposed good, AI also poses a lot of dangers, as reports of misinformation, sophisticated scamming, plagiarism, and privacy issues make an appearance around the world<sup>7</sup>. What does this mean for the business owner?

## Navigating the Regulatory Landscape

As policy continues to investigate and adapt to the new threats posed by AI, its use may become more limited as time goes on. These emergent restrictions, that may take the shape of data collection limitations, IP and copy-

right validation, and transparency<sup>8</sup>, have the potential to reduce the efficiencies offered by AI, which could upset or revert new systems and processes built around AI implementation. This can be expensive and time consuming to rework – especially as the policy landscape evolves and changes (which is likely).

To mitigate this risk, it is important to allocate resources around monitoring and maneuvering the legal developments in AI in a suitable proportion to the magnitude of investment or systems integration you plan on making – as well as in coordination with the timing of your implementation<sup>9</sup>.

## International Operations Risk

This regulation challenge compounds when operations are international. Mirroring the challenges faced by many multinational corporations due to differing international regulations around data collection and privacy (especially relating to social media), companies who have an international presence will likely have to face varying, or even contradicting, regulatory forces implemented by different governments – magnifying the potential for processes and systems problems<sup>8</sup>. For this reason, extra care must be taken when planning out mass integrations of AI in cross-border operations. Contending rules must be used to plan for contingencies.

# Reliance

*Much of the coming policy, regulation, and use of AI will stem from a mutually agreed understanding around its ethics. Here, Dwight Mihalicz offers a perspective of the ethical dilemmas facing the adoption of AI:*

## Macroeconomic Risks

Outside of policy and regulation, there are other macroeconomic and market factors that pose a risk of overreliance on AI.

The first issue is the outlook of the tech sector, particularly around investment and production. At the heart of both issues is the demographic and global economic conditions that are influencing them. The world demography is aging, meaning more and more workers are approaching retirement<sup>10, 11</sup>. This has two important implications for the tech sector – there is shrinking capital in the system, and therefore shrinking investment, and a reduction in workers (generally in their 20s and 30s) to generate the research and engineering necessary to continue tech innovations at the pace of the last decade<sup>12</sup>. This combined with international manufacturing shortages and shipping challenges (due to inflation and similar demographic challenges), and the outlook of

the tech industry over the next several years is looking stagnated at best<sup>13, 14</sup>. This has direct implications for the AI Boom – as overhyped promises and a vision of General AI are pushed farther and farther into the future, and a flood of startups begin to saturate the market, the risk of an industry exodus could lie on the horizon.

## Unit Economic Risks

Not only do the macroeconomics pose a risk to the sustainability of the AI wave, but so do the unit economics. Major tech investor, Roger McNamee, warns that current AI technology was developed during a period of very low interest rates, justifying the low-cost price model of its applications. According to McNamee, with the new climate of major inflation and rising interest rates, the unit economics of AI programs such as ChatGPT and Bard do not work, comparing the “hype” and “aura of inevitability” generated by AI tech companies to that of the Crypto Boom – with a prediction of similar results<sup>15</sup>.

With these economic threats looming over AI's future, overreliance on operational or revenue generation integration with AI tools that run the risk of becoming defunct can become disastrously expensive, and disruptive to business operations (not to mention the cost of employee frustrations with broken systems). In this way, it is important to be thorough when researching the providers from whom to source your AI software<sup>9</sup>. It is best to seek tools from large, stable software providers with sustainable business models, such as Microsoft. While these are likely more expensive options, the risk of collapse and disruption is reduced. It is also important to have a back-up plan in place. Ensure you do not stretch your workforce too thin should you need to revert to more human-produced tasks and create backup stores of information so valuable data is not lost.



# Talent Gaps

*Alongside the risks of AI implementation, the perpetuation of talent gaps poses a significant challenge, particularly in the context of Canada's shrinking workforce and tight labour market, emphasizing the need for knowledge transfer programs and talent pipelines to address gaps left by retiring employees.*

## Perpetuating the Gap

*The final major risk associated with AI is the perpetuation of talent gaps. Canada's emerging demographic challenges and a shrinking workforce means knowledge transfer programs and talent pipelines are pivotal in managing the gaps left by increasing retirements<sup>16</sup>. Technology can play a key role in maintaining business output with a smaller workforce; however, a major blind spot in reflexively replacing human jobs with technology is the reduction or elimination of a sufficient talent pipeline for diagnostic, managerial and leadership positions – those problem-solving roles that AI cannot replace now or in the foreseeable future.*

*Often, the widespread human-to-technology transitions for procedural work seen in the headlines are by large, multinational corporations that are generally more resilient to volatility in the labour market. When dealing with the management of an SME, however, gaps in a talent pipeline can be dangerous in the face of a shrinking and more selective workforce<sup>17</sup>. As such, care should be taken when deciding where and how much of your human capital to replace with technology. Reduction without intention or vision can leave your business vulnerable to massive gaps in leadership or diagnostic decision-makers down the line. However, keeping an abundance of unnecessary or costly procedural positions (with the hope some will turn into level 2 workers) is not necessarily the answer to maintaining a solid talent pipeline.*

## Nurturing Talent

*AI and automated procedural work, when implemented, requires supervision and management; therefore, where opportunities for supplanting roles with technology exist, look to shift your human capital to overseeing and managing these technologies. Ensuring a robust talent pipeline here can shelter your organization against the risks of knowledge or positional holes from early or mass retirements and turnover of high value employees.*

*An effective approach to establishing a level 2 worker pipeline is creating internal employee rotational and/or leadership development programs, which can add intention to your workforce planning, motivate high-value workers, and reduce redundant procedural work<sup>18</sup>.*



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# Create Your AI Map

*As we conclude our exploration of AI, it is clear there are an abundance of opportunities that exist within the wellspring of AI tools now available. As seen, these opportunities are not without their risks. Before jumping head-first into the AI jungle, be sure to give yourself a map to orient your business and guide your way by doing the following exercises:*



## 1. Identify your needs

Separate your diagnostic needs from your procedural needs and consider how these needs may fluctuate as your business grows.

## 2. Plan your level 1 workforce

Take inventory of your level 1 positions. Are there any redundancies? Any efficiencies or output that could be improved with AI tools? If you use level 1 positions as a pipeline for leadership, will this need to change?

## 3. Plan your level 2 and higher workforce

Take inventory of your level 2 and higher positions. Which roles are burdened with repetitive work? Can this be removed or lessened with AI tools? Can level 2 positions be seen as the pipeline for leadership where level 1 roles have disappeared? Can some level 2 positions be made redundant with the increased efficiencies of all level 2 work?

## 4. Establish a knowledge/leadership pipeline

Which roles are the most likely entry-level positions from which you develop managers, decision makers and leaders? Can you implement or enhance employee rotational programs to develop problem-solvers? Can you create a leadership development program to create intentionality around advancement?

## 5. Create cyborgs

After understanding your needs and planning your workforce, start planning ways to turn your employees into “cyborgs” by upskilling, reskilling, or transitioning their roles to work more closely with AI and increase their output. Not only will this help drive greater company productivity, but it can actually help the economic inflationary landscape<sup>19</sup>.

## 6. Do your research

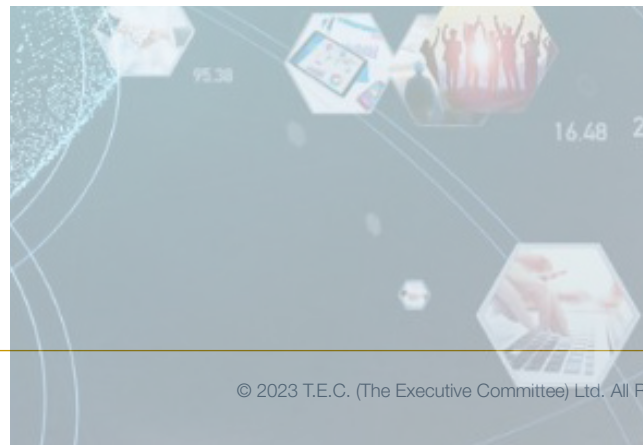
Do your research about AI, and about AI companies, and continually monitor the policy environment. By staying on top of the latest trends, developments, and uses for AI, you can limit your exposure to risk. If you don't have time, ensure you have at least one dedicated role staying on top of developments.

Not sure what AI tools to implement? A comprehensive database of AI tools by function can be found at: <https://www.futuretools.io/>

## 7. Plan integration contingencies

Ensure appropriate backups of information, processes, and human resources are in place in case things fall apart.

To best prepare yourself for navigating the new era of AI, write your map down and bring it to your leadership team, advisors, coach, or peer group. Thoroughly discuss the different aspects and use your collective power to weigh the various opportunities and unexpected consequences in your “theatre of imagination”. Finally, incorporate your new map into your strategic planning for the year. However, remember the AI landscape is constantly evolving, so this will be a living plan that requires constant diligence in maintaining – but with game-changing rewards for your business.



A white robotic hand is shown holding a metal spoon over a white bowl. The bowl contains several electronic components, including a blue integrated circuit (IC) labeled 'C14', a black component labeled 'Prt Soc', and other smaller components. The background is a light blue gradient with a faint grid pattern.

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# Contributors and Sources



# Contributors



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*Colten is a market researcher and data analyst at TEC Canada, known for his strong analytical skills, strategic thinking, and ability to translate complex data into actionable insights. With a background in marketing and a deep understanding of data analysis, Colten leverages his expertise to identify trends, develop insights, and optimize marketing strategies to maximize ROI. He is a creative problem solver with a proven track record of success in driving revenue growth, enhancing brand awareness, and improving customer engagement.*



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*While Artificial Narrow Intelligence is the widespread technology currently available, the concept of Artificial General Intelligence is the one that generates the most attention – producing both existential fear and revelatory excitement. Despite the rapid advancement of current AI tools, and the often-unexpected sophistication and novelty of results, AI is likely still very far from the type of general intelligence that will rival humans. Dwight Mihalicz, President of Effective Managers and TEC Canada Chair and AI Speaker, sums up why fears of AI posing an intellectual threat to humanity are misplaced.*



**Thomas Young**

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TEC Canada and Vistage Speaker*

*Thomas Young is an award winning TEC Canada and Vistage speaker. He has presented to hundreds of groups over the past 20 years. He is the founder and CEO of Intuitive Websites, a digital marketing agency based in Denver Colorado and the author of three books, his most recent is “Sales and Marketing Alignment.”*

*Creator of  
[“A Marketing Revolution: AI and the Future of Digital Marketing”](#)*

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