

**2002 International Infantry & Joint Services  
Small Arms Systems Section Symposium  
Exhibition & Firing Demonstration  
21st Century Military Operations and Technology**



*Program Executive Office  
Soldier*

*Soldier Systems Architecture  
“The Soldier As A System”*

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Mr. Dan Causey, Jr.  
PH- (703) 704-1410 DSN 654  
FAX- (703) 704-1110

E-mail: [dan.causey@peosoldier.nvl.army.mil](mailto:dan.causey@peosoldier.nvl.army.mil)



# The Need For PEO Soldier

## To Treat The Soldier As A System & Sponsor Soldier-Centric Design

1980's & 90's

1999-2000

2002

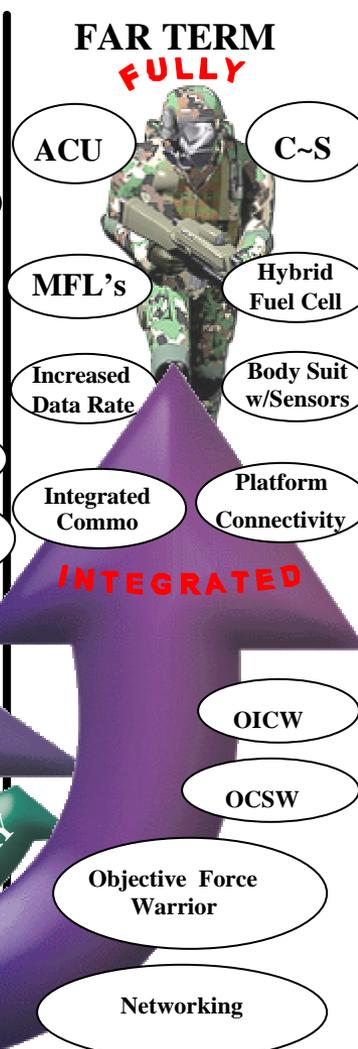
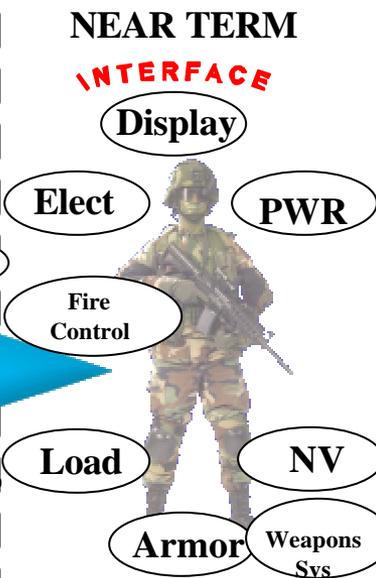
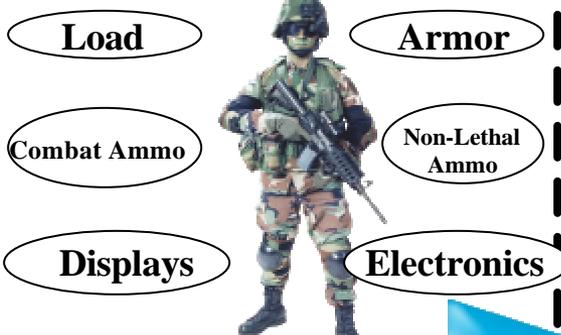
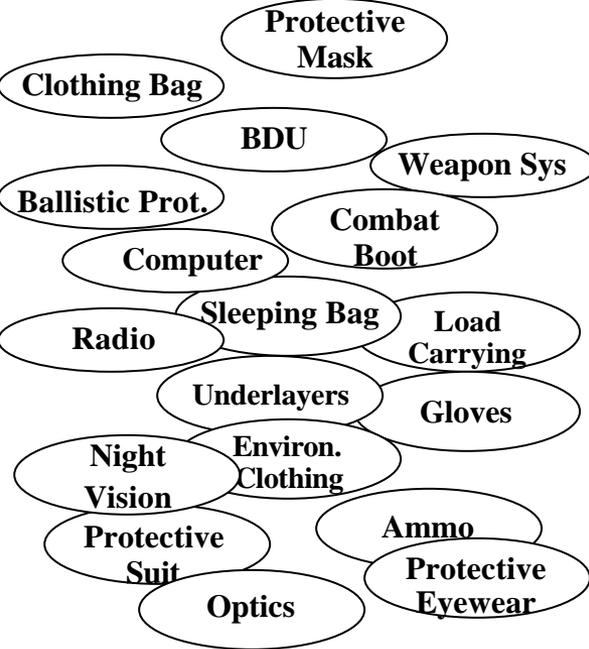
2008

### Chaos We Started From

### Initial Steps We Made

### We Are Now

### We Are Going



**TEAM SEP/CIE**

**FOCUSED EFFORT**

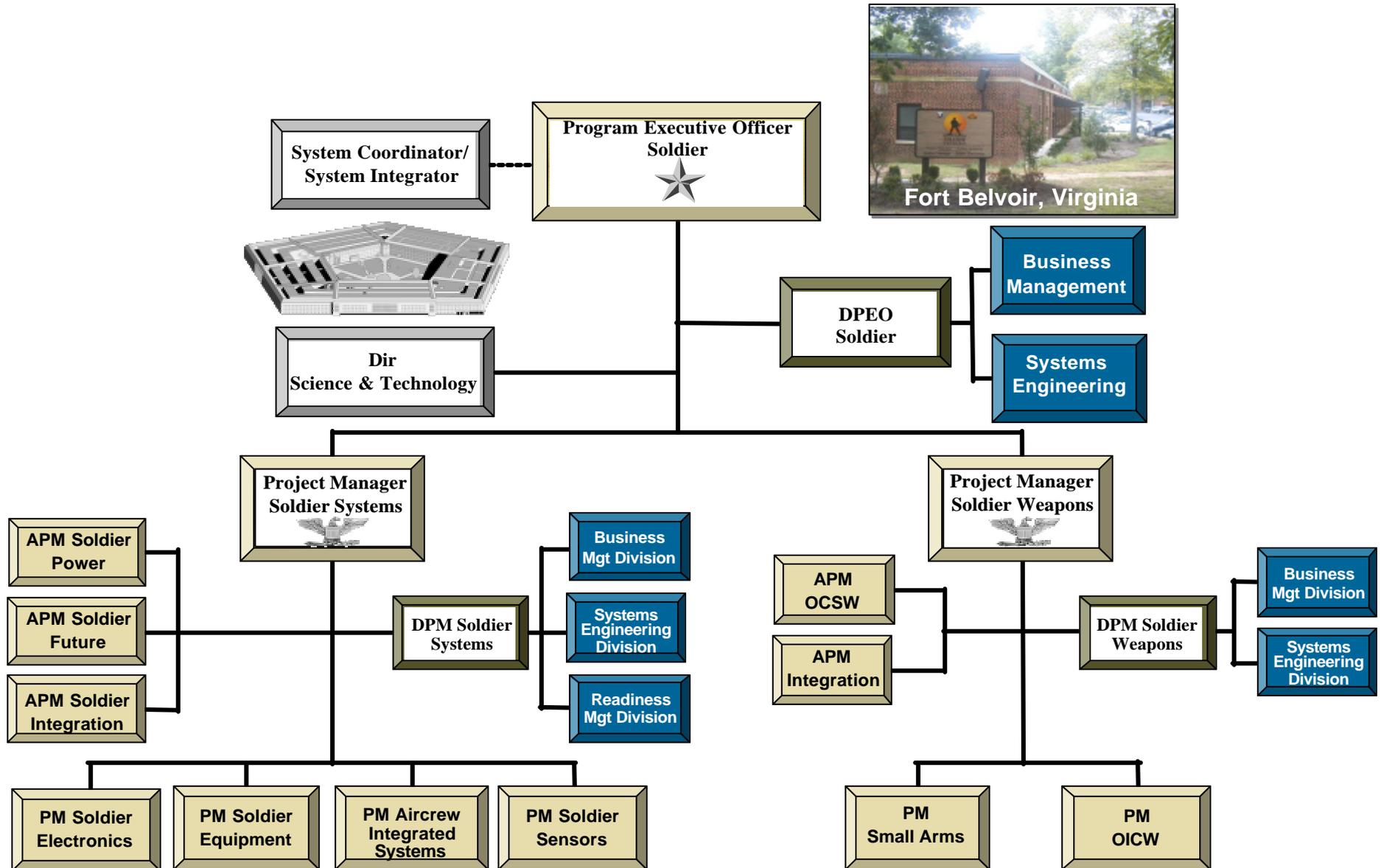


*Soldier Systems Architecture*



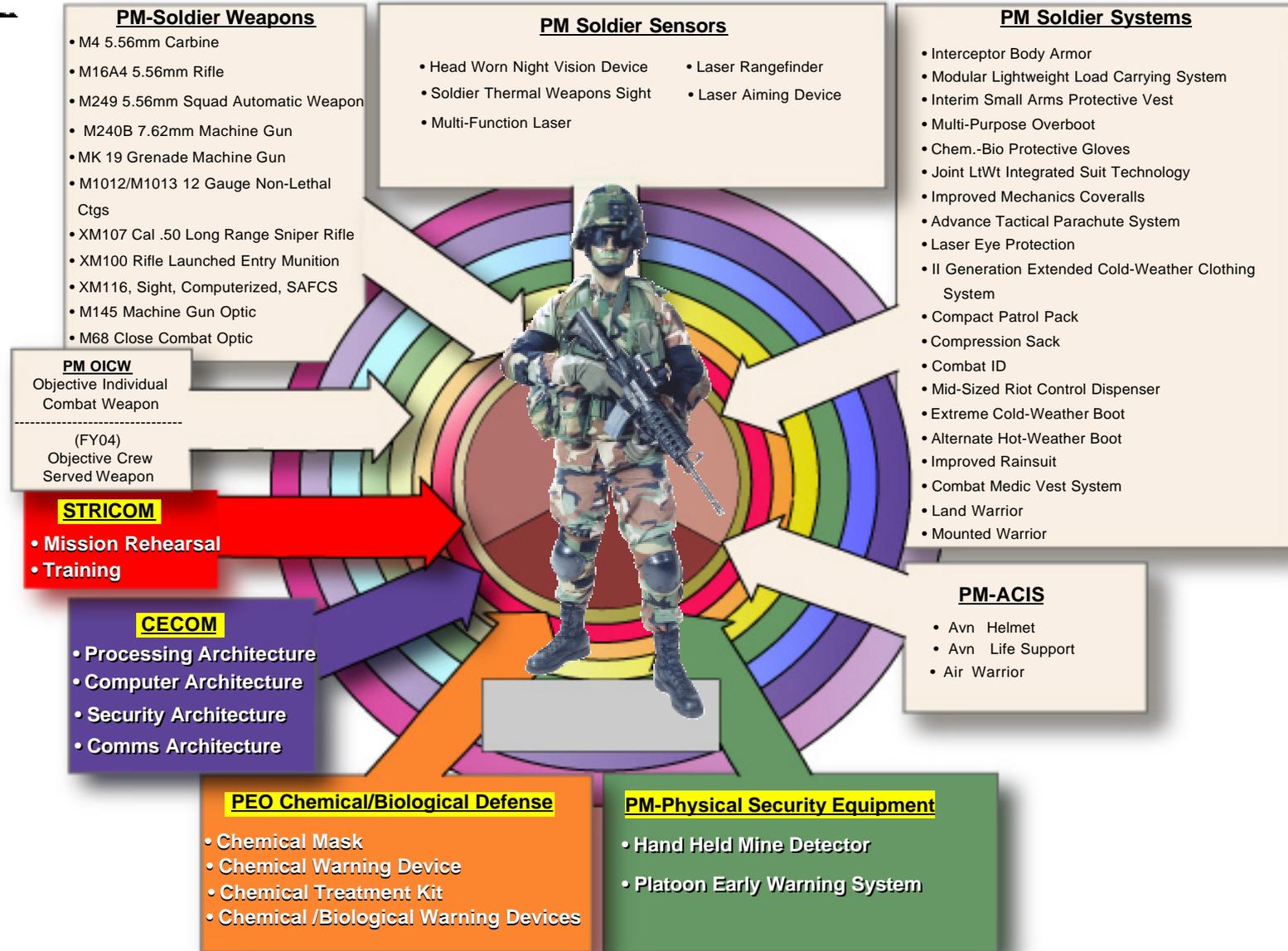
# Program Executive Office Soldier

## Who We Are, Where We Are, What We Do





# Soldier Systems Integration Focus



**Soldier Systems Architecture Integrates 346 Programs Internal To PEO Soldier & Countless Others Externally!**



# Soldier Systems Architectural Approach

## The Path From "Standalone" To "System-Of-Systems"

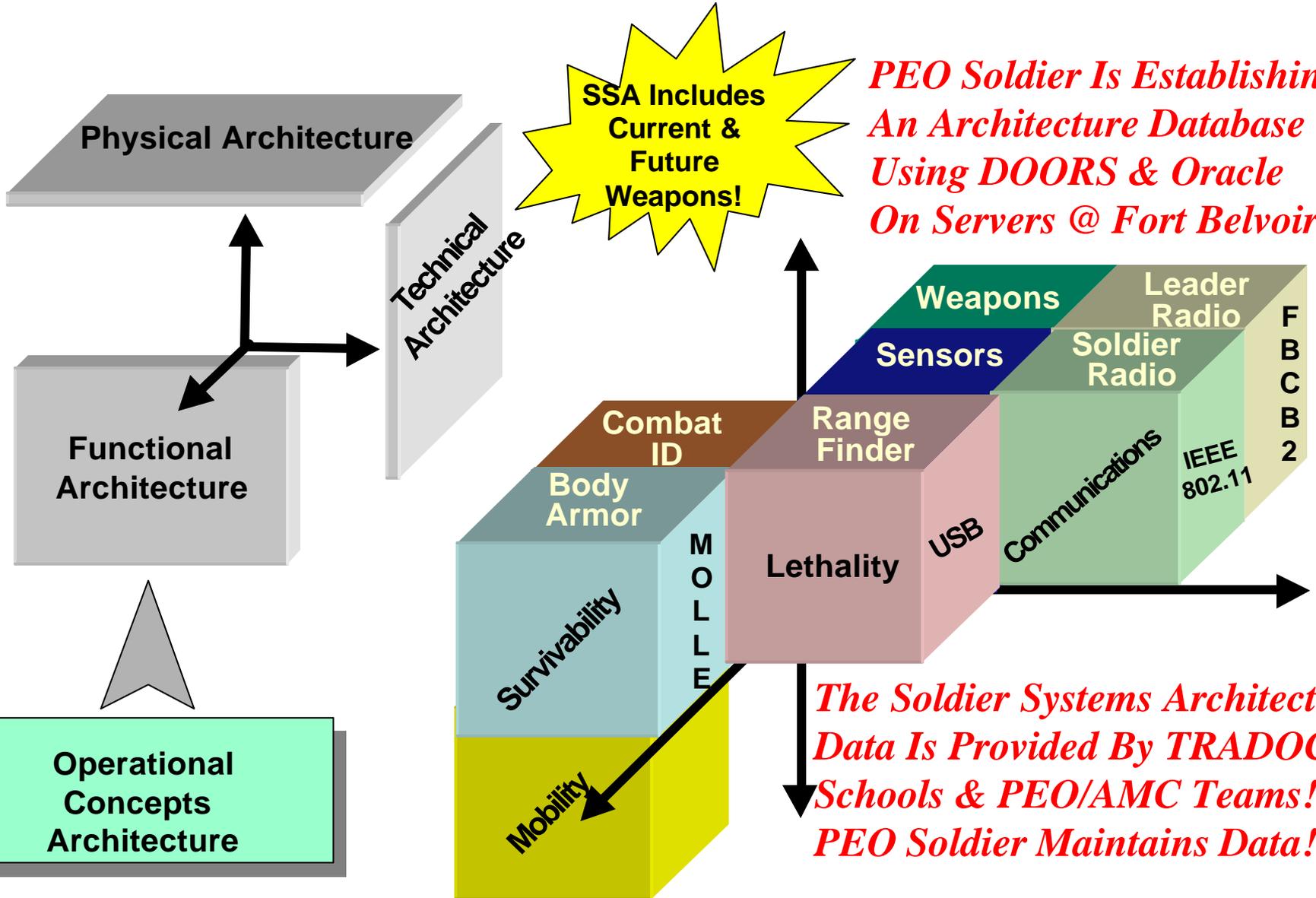
**Fully Integrated Soldier Systems:**  
 A "Uniform" That Comes With  
 Computing/Connectivity Built In!  
 Same Core Functionality In  
 Garrison/Field/Fight Situations!  
 Common Hardware & Software!  
 In Peace, Soldiers Are "On Line"  
 Not In Line! In Conflict, All Parts  
 Work Together – From Weapons To  
 Comm's & From Soldier To Vehicle!



**Soldier Systems Architecture = Work, Train, & Fight With Integrated Equipment!**



# *Establishing The Soldier Systems Architecture Technology Management Tool For Soldier-Centric Design!*



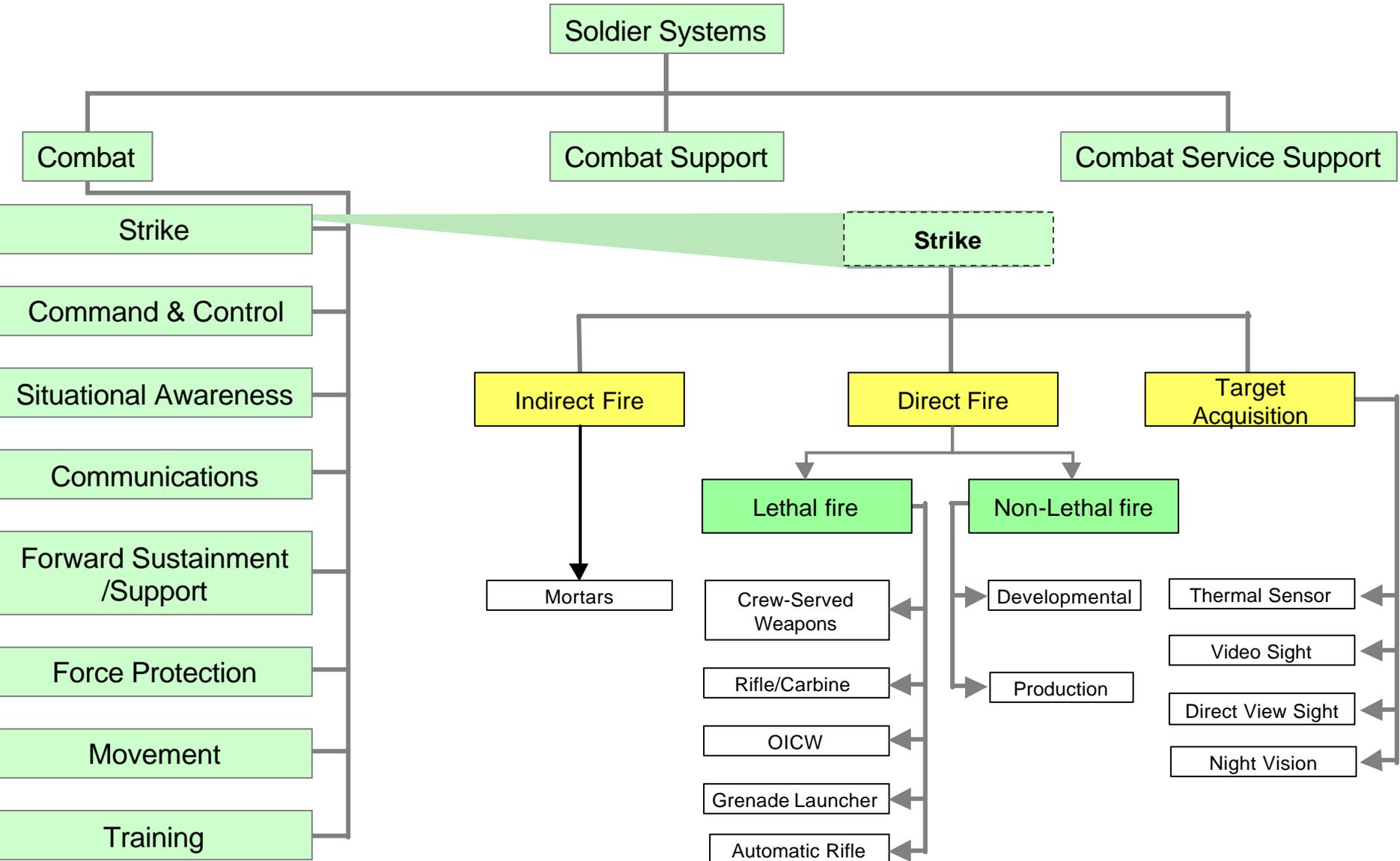
*PEO Soldier Is Establishing  
An Architecture Database  
Using DOORS & Oracle  
On Servers @ Fort Belvoir*

*The Soldier Systems Architecture  
Data Is Provided By TRADOC  
Schools & PEO/AMC Teams!  
PEO Soldier Maintains Data!*



# Soldier Systems Architecture

## Work Breakdown Structure





# PRODUCT MANAGER SMALL ARMS

**PM SMALL ARMS**



**M16A4**



**NL Bursting  
Hand  
Grenade**



**M84 Stun  
Grenade**



**M19 Grenade  
Machine Gun**

**PM SMALL ARMS**



**M249 SAW**



**M4 Modular Weapon System**

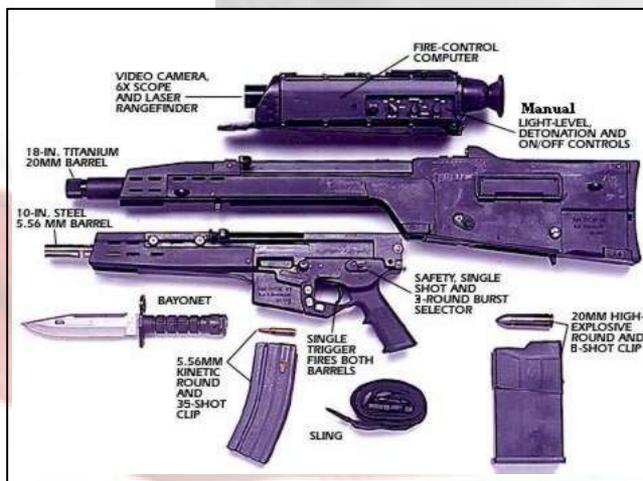
**ACAT III**



# PRODUCT MANAGER OBJECTIVE INDIVIDUAL COMBAT WEAPON (OICW)



Three different 20mm ammunition types for the OICW. From Left to Right: Bursting munition, High Explosive, Target Practice



ACAT II



# **ASSISTANT PRODUCT MANAGER OBJECTIVE CREW SERVED WEAPON (OCSW)**



**Program in S&T and will transition to  
PM Soldier Weapons in FY04**



# Championing The Soldier As A System Implementing The Two Teams (ICT & WG)

Described In The Soldier Systems Architecture  
(Operational, Functional, Physical, Technical)

## User Requirements

Lethality  
Survivability  
Mobility  
Sustainability  
Reliability  
(Specific Schools)

ICT



## Developer Products

Land Warrior  
Air Warrior  
Mounted Warrior  
•  
Objective Force Warrior  
(Specific Platform IPTs)

WG



ICT

WG



### Step One:

Build The Soldier System Architecture (Operational, Functional, Physical, And Technical) & Update As Required Via ICT & WG

### Step Two:

Institute The Repetitive User And Developer, Integrated Processes For Using The Architecture – User ICT & Developer Working Group!

The Soldier Systems Architecture

With

System-Level Configuration Management

Allows

**Acceptable System Performance @ Reduced Cost & Schedule!**

# *Objective Force System of Systems*

## *Soldier-Centric Architecture*

**Objective Force  
System of Systems  
Based On A  
Soldier-Centric  
Architecture**

**Future Combat System (FCS)  
Objective Force Warrior (OFW)**

**FCSS**

**Integration Of  
Hardware  
Software  
Soldiers**

**Hardware  
Software  
Legacy  
Systems  
Architecture**

**The Operational-Functional Reference Model For  
The Objective Force Architecture Integrates Vehicle  
And Soldier Sub-Systems Into A Coherent, Synergistic  
System-of Systems**

**Individual  
And  
Collective  
Soldier  
Systems  
Integration**

**The  
Connected  
Soldier  
Full-Time  
Situation  
Awareness**

**Soldiers  
With  
Personal  
Equipment**



**The Overarching Objective Force Soldier-Centric Architecture Is Required To Support An Army Transformation Based On The Legacy Force Recapitalization, The Interim Force Assimilation, And The Objective Force Implementation Of Technologies As They Become Available. Only Thus Will The Objective Force Be The Stated Achievement Of The Army's Transformation Objective Based On A Soldier-Centric Architecture Capitalizing On Technology For Lethality, Speed, And Agility To Serve As A Deterrent To All Potential Adversaries By Supporting A Wide Range Of Flexible National Command Authority Options.**