

Interactive Intelligent Systems

Aptima's Interactive Intelligent Systems (I2S) capability builds intelligent context-aware systems that combine advanced naturalistic interfaces with visual and computational analytics. At the heart of all of our I2S solutions is **context awareness**:

- **Context about the data.** This includes understanding and representing the relationships and topics that connect multi-modal data—including text, images, and video—by analyzing the references to people, places, and events extracted by advanced processing techniques.
- **Context about the user.** What the user is doing, where they are getting their information, what annotations have they made, what is their environment like, who are they are interacting with, and how their team goals that are either explicitly stated or inferred from their activity.

Naturalistic interactions through multi-modal interfaces designed by I2S—including speech, gesture, and touch—allow the user to interact with their data in ways that take advantage of their natural abilities.

Aptima uses a cyclical, three phase approach to enable context awareness.

- **Monitor:** Capture context about what the user is looking at and doing from data and interactions with systems and environment.
- **Analyze:** Use advanced analytic techniques to infer goals, identify relevant information, and predict what the user may want to do or see next.
- **Augment:** Recommend information and tasks that improve their ability to quickly and easily do their jobs. Tailor and customize interfaces and interactions to recognize individual differences and support cognitive processes.

Aptima's I2S solutions provide augmentation that completes the cycle of context aware systems, allowing the user to interact with the information that is most relevant to the task at hand at the time when it is most needed, and capturing new contextual data to improve augmentations over time.

