

ChatGPT: The Present and Future of Generative AI for Enterprises

Beyond the hype: What can it do for you?

Info-Tech Research Group Inc. is a global leader in providing IT research and advice. Info-Tech's products and services combine actionable insight and relevant advice with ready-to-use tools and templates that cover the full spectrum of IT concerns.
© 1997-2022 Info-Tech Research Group Inc.

INFO~TECH
RESEARCH GROUP

What is ChatGPT?

ChatGPT is a generative AI tool developed by [OpenAI](#), a non-profit founded by Silicon Valley titans including Elon Musk and Sam Altman. It is designed to interact with users in a way that mimics human dialogue. The tool became available via a research release on November 30, 2022 and was an immediate hit – within a week it attracted [more than a million users](#).

Functionally, ChatGPT is designed to answer questions. It is, of course, far from the first chatbot. The concept has existed for decades, with early examples including SmarterChild, developed by [Colloquis](#) (later acquired by Microsoft) and a host of other generative AI tools that facilitate [content creation](#), provide [support to customers](#), and even allow for [natural language search](#). ChatGPT takes things to the next level, however. It can write poetry, debug code, and even generate passable marketing copy.

How does it work?

OpenAI [trained the model](#) using supervised learning and reinforcement learning. Essentially, a human demonstrated desired behavior and supervised the output produced by the model, reinforcing the learning by ranking outputs based on their quality. In rinse, lather, and repeat fashion, this produced a set of high-quality outputs that catered to the preferences of the human labelers. This is a process similar to those used in other iterations of the Generative Pretrained Transformer Model (ChatGPT represents version 3.5 of this model).

OpenAI trained the model in partnership with Microsoft and made [extensive use](#) of the Azure cloud's supercomputing infrastructure in training the model.

Criticisms and verdict

The tool is undoubtedly very powerful, but in the short time it has been available it has attracted criticism for its accuracy (Stack Overflow banned answers generated by ChatGPT, [claiming](#) they're often wrong but look accurate), [perceived bias](#), and even [proposing torture](#). The model finished training in early 2022 and does not have access to the internet or other external sources of information.

So, is ChatGPT a gimmick? Is it "[dumber than you think](#)" (as *The Atlantic* put it) or will it "[kill search](#)," upending the web as we know it. Who better to ask than ChatGPT itself:

"I am not a gimmick, but rather a tool that can be used in a variety of applications to generate natural language text. Whether or not I am valuable depends on how you plan to use me and what your goals are."

In this case, it's probably exactly right. Three use cases, including product development, customer service, and enterprise support present incredibly compelling use cases – provided you manage your expectations. Those cases are reviewed here.

Why is ChatGPT special?

We've had Siri for years. Why the hype?

- Unlike previous iterations of the GPT model (the most recent being 3.0), ChatGPT (3.5) is [specifically designed](#) to serve a chatbot function. Compared to similar technology, ChatGPT is adept at engaging in dialogue with its users and can respond to feedback, seek clarification, and iterate on its answers based on how users respond to them. Try a complicated, multistep request with Siri or Alexa and you'll see why ChatGPT is getting as much attention as it is. Other services, like [Jasper](#) or [ServiceNow's Virtual Agent](#), have more specific use cases (content creation and technical support workflows respectively) and are generally focused less on the conversational aspect.
- GPT 3.0, the model that undergirds ChatGPT, has 175 billion parameters (according to [one source](#), though the tool itself claims that the number is not public), making it an extremely versatile tool. Users can have it write poems about fudge, hypothesize what a world where commercial airliners were replaced by dirigibles would look like, or even write marketing copy for a report on the future of generative AI – all of which make it attractive for curious internet users.
- Like its sister model, Dall-E 2, ChatGPT is **generative AI**, and unlike your standard chatbot, which excels at executing basic workflows, ChatGPT can create new content based on inputs. There have been other examples of this type of AI in the past, but few are as accessible or impressive as ChatGPT.

“GPT, or Generative Pretrained Transformer, is a type of language model that uses deep learning to generate text. It is trained on a large amount of data and can generate text that is similar to human-written text in terms of style, coherence, and grammatical correctness. GPT can be used for a variety of tasks, such as language translation, summarization, and text generation. It is particularly useful for generating long pieces of text, such as articles or books, because it can maintain coherence and consistency over extended periods of time.”

– ChatGPT, discussing itself

What can it do?

Why bother?

Whether ChatGPT thinks it's a gimmick or not is irrelevant if there is no concrete use case. Fortunately for OpenAI and others operating in this space, real-world use cases for ChatGPT and other generative AI tools abound, including enterprise support, customer interaction, and new product development.



Enterprise support

ChatGPT or another conversational AI tool could serve as the backend of an information concierge that automates enterprise support. Chatbots already exist, but ChatGPT could be a game changer.



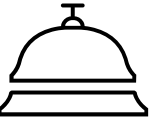
Customer interaction

Generative AI can answer queries more cheaply, intelligently direct users to appropriate products and services, and improve the customer journey so substantially as to be a differentiator.



Product development

Anyone who creates content can see their workflow supplemented with an intelligent solution like ChatGPT. Generating marketing copy, summarizing long documents, and even authoring communications represent great business applications for generative AI.



Use case: Enterprise support

Challenge

Despite the growth of the information economy, effective organization of information remains elusive. Nearly [half of employees](#) find it difficult to locate information necessary to do their jobs. Users often turn to their human colleagues because – despite the hype – chatbots aren't there yet: an overwhelming majority of people [report](#) preferring to deal with humans.

How can enterprises meet user needs in a cost-effective way?

Solution

If trained on an appropriate data set, ChatGPT could serve as an information concierge, answering basic user questions, directing them to proper sources of information by parsing detailed requests and turning over relevant details. While it is [not currently available](#) in the OpenAI API, it is not difficult to picture a future where it is made available as a plugin.

For direct service support, a chat-based interface could reduce the human effort required to resolve most incidents and reduce the overall cost of support.

Results

Better organization of information, combined with reduced manual effort, could increase both efficiency and user satisfaction in a way that is not currently feasible with most automated solutions. As ChatGPT grows and improves – and as it is trained on more specific information – enterprises will be able to leverage it or similar tools to provide experiences that are acceptable to end users.



Use case: Customer interaction

Challenge

Anyone who has dealt with an IVR knows how frustrating the current iteration of an automated workflow can be. Listening to a list of options and selecting the one that seems most appropriate isn't always easy, and it doesn't always produce a positive experience. Same goes for many existing chatbots and search functions – turning up a list of semi-relevant results and sorting through them is rarely the UX that customers crave. Poor customer service experiences drive down sales and can impact an organization's reputation.

Solution

Introducing a conversational layer powered by a service like ChatGPT reduces the friction. Instead of searching a website for information, a customer could ask “are the shoes made of real leather” or “when does your Black Friday sale start.” This technology removes the need for the customer to sift through the information and extract relevant details and instead provides a direct, speedy resolution to an inquiry that is more convenient for both customers and the organization providing the service.

Results

As ComputerWorld put it, ChatGPT is a chatbot “[worth talking to](#).” Successful deployment of generative AI in a customer service capacity could drive up service quality and customer satisfaction, drive down costs by saving agents time, as a greater number of inquiries are handled in an automated fashion, and it could improve sales via better issue matching and higher quality responses from customers. Gone are the days when a chatbot analyzes key words and guesses what link you're looking for. Conversation is here and it is poised to change things.



Use case: Product development

Challenge

Content may be king but that's at least in part due to how difficult it can be to produce a steady stream of it. Copywriters must meticulously describe events, avoiding cliches while writing gripping prose; designers use their skills to realize their ideas as visual works of art; and developers spend hours coding and debugging. These things take time, and – to use one of the cliches copywriters should avoid – time is money.

Solution

Generative AI like ChatGPT and its related models, like the Dall-E 2 image generator, can create new content (hence the “generative” title), saving designers time. Instead of tasking a human reporter with a mundane task like [summarizing baseball games](#) or tasking a graphic designer with drawing a dancing avocado for a vegan restaurant, the reporter can focus on implications and the designer can create a theme for the menu.



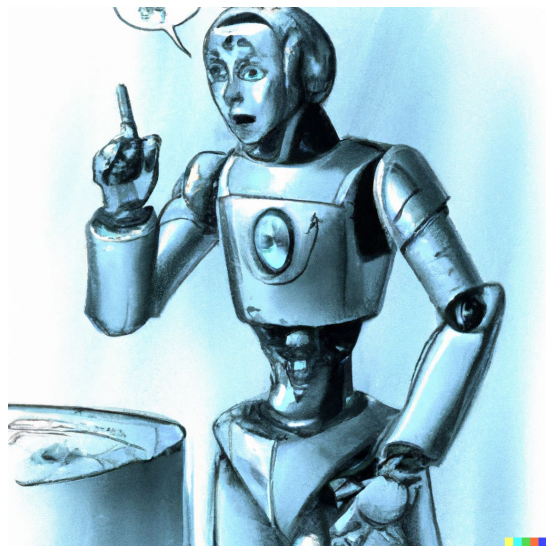
Dall-E 2's take on a dancing Avocado

Results

At all levels, from enterprises that send corporate communications to thousands of employees, to ad agencies that pump out marketing copy, all the way to graphic designers who create restaurant menus, generative AI will serve as a force multiplier. Instead of spending hours or days on simple projects, the AI can produce first drafts. Instead of wasting valuable development time on basic feature requests, ChatGPT can write or debug code, making developers more efficient. AI can literally draw the first picture, and we will all be more productive for it.

Recommendations

How can you best incorporate ChatGPT and other generative AI products into your service catalog?



Dall-E 2's take on a robot providing advice.

1

ChatGPT and other **generative AI solutions are tools – nothing more**. Like any piece of software, computer hardware, or any other kind of machinery, there are things that this technology is especially good at and others that it is not especially useful for. Understand your business processes and highlight opportunities to reduce friction, increase the quality of the service experience, and drive efficiency. See the next slide for an activity that will help you conduct this activity.

2

Though it may be appealing to dive right into the AI end game, **start with augmentation**. Generative AI is an incredible technology, but it's not self-sufficient. It still needs guidance and feedback from human curators. As you review business processes, look for those that generative AI can supplement, perhaps by producing first drafts of press releases to be reviewed by a human editor, or by writing code that will be reviewed by a senior developer before it is pushed to production. As you augment your production capabilities, you should also expect to incur the cost of augmenting your supervisory capabilities.

3

Talk to your lawyer. Chatbots that manage workflows aren't complicated, but a bot that will interact with users and customers and produce content could expose you to legal risk, perhaps by [lifting content from other sources](#), or – in the case of generative AI – producing [artificial nude pictures of real people](#), which could be illegal. With new frontiers come new potential problems, so it's a good idea to ask these questions.

What's the next step for IT?

Refine your use case for generative AI.

1. Review capability map for high-value processes

- a) Identify your capabilities that support key business processes.
- b) Build a heatmap, highlighting areas where a generative AI solution could be effective (**repeatable, generative, valuable** – framework; see next slide).

2. Conduct a basic cost-benefit analysis for the tech

- a) Of the most appealing processes/capabilities, select one or a small number that are most suitable for generative AI intervention.
- b) Outline a high-level business case – how would generative AI reduce manual work? What would its output look like? What would the expected benefit be? What are the drawbacks? How much would it cost?

3. Explore the vendor landscape

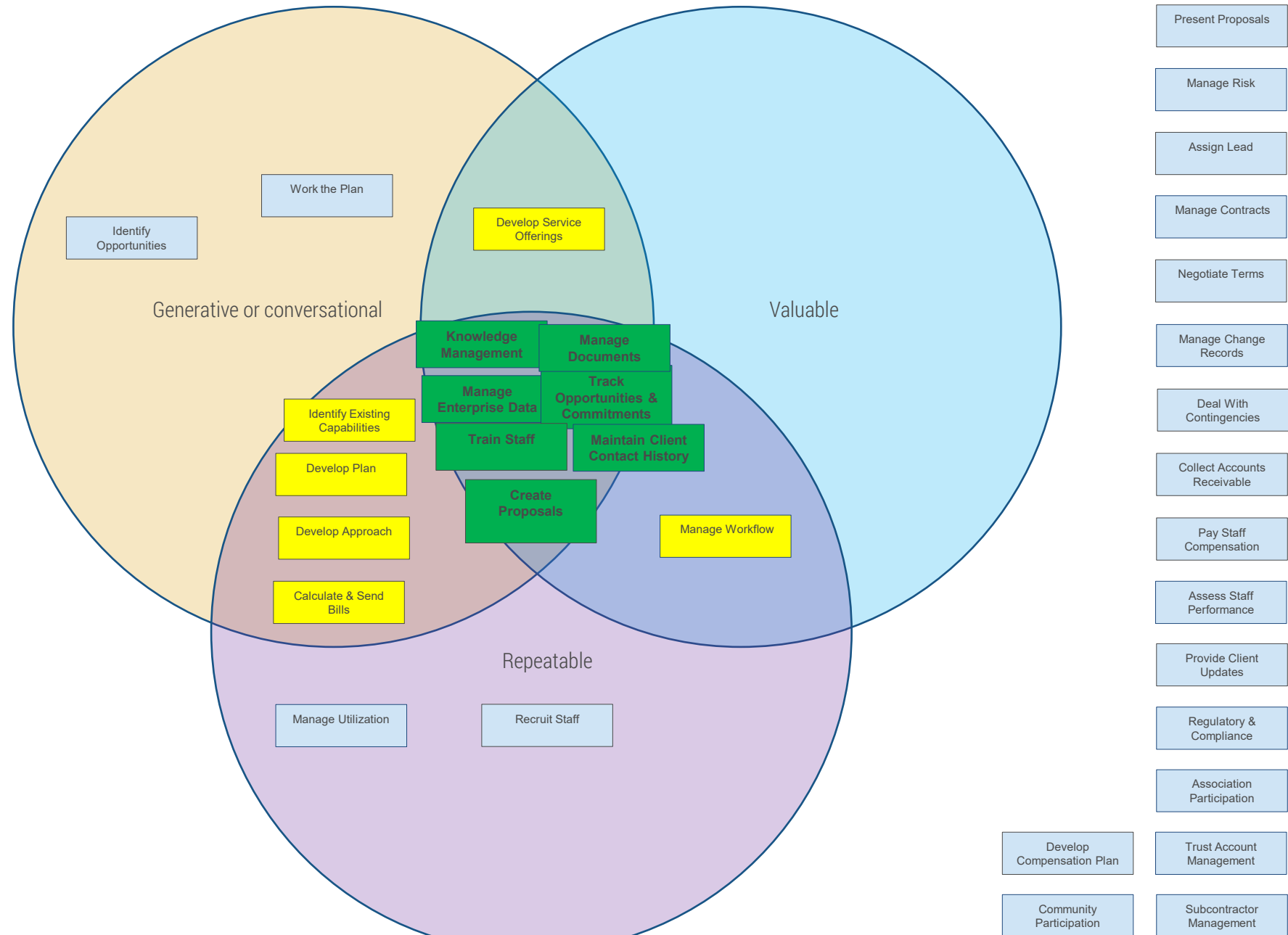
- a) Identify the table stakes – what does your AI solution need to do? What solutions does it need to integrate with?
- b) Review options available on the market. Many tools exist but are not "products." ChatGPT is available as a research preview, while other tools, like Jasper, Rytr, and the various ITSM chatbots, can all be purchased for enterprise use.
- c) Compare your requirements to your options, select, and begin piloting.

Applying the framework

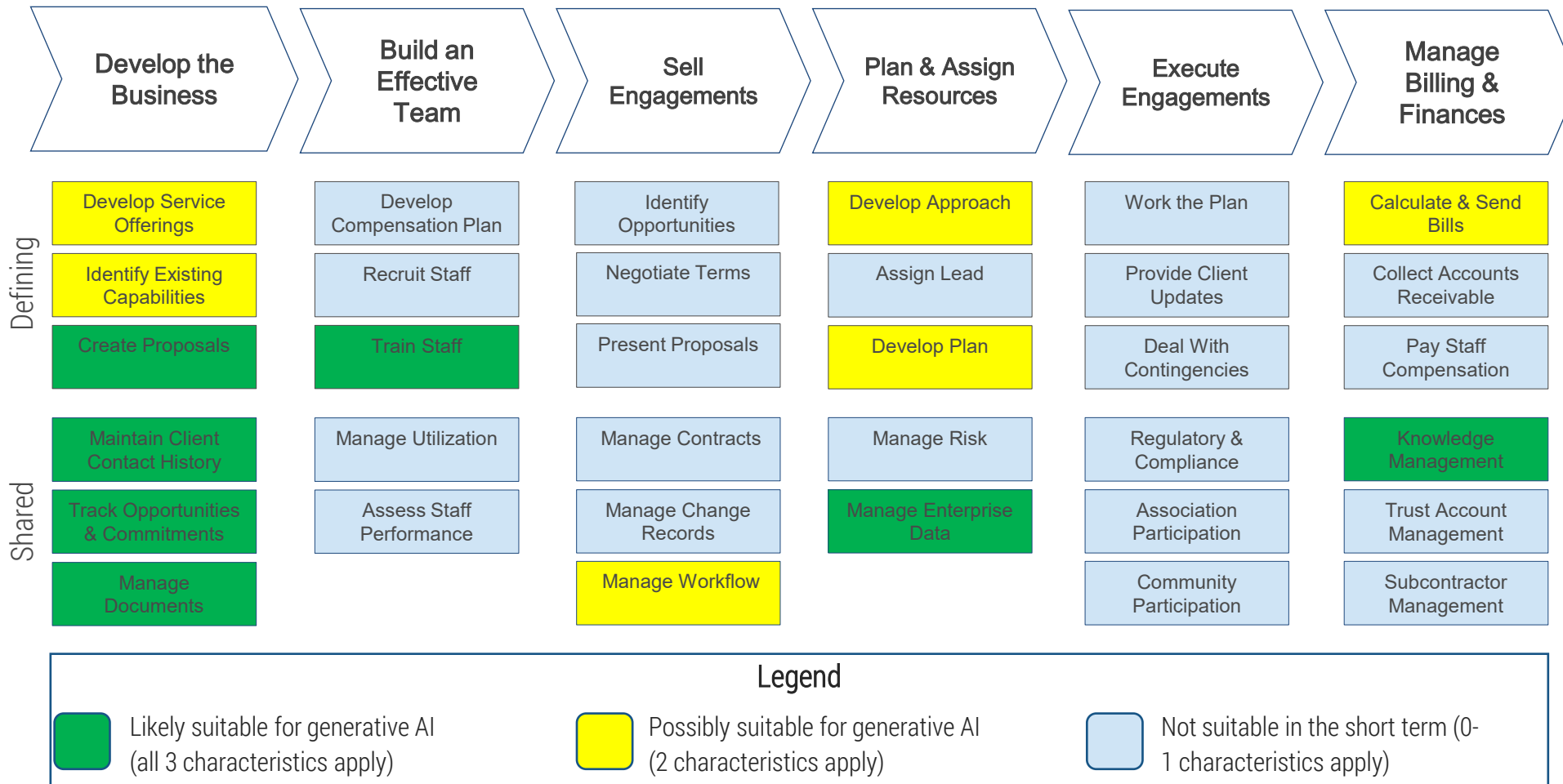
Generative or conversational: Is this the sort of work a generative AI can do? Does it involve conversation or the creation of new material? AI should probably not make decisions at this stage, but it can present or sort information and answer questions.

Valuable: The capabilities of the generative AI would meaningfully reduce manual effort in completing a task. Tasks that require extensive permissions, highly specific or contextual expertise, or could expose the organization to risk would not generally fall into this category.

Repeatable: Is the task repeatable such that it occurs frequently enough to train a model and recoup initial investment?



Capability map: Professional services



This is an example of a business capability map that applies to a professional services firm. Generative AI as it currently exists and is likely to exist for the foreseeable future, would be suitable for information management tasks, including making it easier for consultants to query shared knowledge repositories, access documents, and the management of enterprise data as an information concierge. It may also be useful in creating proposals and in training staff via direct conversation. It is less likely to be useful in workflow management and in developing new services, though these are not far-fetched cases.

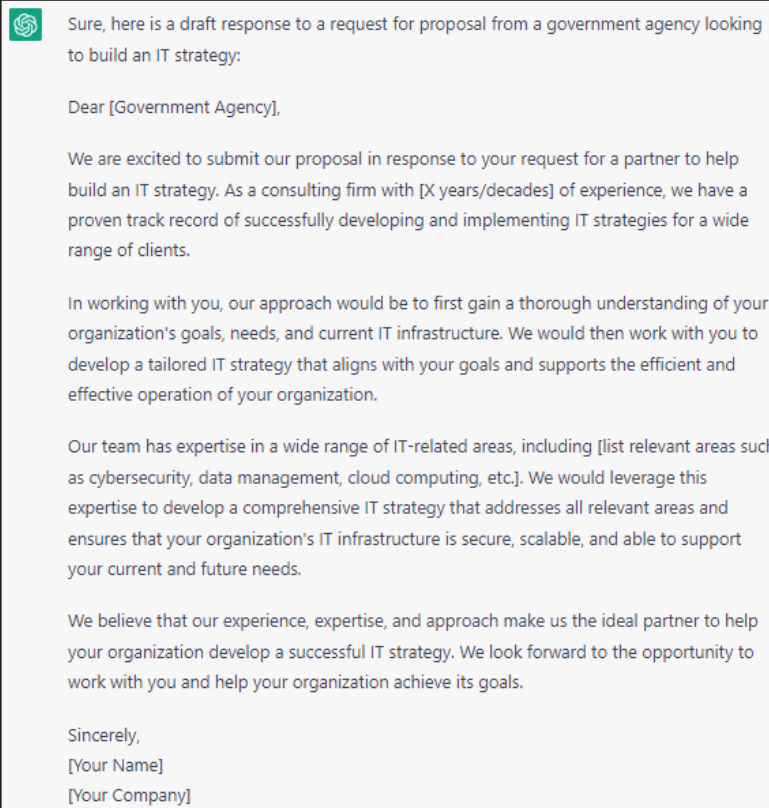
Review use cases: Proposal creation

Description

Professional services firms respond to requests for proposal and create proposals for new work regularly. A generative AI could be used to automate parts of the initial proposal creation, including a cover letter, while staff focus on pricing, resourcing, and managing the relationship with the potential client. If the AI can be trained using organization-specific data, the potential quality of the resulting artifacts could be improved and allow the AI to assume a greater role in the proposal creation process.

There are several tools on the market today that can serve this function, including Jasper, Rytr, and even ChatGPT, though the latter has not been released and is not officially “on the market.”

- **Specific use and description of output:** Generative AI could be used to author components of a proposal in place of a client-facing resource who might otherwise be better deployed in a billable capacity.
- **Expected benefit:** Fewer person-hours devoted to part of the toil associated with creating proposal documents, which must often answer specific questions and provide details as outlined by requesters. Generative AI is especially useful for this type of work.
- **Possible drawbacks:** The technology is new and untested, sometimes provides the wrong information, and would likely need human review before going in front of a prospective client.
- **Cost:** Pricing varies by vendor, but generally users are billed by the word or pay a small monthly fee, or a combination of the two. If the service in question is procured as a SaaS with limited custom training, it would likely cost several hundred dollars annually. A custom-trained enterprise application would be much more expensive.



The screenshot shows a draft email response from ChatGPT. It begins with a greeting to a government agency, followed by an expression of excitement to submit a proposal. The text describes the company's experience and track record in developing IT strategies. It outlines a proposed approach of first understanding the client's goals and then developing a tailored IT strategy. The response also mentions the team's expertise in various IT-related areas and expresses confidence in being the ideal partner for the client's needs. The email concludes with a sign-off and placeholders for the sender's name and company.

ChatGPT's proposed response to a request for proposal.

Explore the vendor landscape



Once you understand your desired future state and broad requirements, review the market space. SoftwareReviews is an excellent resource for this type of research (pictured above is the Data Quadrant for chatbot solutions). Begin your analysis using a selection methodology like the Rapid Application Selection Framework (pictured right).

Rapid Application Selection Framework (RASf)

| Awareness | Education & Discovery | Evaluation | Selection | Negotiation & Configuration |
|---|--|---|---|---|
| 1.1 Proactively Lead Technology Optimization & Prioritization | 2.1 Understand Marketplace Capabilities & Trends | 3.1 Gather & Prioritize Requirements & Establish Key Success Metrics | 4.1 Create a Weighted Vendor Selection Decision Model | 5.1 Initiate Price Negotiation With Top Two Vendors Selected |
| 1.2 Scope & Define the Selection Process for Each Selection Request Action | 2.2 Discover Alternative Solutions & Conduct Market Education | 3.2 Conduct a Data-Driven Comparison of Vendor Features & Capabilities | 4.2 Conduct Investigative Interviews Focused on Mission Critical Priorities With Top 2-4 Vendors | 5.2 Negotiate Contract Terms & Product Configuration |
| 1.3 Conduct an Accelerated Business Needs Assessment | 2.3 Evaluate Enterprise Architecture & Application Portfolio | 3.3 Narrow the Field to Four Top Contenders | 4.3 Validate Key Issues With Deep Technical Assessments, Trial Configuration & Reference Checks | 5.3 Finalize Budget Approval & Project Implementation Timeline |
| 1.4 Align Stakeholder Calendars to Reduce Elapsed Time & Asynchronous Evaluation | 2.4 Validate the Business Case | | | 5.4 Invest in Training & Onboarding Assistance |

Related Info-Tech Research



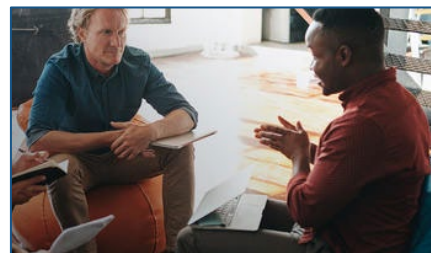
Tech Trends: 2023

7 tech trends that cover everything from the Metaverse to ESG analytics and reporting—along with generative AI, of course.



Build Your AI Governance Framework

Leverage Info-Tech's framework to effectively manage and govern your AI deployment.



Prepare for Cognitive Service Management

If you're intrigued by natural language processing as a tool for providing service management, this is the research for you.

Bibliography

"18 Startling Information Management Statistics." *M-Files*, n.d. Web.

Alba, Davey. "OpenAI Chatbot Spits Out Biased Musings, Despite Guardrails." *Bloomberg*, 8 Dec. 2022. Newsletter. Web.

Biddle, Sam. "The Internet's New Favorite AI Proposes Torturing Iranians and Surveilling Mosques." *The Intercept*, 8 Dec. 2022. Web.

Bogost, Ian. "ChatGPT Is Dumber Than You Think." *The Atlantic*, 7 Dec. 2022. Web.

Casey, Michael J. "ChatGPT Will Kill Search and Open a Path to Web3." *CoinDesk (Nasdaq)*, 9 Dec. 2022. Web.

"ChatGPT FAQ." *OpenAI*, n.d. Accessed 14 Dec. 2022.

"ChatGPT: Optimizing Language Models for Dialogue." *OpenAI*, 30 Nov. 2022. Web.

De Jesus, Cecille. "AI Will Begin Writing News Stories for Minor League Baseball Games." *Futurism*, 7 July 2016. Web.

Doyle, Krista. "What is ChatGPT and How is it Different from Jasper?" *Jasper*, 11 Dec. 2022. Web.

Elgan, Mike. "ChatGPT: Finally an AI chatbot worth talking to." *Computerworld*, 8 Dec. 2022. Web.

Endicott, Sean. "A week since launch, OpenAI's ChatGPT has shown the power, and horror, of AI." *Windows Central*, 7 Dec. 2022. Web.

Halpern, Ben. "The Difference Between ChatGPT and GPT-3." *Dev.to*, 5 Dec. 2022. Web.

Hughes, Alex. "ChatGPT: Everything you need to know about OpenAI's GPT-3 tool." *Science Focus*, 8 Dec. 2022. Web.

"Is the content Jasper writes original, or do I need to be worried about plagiarism?" *Jasper Bootcamp*, n.d. Web.

"Microsoft Acquires Colloquis to Enhance User Interactions Online." *Microsoft*, 12 Oct. 2006. Press Release. Web.

Mollman, Steve. "ChatGPT gained 1 million users in under a week. Here's why the AI chatbot is primed to disrupt search as we know it." *Fortune*, 8 Dec. 2022. Web.

Press, Gil. "AI Stats News: 86% Of Consumers Prefer Humans To Chatbots." *Forbes*, 2 Oct. 2019. Web.

Snow, Olivia. "'Magic Avatar' App Lensa Generated Nudes From My Childhood Photos." *Wired*, 7 Dec. 2022. Web.

"Temporary policy: ChatGPT is banned." *StackOverflow Meta*, 8 Dec. 2022. Web.

Bibliography continued

Products noted:

[Microsoft Power Virtual Agents](#)

[Jasper.AI](#)

[ServiceNow Virtual Agent](#)