

# **NDIA Gun & Missile Systems Conference**

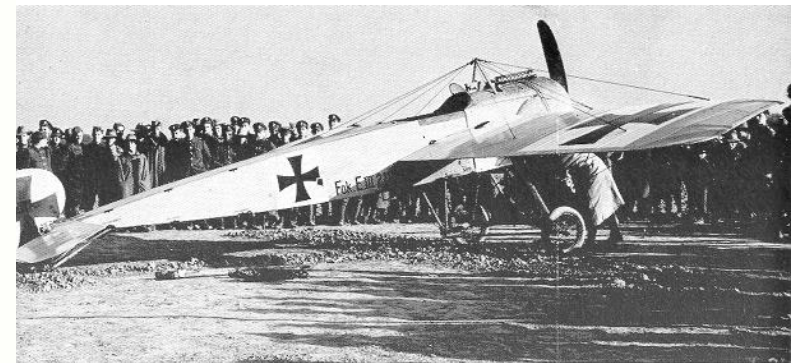
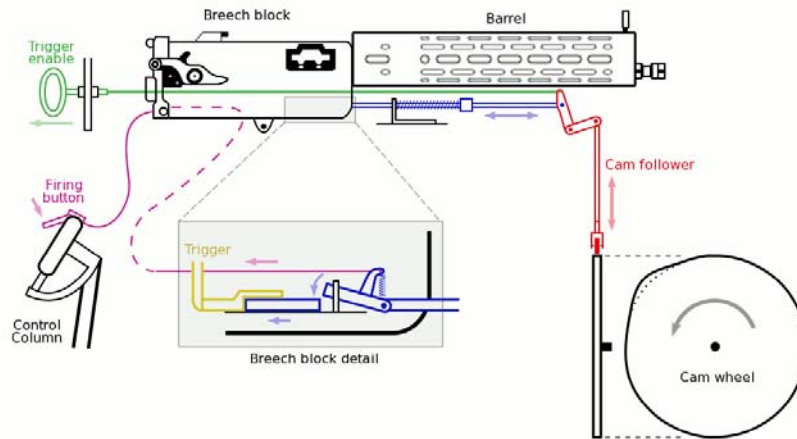
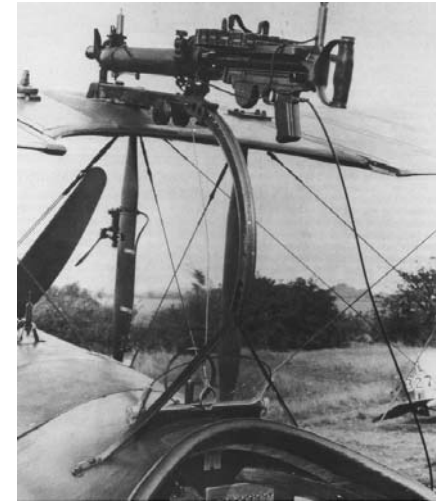
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## **Panel Discussion: Unmanned and Autonomous Systems Weapons Integration**

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# Lessons From History: The Aircraft Analogy



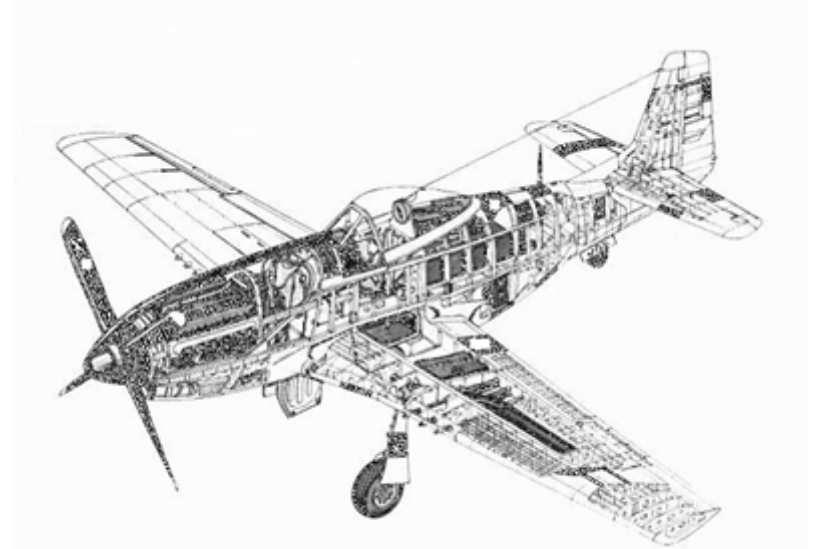
Ferdinand Foch, allied commander in chief in 1918, reputedly stated in March 1913  
"Aviation is fine as sport.  
I even wish officers would practice the sport, as it accustoms them to risk.  
But, as an instrument of war, it is worthless (c'est zero)."



# Lessons From History: The Aircraft Analogy



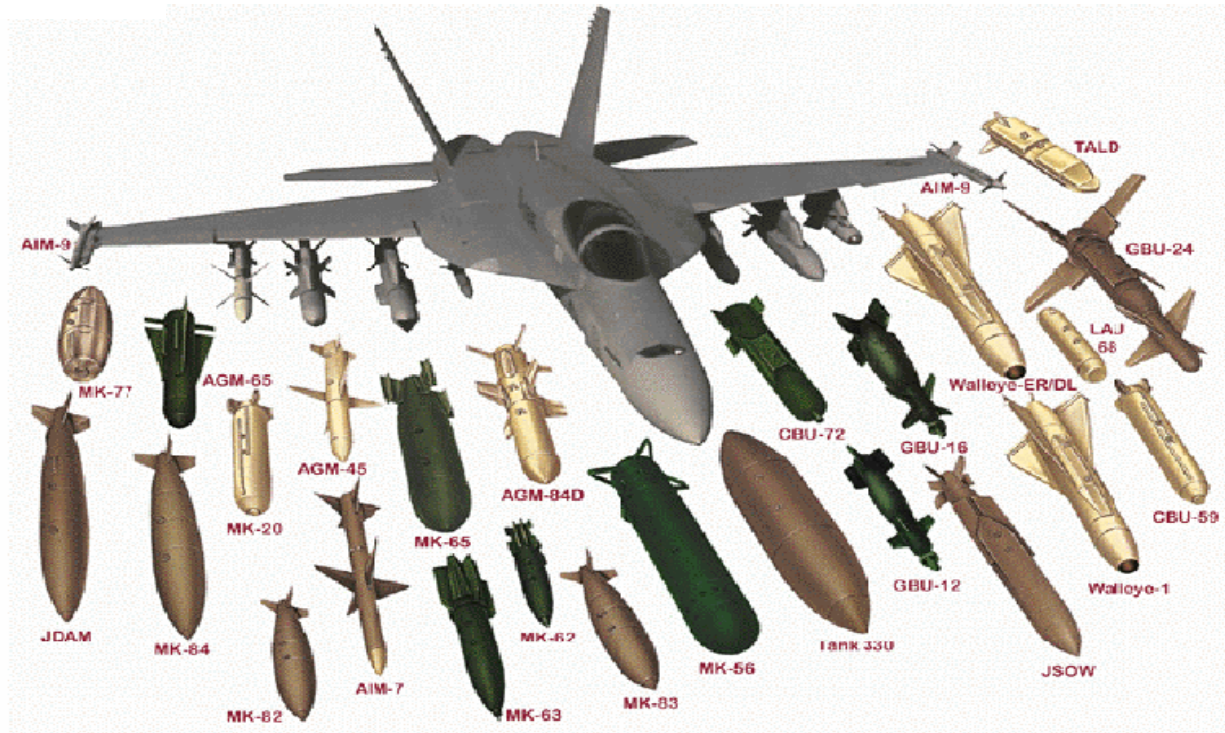
**1940: North American Aviation contracted to develop the P-51 Mustang. The original NA-73X had (2) chin mounted 50 cal guns.**



**Within a few short years the P-51 had all wing mounted guns and began carrying rockets mounted to external wing stations.**



# Lessons From History: The Aircraft Analogy



**60 years later, the FA-18 exemplifies a mission and systems integration focus:  
The entire platform design enhances capabilities and effects for the tactical mission**





# Lessons From History: The Aircraft Analogy



**The UAV community has turned the corner and adopted the concept of matching armed capabilities to mission requirements**





# Desired Endstate

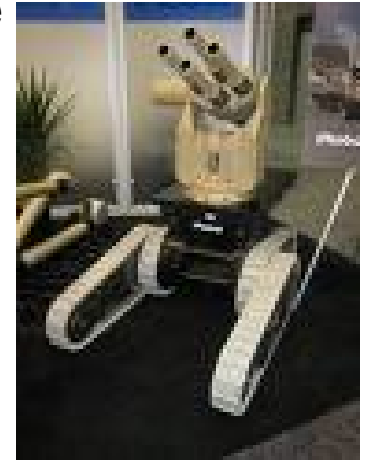
- **Effectiveness/Combat Effectiveness**

- Efficient, reliable, and accurate



- **Scalability**

- Responsive via lethal and non-lethal applications
- Meets multiple battlespace requirements ranging from effective passive deterrence to combat force multiplication



- **Multiplicity**

- Multiple platforms deployable on a single mission set



- **Safety**

- Unquestionable and trusted ally





# Future Capabilities

