

## Deloitte Engineering GenAI

Generative AI has already seized the imagination of the consumer. The public release of models that can convert text to images or respond coherently to user prompts captivated and even startled many.

As the Generative AI marketplace grows, consumers are increasingly exposed to Generative AI-enabled search, educational tools, and a range of free and paid services.

For businesses in the consumer industry, Generative AI holds vast potential for improving and enhancing interactions, from helping consumers understand and find the products they need to accessing better, more real-time support to promoting brand loyalty.

### 6 Key Modalities of GenAI

One of the primary differences between more traditional AI and Generative AI is that the latter can create novel output that appears to be generated by humans. The coherent writing and hyper-realistic images that have captured public and business interest are examples of Generative AI models outputting data in ways once only possible with human thought, creativity, and effort.

Today, Generative AI models can create outputs in six key modalities.



#### Text

Written language outputs presented in an accessible tone and quality, with details and complexity aligned with the user's needs.

Examples include summarizing documents, writing customer-facing materials, and explaining complex topics in natural language.



#### Code

Computer code in a variety of programming languages with the capacity to autonomously summarize, document, and annotate the code for human developers.

Examples include generating code from natural language descriptions and autonomously maintaining code across different platforms.



#### Audio

Much like textual outputs, audio outputted in natural, conversational, and even colloquial styles with the capacity to rapidly shift among languages, tone, and degrees of complexity.

Examples include Generative AI-powered call centers and troubleshooting support for technicians in the field.



#### Image

Textual or visual prompts lead the model to create images with varying degrees of realism, variability, and "creativity."

Examples include simulating how a product might look in a customer's home and reconstructing an accident scene to assess insurance claims and liability.



#### Video

Similar to imagery, Generative AI models can take user prompts and output videos, with scenes, people, and objects that are entirely fictitious and created by the model.

Examples include autonomously generating marketing videos to showcase a new product and simulating dangerous scenarios for safety training.



#### 3D/Specialized

From text or two-dimensional inputs (e.g., images), models can extrapolate and generate data representing 3D objects.

Examples include creating virtual renderings in an omniverse environment and AI-assisted prototyping and design in a purely virtual space.

By understanding these modalities, organizations are empowered to think through and better understand the kinds of benefits Generative AI could permit. For each use case described in this dossier, there may be more than one value-driving modality.

A chatbot text output could be presented as simulated audio; a generated image could be extended into a video. Ultimately, the Generative AI use case and the value the organization seeks will determine which output modalities can contribute the greatest advantages and outcomes.

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