GAO U.S. Government Accountability Office

CYBERSECURITY CHALLENGES AS FAA IMPLEMENTS NEXTGEN

October 21, 2015

Prepared for the Information Security and Privacy Advisory Board

Two GAO Reports,
# Two Perspectives
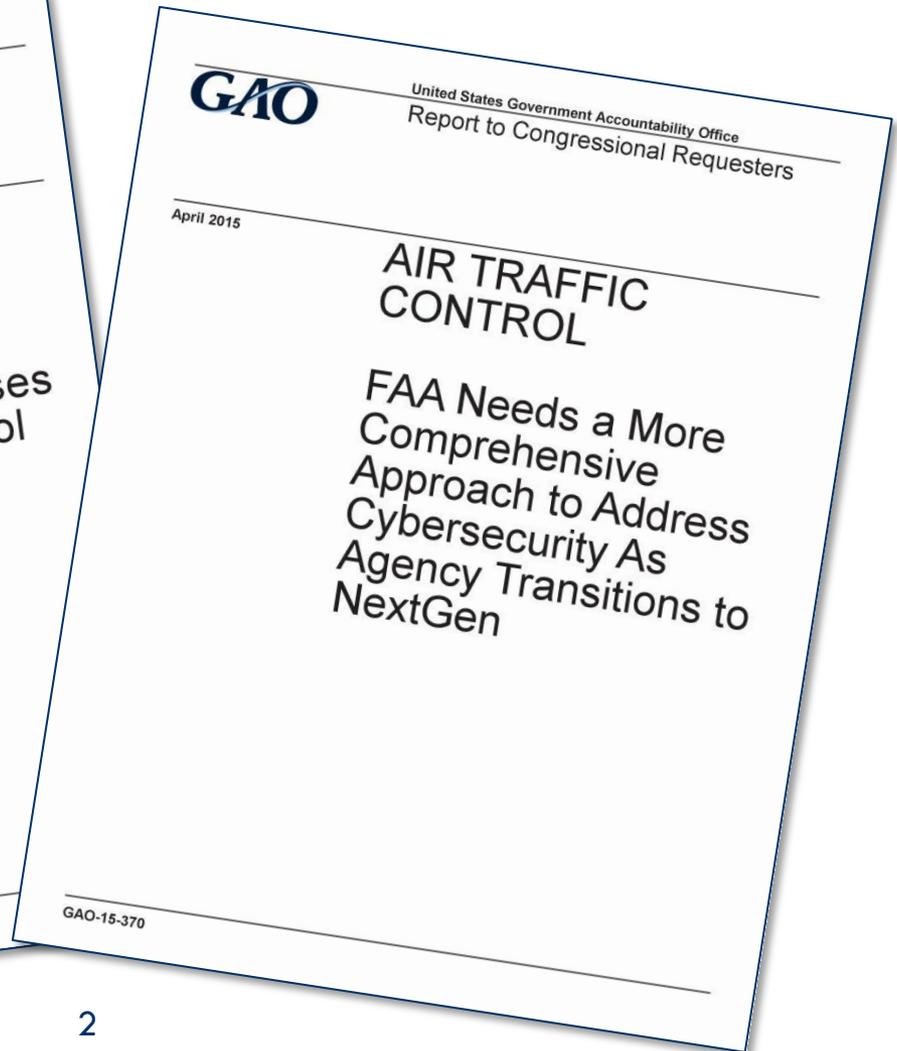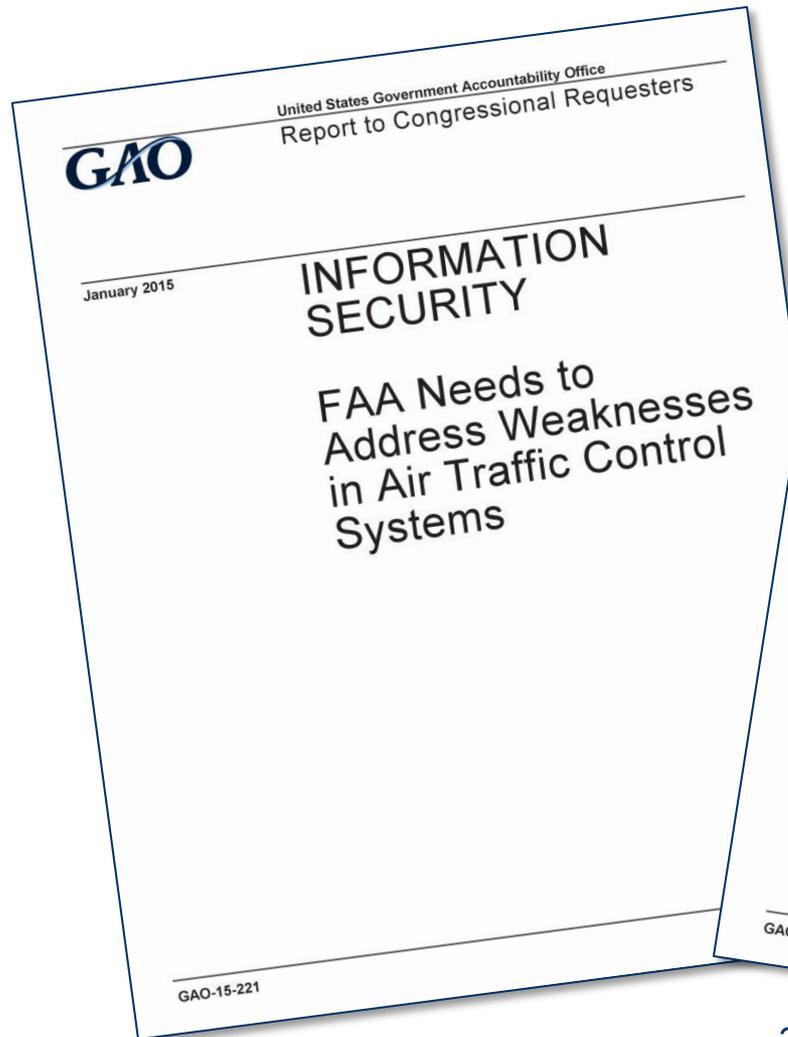
National Airspace System's Transition to an Internet Protocol (IP)-Based Network

Source: GAO. | GAO-15-370
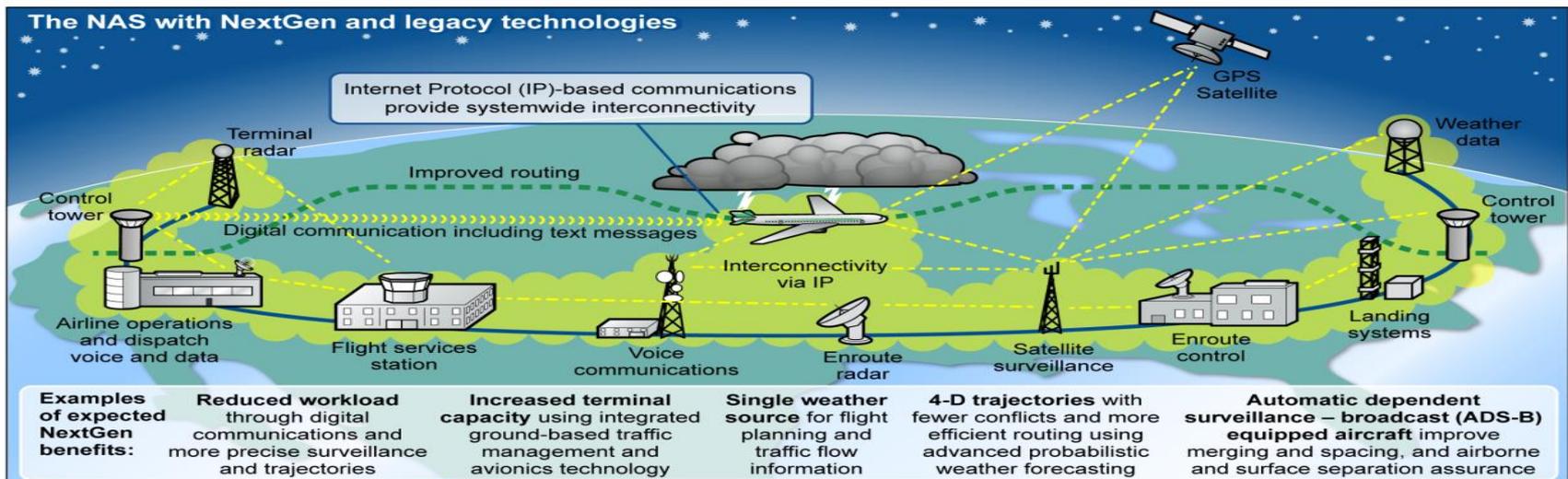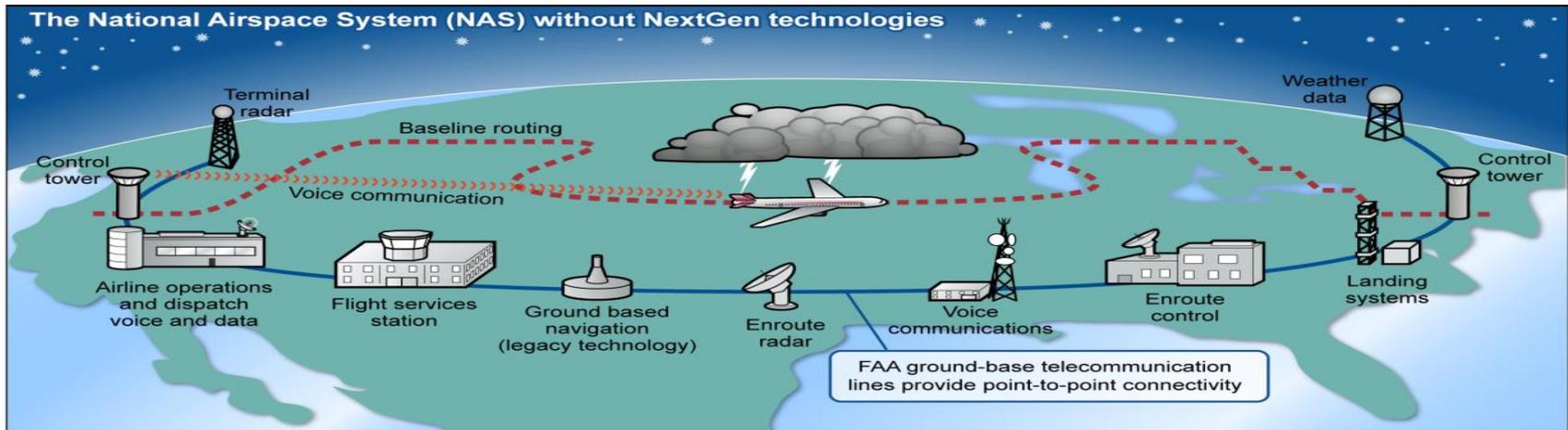
NextGen Transformational Programs

Surveillance and Broadcast Services Subsystem (SBSS)
A satellite-based information-broadcasting system to enable more precise control of aircraft

Collaborative Air Traffic Management (CATM)
Encompasses the development of systems to manage airspace and flight information

Weather information
Airline schedules
Security restrictions
Other information
→ **Routing information**

Common Support Services– Weather (CSS–Wx)
Provide real-time access to a unified aviation weather picture via SWIM

Data Communications (Data Comm)
Provides text communication transmissions directly to pilots and their flight management systems

T Text

NAS Voice Switch (NVS)
Replaces terminal and en-route voice-switching systems with a more flexible network

))) Voice

System Wide Information Management (SWIM)
The information management architecture for the national airspace system

SWIM core services

Source: GAO. | GAO-15-370

FAA Incorporates Cybersecurity Controls into NextGen Acquisitions

Sources: GAO and FAA. | GAO-15-370
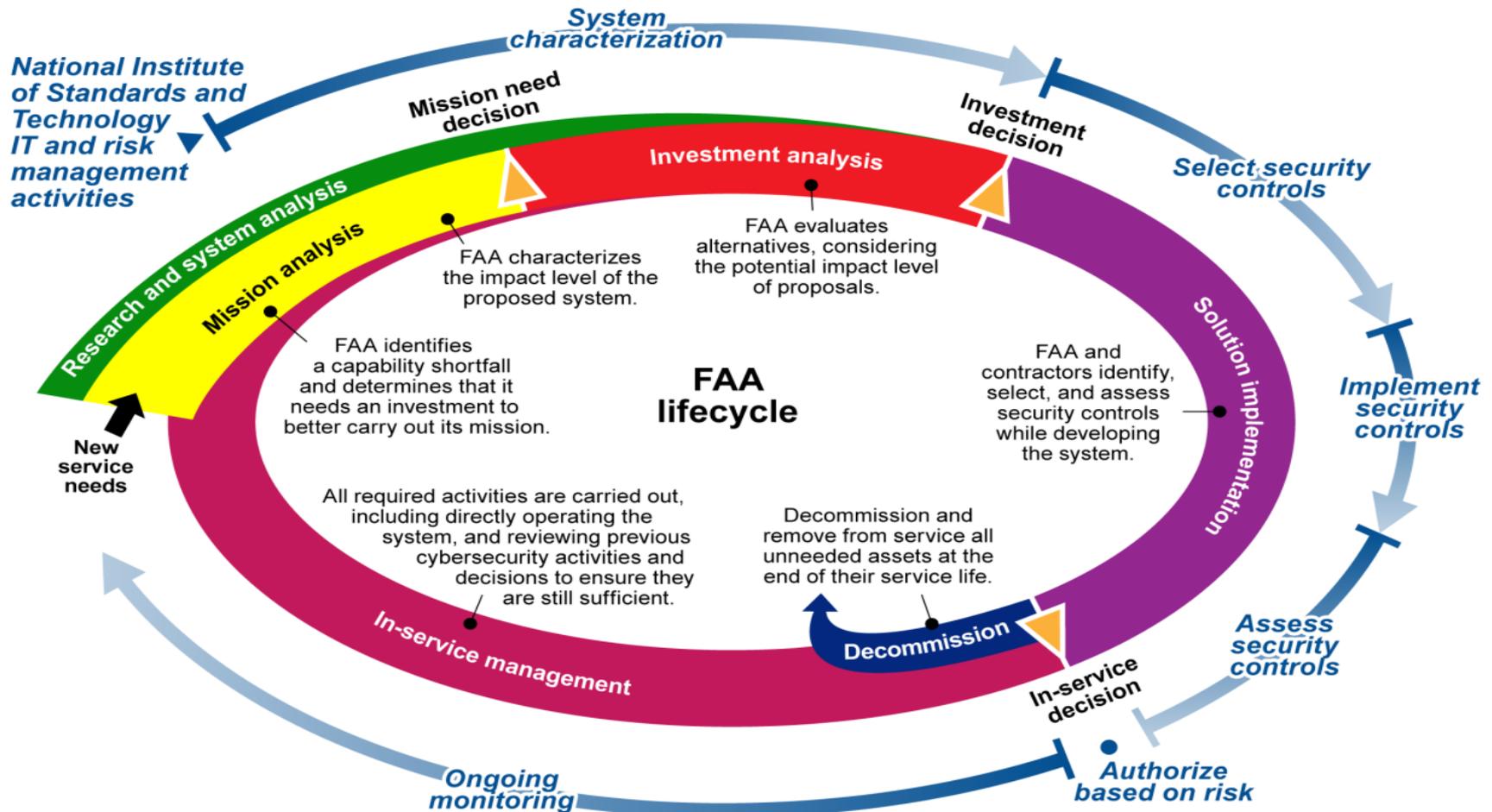
Traditional NAS ATC Systems Compared to Enterprise Approach

Source: GAO. | GAO-15-370
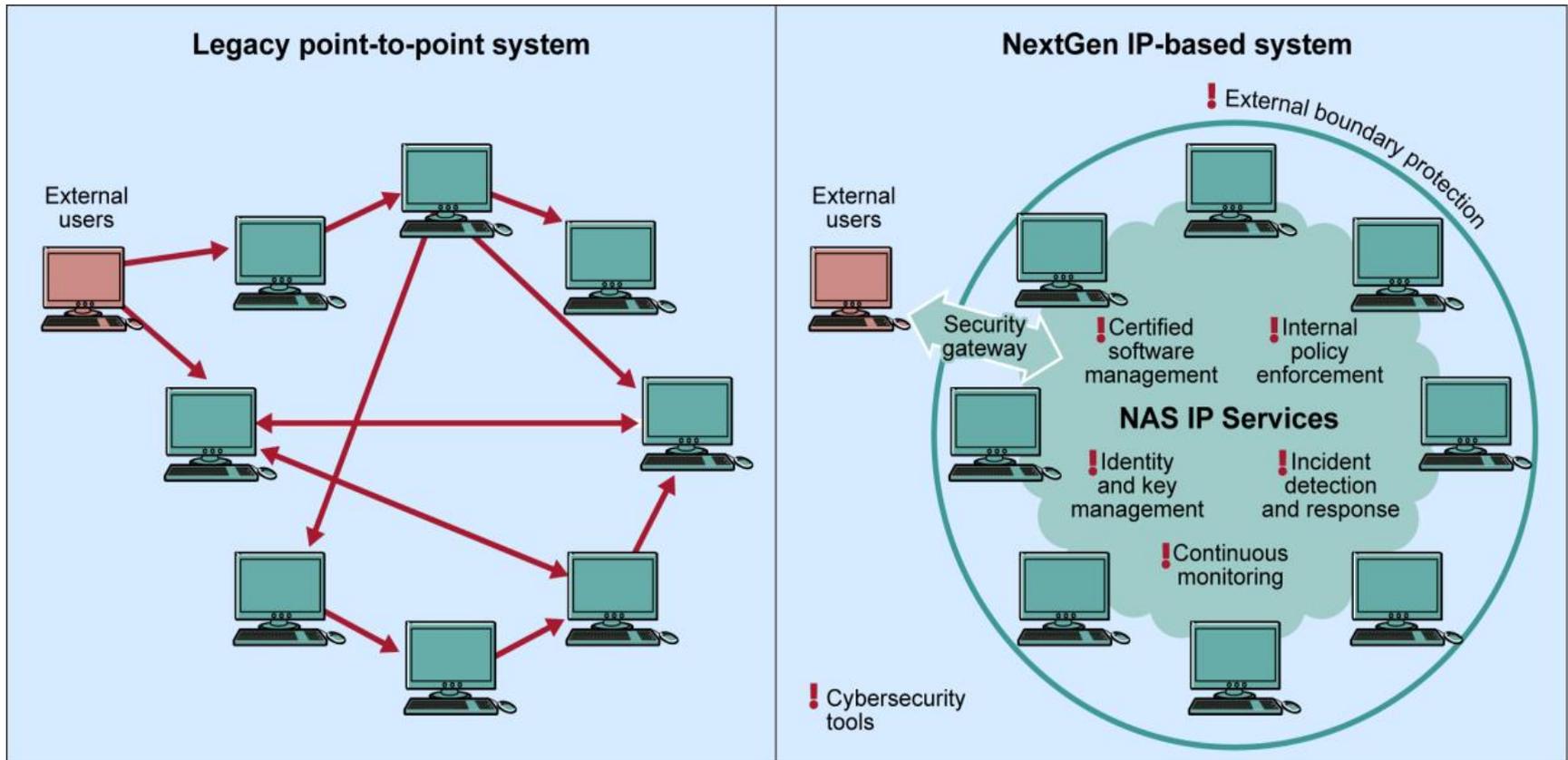
Basic Illustration of Aircraft Internet Protocol (IP) Connectivity Inside and Outside of Aircraft

Source: GAO. | GAO-15-370
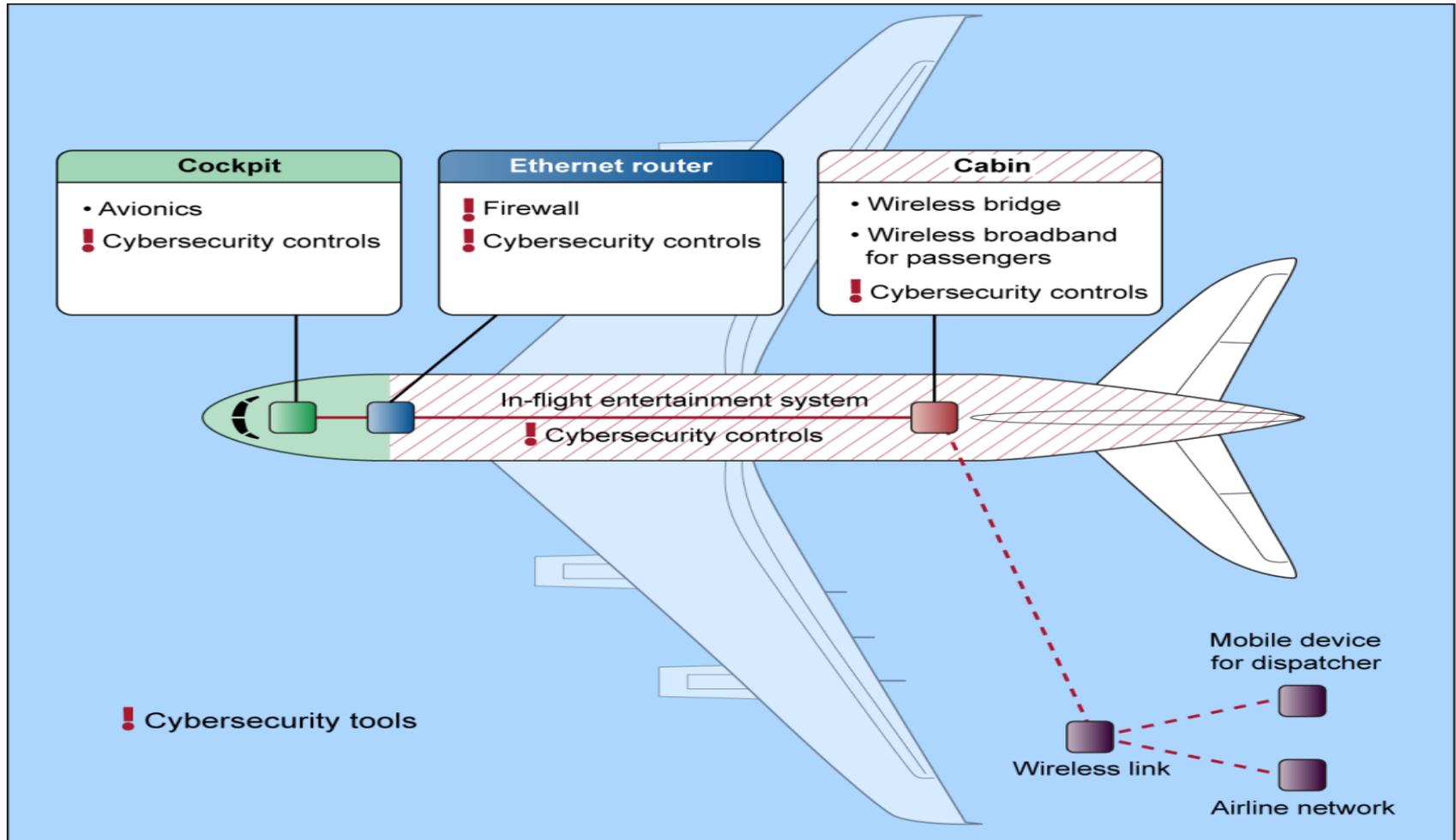
Thank you for your time today. Questions?