# Opening Statement:

Our objective today is to introduce the importance and criticality of designing systems for reliable operation. Given the diverse engineering disciplines represented here we speak to the common design principles for reliable system operation through design processes.

Our agenda today includes an opening video about the NRO. The video will be followed by a presentation where we introduce the types of system the NRO deploys. These systems will serve as a case-study for underscoring the importance designing systems for high reliable operation. We will also speak to common design practices that promote high reliable system operation. Note that our case-study is on satellite systems, and these systems are highly complex and their successful mission operation begins with satellite design, launch design, and operation design.

# NRO Video:

Our work is for the NRO and hence we have a video that introduces this government agency. The relevance of the NRO to this talk today is that this agency deploys highly complex and reliable systems that serve a diverse set of missions. Start the video.

# Presentation Slide 2:

The NRO (National Reconnaissance Office), oversees the deployment and operation of satellites, hence their vision is vigilance from above, and their mission entails intelligence based on innovations from overhead.

# Presentation Slide 3:

The NRO is a part of a community of government agencies, and the NRO’s role comprises tasking overhead assets (satellites), collecting information from satellites, and processing this information. Other agencies perform exploitation, dissemination, and archiving roles.

# Presentation Slide 4:

The mission partners include the National Security Agency and the National Geospatial-Intelligence Agency.

# Presentation Slide 5:

NRO systems play a major role in solving some of our nation’s most demanding and complex problems. Resolving these problems underscore the critical importance of the NRO systems that are tasked; and the nature of these problems require NRO systems to possess demanding attributes which are the essence of highly reliable systems:

1. Rapid Response → Real-Time On Demand Availability
2. Available 24/7/365 → High Reliability and Robust

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