

# Multi-Domain Operations and Evolving Energy Requirements: Implications for Modernizing Army Installations



Presentation to NAS Study Team: Powering the U.S. Army of the Future  
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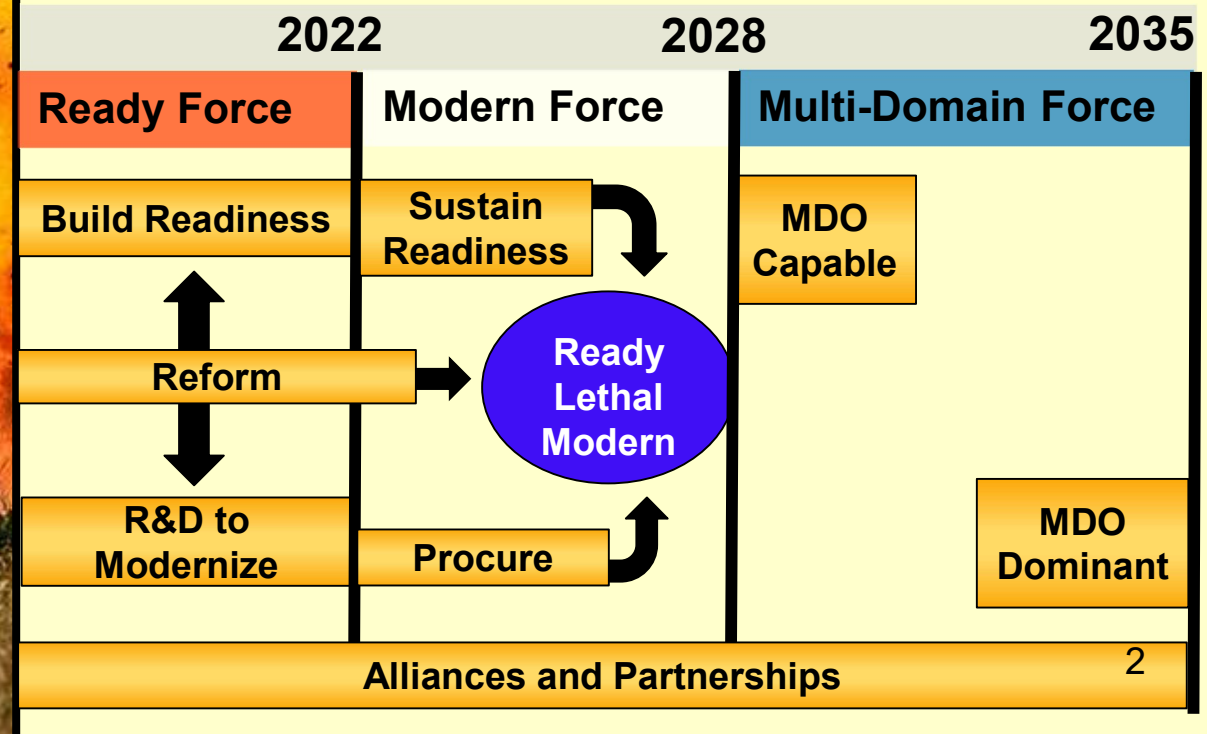


# The Army Strategy



The Army will build readiness, modernize concepts and capabilities, reform processes, and strengthen our alliances and partnerships to ensure land power dominance on any battlefield, against any threat, at any time.

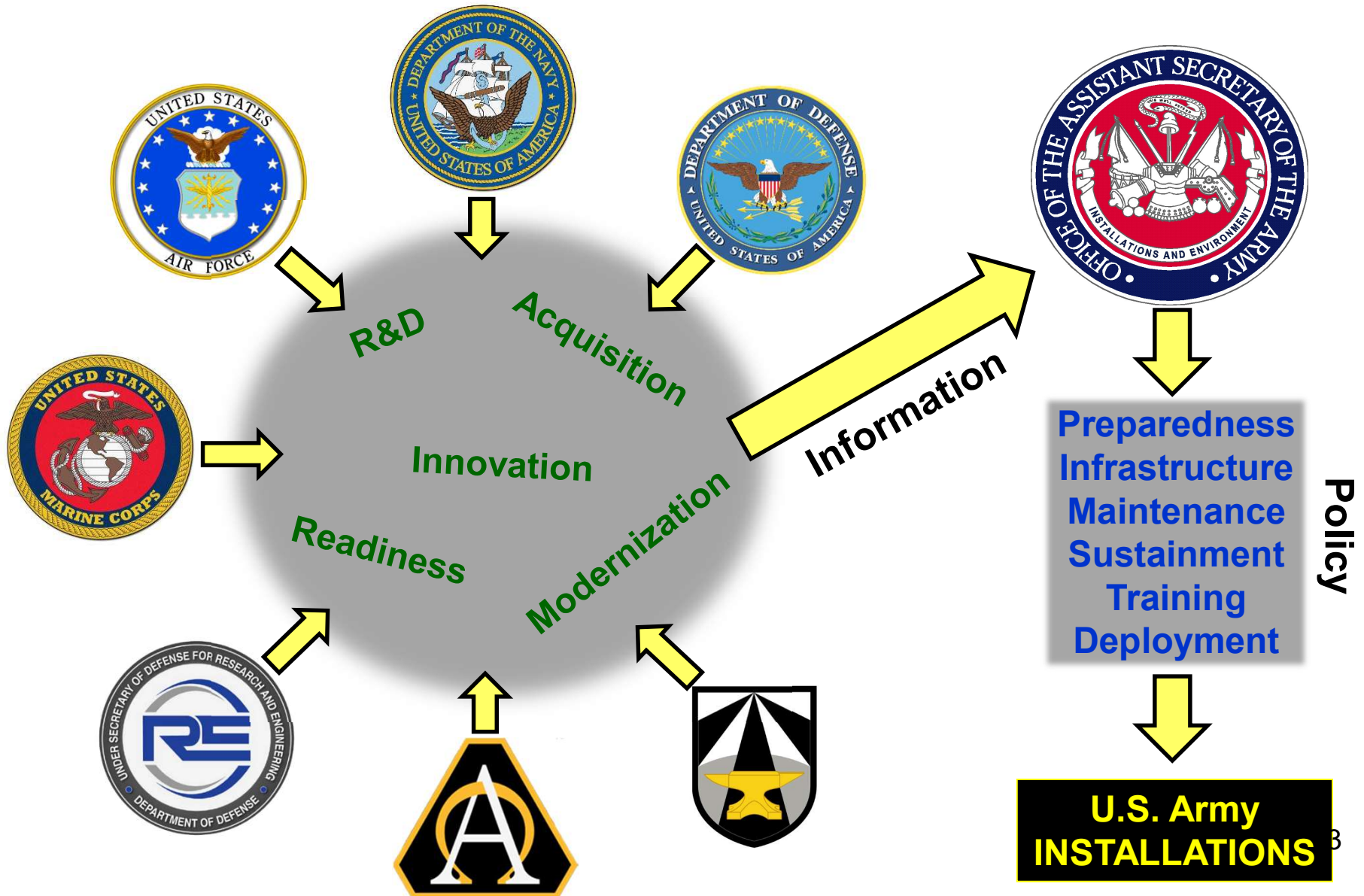
## *The Army Strategy / Strategic Approach*







# Installations Supporting Modernization

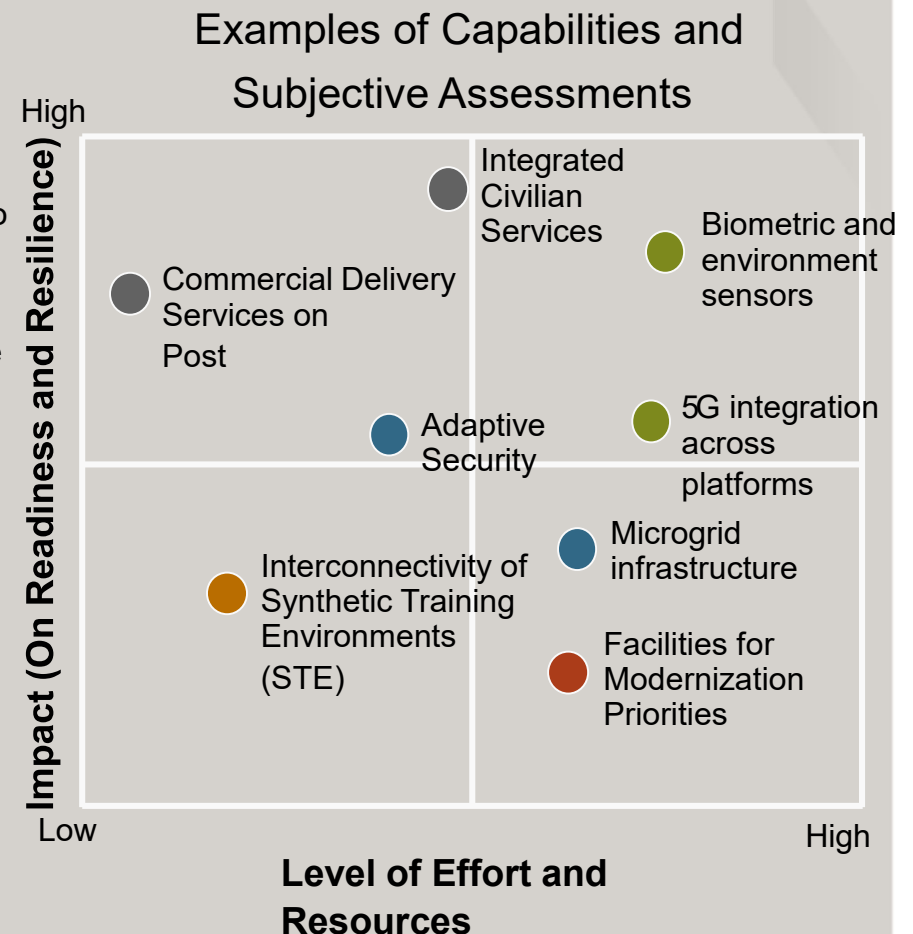




# Five Potential Categories of Capabilities Investing in Modern Installations



- **Scale Functions and Operations** enabling the ability of single installations to expand capacity and output according to mission needs; the ability of the Constellation of Installations to combine assets and capabilities according to mission needs
- **Maneuver with Speed** ensuring that installations respond to mission and operational requirements with agility
- **Develop Esprit de Corps** supporting a vibrant Army culture with capabilities, services, and amenities enabled by both physical and virtual facilities, training, communications, etc.
- **Provide a Positive Installation Experience** delivering environment where the Soldier, family, and collective unit can operate and live with amenities commonly found in society; productive spaces and interoperable systems that enable individual mobility and mission success
- **Enable the Modern Army** reframing installations as warfighting platforms at the forefront of the future combat environment





# Two Future States for Installations



## Installation as a Platform

### Modularity to Customize

- Components can be substituted, replaced, or built upon without disrupting other components

### Flexibility to Scale

- Platforms respond to new inputs, stakeholders, and missions gradually over time and as necessitated by contingencies



## Constellation of Installations

### Adaptability to Respond

- The network of installations respond to shutdowns or disruptions

### Interoperability to Deliver

- Installations adapt to new missions and use personnel and data across installation portfolio



Source: Toffler Associates. [Briefing] Defining the Army Installations of the Future. October 29, 2019.





# IoT Applications to Installations



## Readiness



Soldier Monitoring

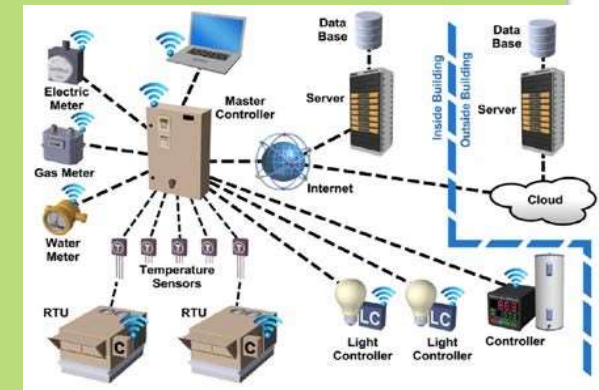


Predictive Maintenance  
for Real Property Management



Enhanced Training

## Cost Savings



Building Automation  
for Energy Savings



Efficient Security 6



# Importance of Proper Planning







# Planning for Electrified Fleet







# The Installation as a SSA







# Installation Command Realignment



**IMCOM**



**AMC**

LTG Edward Daly, DCG AMC - "We can now integrate and synchronize all sustainment capabilities to ensure operational readiness. We will continue to reform and anticipate further requirements as we support sustainment from the factory to the port to the foxhole."







# Enabling Army Readiness through Energy Resilience





# Questions / Discussion





# Drivers of Change for Future Installations



## **Army Modernization is underway:**

Installations must be prepared

- The future installation will possess the flexibility to support new weapons systems and types of combat
- Several of the "Big 6" Army Modernization Priorities are complex, networked systems which demand specific resources and infrastructure – installations must provide these essential capabilities
- The pace of innovation is staggering – future installations must be able to support various technology applications, including those which have yet to be invented
- *You can't have a Modern Army without a Modern Installation*

## **Smart city technologies are mature:**

Installations should harness technologies to reduce costs and improve capabilities

- Smart environment technologies generate resilient installations and can produce cost and time efficiencies
- Most Smart City technology is currently available for delivering connected environments
- Networked, smart installations will enable readiness by facilitating virtual and in-person training

## **Platforms are catalysts for Army readiness:** Modular installations deliver adaptability and flexibility

- The future installation will leverage a range of smart city initiatives, processes, sensors, and technologies designed with the deliberate purpose of enabling Soldiers, families, and Army employees to deliver the Army mission

*Adapted from: Toffler Associates. [Briefing] Defining the Army Installations of the Future. October 29, 2019.*