

AI – Friend or Foe of Architects & Engineering Firms?

Architects & Engineers Team

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September 2023

What can be done with AI?

What is AI?

In the middle of 2023, another new topic has emerged; it is being touted as a potential threat to the very way that professional services are provided. Artificial Intelligence (AI). We are still very much in the infancy stages of the AI movement. There are many questions arising that need to be considered, as the practice of AI in the professional services world evolves. What is AI? What can be done with AI? What is the standard of care when using AI? Who owns what AI produces? What are other firms doing with AI?

In this document we hope to share, to the best of our professional opinion, knowledge, and belief, what some of these answers may be. We aim to highlight potential pitfalls which may arise with the use of AI. While many are fearing the potential threat AI presents to the livelihoods of all design professionals, others view AI as a robust tool boosting productivity and increasing the quality of client deliverables.

What is it and what is it not?

Let's start at the surface and define AI. Artificial Intelligence is "the ability of a computer, or a robot controlled by a computer, to perform tasks that usually require human intelligence and discernment." There are three "stages" of AI and how it may develop over time. Those stages are:

- **Artificial Narrow Intelligence (ANI) or Weak AI:** the stage of AI where machines can only perform a narrowly defined set of specific tools. There is no thinking ability.
- **Artificial General Intelligence (AGI) or Strong AI:** the stage of AI where machines can think and make decisions like humans. Currently, this does not yet exist.
- **Artificial Super Intelligence (ASI):** the stage of AI where computers surpass the capabilities of human intelligence. Currently, this does not yet exist.

Where we stand in the three stages outlined above may come as a surprise. The media, and other news outlets, lead us to believe that we are already in the AGI stage; however, AI is not currently capable of thinking or making decisions like a human. In the current form, AI is providing information based on a narrowly defined set of specifications. This data is pulled from many sources, and there is not a generation of new ideas or innovations. Most do not realize AI already is, and has been, part of our everyday lives for quite some time. For example, Siri, automatic vehicle shifting, social media algorithms, and other website chat bots are providing similar ANI outcomes. Even when writing this paper, Microsoft Word is attempting to predict what word or phrase will be typed next, to create a more efficient process.

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What are the known concerns?

There are already many questions this debate has sparked, and we will shed light on a few that we find most pertinent today:

- **AI Impact on the Standard of Care**

One big question is: “How will AI affect the Standard of Care?” Well, who better to ask about Standard of Care than ChatGPT? The following question was asked of ChatGPT 3.5:

“What is the Standard of Care for a design professional using artificial intelligence?”

The standard of care for a design professional using artificial intelligence (AI) involves several aspects that focus on ensuring ethical, legal, and efficient use of AI. Depending on the context and jurisdiction, these might include:

1. **Professional Knowledge**: Design professionals must fully understand AI technology they are using. They should stay updated on technology developments and familiarize themselves with the operations, limitations, and potential risks of the AI.
2. **Transparency**: The use of AI should be clear and transparent to all concerned stakeholders. Design professionals must fully clarify how AI is influencing any decisions, especially when these systems are being used to automate design processes or augment capabilities.
3. **Quality and Accuracy**: Designers must ensure that the AI tools they use are reliable and accurate. Any tool’s output should be carefully

reviewed and validated to avoid mis design due to AI errors or bias free.

4. **Data Privacy and Protection**: Design professionals should understand data protection laws and ensure the AI systems they use comply with them. Users’ personal and sensitive information must be protected and not shared without informed consent.

5. **Ethics**: The use of AI should follow ethical guidelines. For instance, AI should not be used to create deceptive or misleading designs. Any design decisions influenced by AI should be unbiased and free from discrimination.

6. **Inclusivity**: AI-powered design should respect diversity and inclusivity. It should not just serve a small, specific group of users but consider the wide range of human experiences and needs.

7. **Ongoing Monitoring and Maintenance**: The performance of AI systems should be regularly monitored. Any anomalies, failures, or concerns raised by users should be promptly addressed.

8. **Collaboration with Experts**: Particularly complex uses of AI might require collaboration with data science or AI ethics experts. Recognizing when outside expertise is necessary is a crucial professional responsibility.

Just like in the use of any professional tool, using AI requires judgment, responsibility, and in-depth understanding of one’s professional obligations to clients and the wider society. This extends to using AI and technology for design purposes and more widely.

GPT-3.5. (2023)

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As we can see, even AI struggles to provide an exact answer regarding the Standard of Care when using AI. Note that AI itself offers a disclaimer on what it believes to be the Standard of Care. The current Standard of Care for a design professional typically accepted is, **“performing services in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession, under similar circumstances, at the same time, and in the same or similar locality.”** (AXA XL Contract Guide – Standard of Care). The more design professionals use AI on projects, the more data will become available, as to what the Standard of Care will be. Until then, as AI in design evolves, so will the Standard of Care.

- **Copyright Concerns**

One issue that has become clear, as we explore the leveraging of AI and who owns the content, is the improper use of copyrighted material. AI is not currently thinking and making insights, but rather pulling from previously published work found during a broad internet search. This would likely violate laws governing intellectual property and create unanticipated risks to Architects and Engineers. The fine print with many of the AI tools or software programs declares the content generated to be now owned by the company

who developed the AI software. In essence, once we put in the prompts, the output is now owned by someone else. This creates a great deal of confusion, and insurability concern related to the ownership of instruments of services.

Additionally, there is the issue of validating content and advice that a chatbot may offer when queried on a subject. When we use AI, we must still verify the accuracy of the output or response. This is true for all data-providing technology, even a calculator. When we type an equation into a calculator, we have already figured a rough estimation of the expected response in our head. When we press the equals sign, we will automatically compare that answer with the estimation we formulated. We have all seen what happens when we hit the multiplication symbol, instead of addition. Would this error be the calculator’s fault or the user? In the same way, a design professional will have an obligation to act with caution and confirm accuracy, even when applying an advanced technology, like AI.

Further concerns include ethical dilemmas, safety concerns, and unique AI biases; however, the topics outlined above are believed to have the greatest impact on insurability.

...is the usage of AI by design professionals, in providing professional services, insured?

When coverage may or may not respond?

Finally, the question everyone is asking: is the usage of AI by design professionals, in providing professional services, insured? Like any good insurance question, the answer is: it depends, and no one knows yet. While many 'what if' scenarios can be considered, highlighted below are some helpful insights found in most Professional Liability policies, where questions may be asked or answered:

- **Applicable Language**

- o **Professional Services definition:** This definition establishes the professional services provided and whether coverage will be triggered by a specific service being offered. Currently, most language will include something like the following: *The preparation of reports, opinions, recommendations, permit applications, maps, drawings, designs, models, Building Information Modeling, specifications (including the use of 3-D printing or other computer-assisted design technology to prepare such maps, drawings, designs and specifications), manuals, instructions, change orders or computer programs for designed systems.* Will this definition expand to the usage of AI technology? The early feedback in the marketplace would lean toward 'yes,' but this is subject to change.
- o **Personal Injury definition:** Many professional liability policies will include exclusionary language for copyright or patent infringement for intentional acts in the definition of personal injury in a policy, and intentional acts exclusion which could be triggered if the copyright

issues are not previously addressed. The language will typically read something like: *PERSONAL INJURY means injury arising out of false arrest, detention, or imprisonment; wrongful entry, eviction, or other invasion of a right of occupancy; any libel, slander, utterance, electronic distribution, or other publication in violation of a right of privacy; malicious prosecution; or the unintentional infringement of copyright or patent.* (Per AXA XL LDD 050 1116)

- **Non-Applicable Coverages**

- o **Network Security Liability Insuring Agreement:** While most Professional Liability policies have a Network Security Liability insuring agreement, not everything relating to computers applies. This portion of the policy has a different intent, and future policies will narrow this coverage to fit its true intentions.
- **Exclusions to be mindful of**
 - o **Products Liability Exclusion:** As the development of documents leverage the technology more, cases will establish the output of an AI program and how it differs from that of human work. If AI output is considered a product, and not a service, this could create some concerns with potentially triggering the products liability exclusion in a Professional Liability policy.

- o **Contractual Liability Exclusion:** While the requirement to use AI may not appear in a contract, utilization could lead to a heightened standard of care. This could trigger the contractual liability exclusion in a Professional Liability policy. This would also be triggered in the event of a copyright infringement battle or intellectual property dispute.

Holmes Murphy will continue to gather information and data from our carrier partners, as coverage is expected to evolve with increased use of Artificial Intelligence.

What are other firms doing?

We have solicited feedback from several design firms to shed light on how others are approaching the application of AI in their everyday services. The most common response we have received is, "Nothing yet! What do you recommend?" Whether we spoke with industry firms, carrier partners, or other brokers, everyone reflects this same sentiment. Currently, no one appears to be ahead or behind. Here are some pathways to consider on the AI journey:

- **Take a stance.** It is important that leadership of a firm discusses this important topic and determines how to address the use of this type of technology.
- **Communicate to employees.** This can be done via companywide memo and updating the employee handbook or manual. AI should be treated similar to a social media policy. All staff should understand what can and cannot be done in leveraging this resource.

- **Control usage.** If utilization of AI is prohibited, clearly communicate the reason. Speak with the firm's IT service provider about blocking known websites (ChatGPT, OpenAI, etc.) on staff computers. If usage of AI is allowed, outline the parameters.
- **List the approved resources.** Firms allowing the usage of AI are going to the granular step of outlining which current technologies and specific resources are allowed to be used. As this technology evolves, the permitted list will need to be updated.
- **Provide clients with transparency.** Communicate what is and what is not being produced using AI systems. Learn the comfort level of each client with this practice.
- **Seek fairness.** Avoid any biases these technologies may create. Implement human oversight checking accuracy and equality.

As seen above, the steps some firms are taking center around communication and flexibility. These policies should be more like guideposts, rather than hard and fast rules, until the technology and users evolve to their final form. Company policies regarding AI should be monitored and updated with regulatory to capture the true exposure for firms.

In Conclusion

While there are many more questions than answers, as it relates to this complicated topic, we are still too early in the advent of this technology to speak definitively. Artificial Intelligence, like many past technology iterations before (BIM, E-Mail, Drones, etc.), may revolutionize how business is conducted, but it is yet to be answered whether there will be the doomsday impact that has been making headlines.