

46th Test Squadron Detachment 2

War-winning Capabilities...On Time, On Cost



U.S. AIR FORCE

ECCO, (Enabling Common Cyberspace Operations).... Testing the Air Forces next Generation Cyber Ops Platform



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Overview



War-winning Capabilities...On Time, On Cost

- **46th TS Detachment 2**
- **ECCO Overview**
- **Regression Test on ECCO**
- **Future ECCO Regression Testing**
- **Benefits Regression Test Suites**

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46 TS Det 2



War-winning Capabilities...On Time, On Cost

Mission

Reduce technical risk and improve the acquisition of cyber warfare systems by conducting test and range management and operations support to the US cyber warfare community.

Vision

Be the DoD center of excellence for cyber warfare test with a cutting edge cadre of ops-savvy testers and network professionals.

Chain of Command

Air Force

AF Materiel Command

Air Force Test Center

96th Test Wing

96th Operations Group

46th Test Squadron

Key Information

-36 Personnel: 7 Mil, 11 Civ, 17 Ctr

-Mission Areas

- DT management, execution, and support**
- Cyber warfare test and training range O&M**
- Ops support – manpower and facilities**

Organizations Supported

- AFLCMC Network Warfare Systems Branch***
- 24th Air Force***
- 67th Network Warfare Group***
- 346th Test Squadron***
- Air Force Network Program Office**
- Joint Partners**
- AFRL Info Dominance Directorate**
- * Collocated in San Antonio**

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Customers & Level of Support

War-winning Capabilities...On Time, On Cost

- **AFLCMC Network Warfare systems Branch**
 - Developmental testing on all acquisitions programs delivered by SPO
- **24th Air Force and subordinate units**
 - Developmental testing and range environments
- **346th Test Squadron**
 - Range infrastructure co-use
 - Combined developmental and operational testing and environments
- **AFLCMC Cyber Integration Division**
 - Developmental testing for Cyber Integration Division programs
 - Developmental testing and environments
- **Joint Partners**
 - Developmental testing

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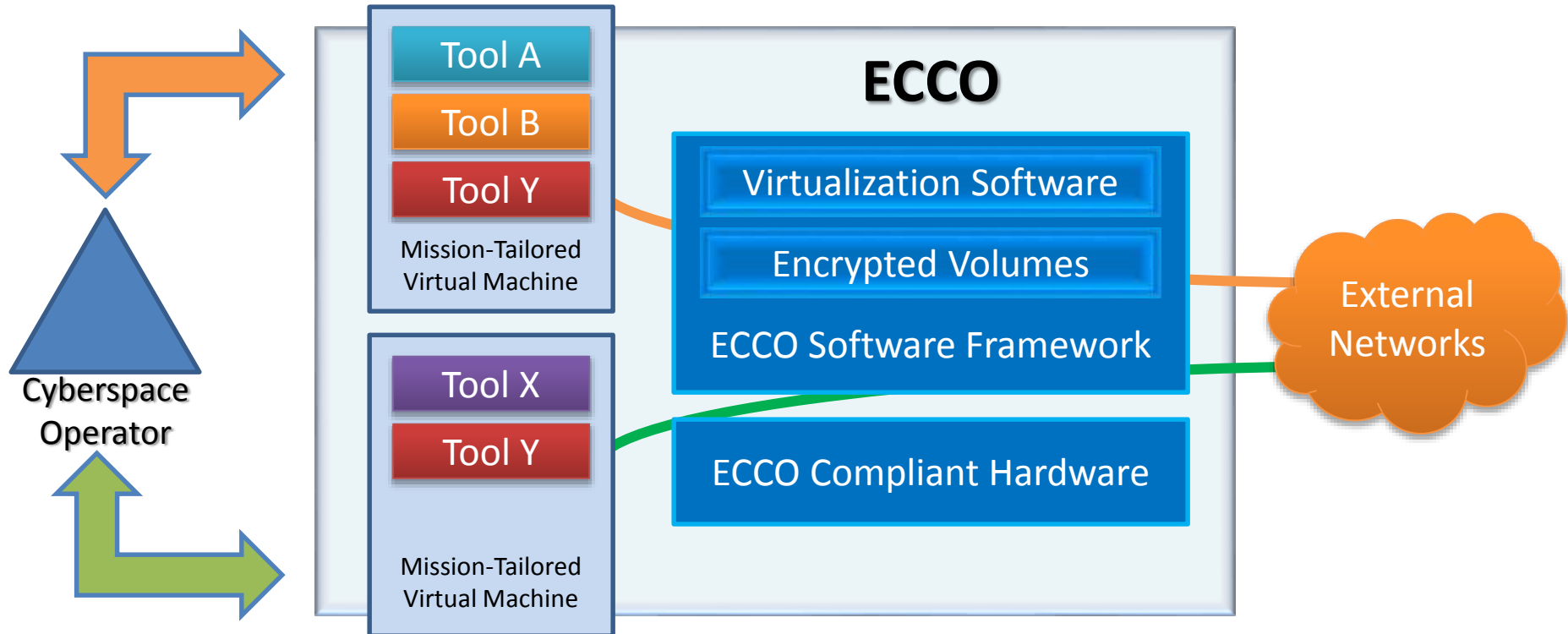


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ECCO Overview



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- ECCO is a foundational GOTS platform designed to be hardware independent
 - high confidence is required, all hardware outside baseline must be tested
- ECCO is an execution platform that supports the use of multiple tools running in individually configured VMs
- ECCO takes special consideration for security
 - ECCO is unable to make any network connections without using a VM

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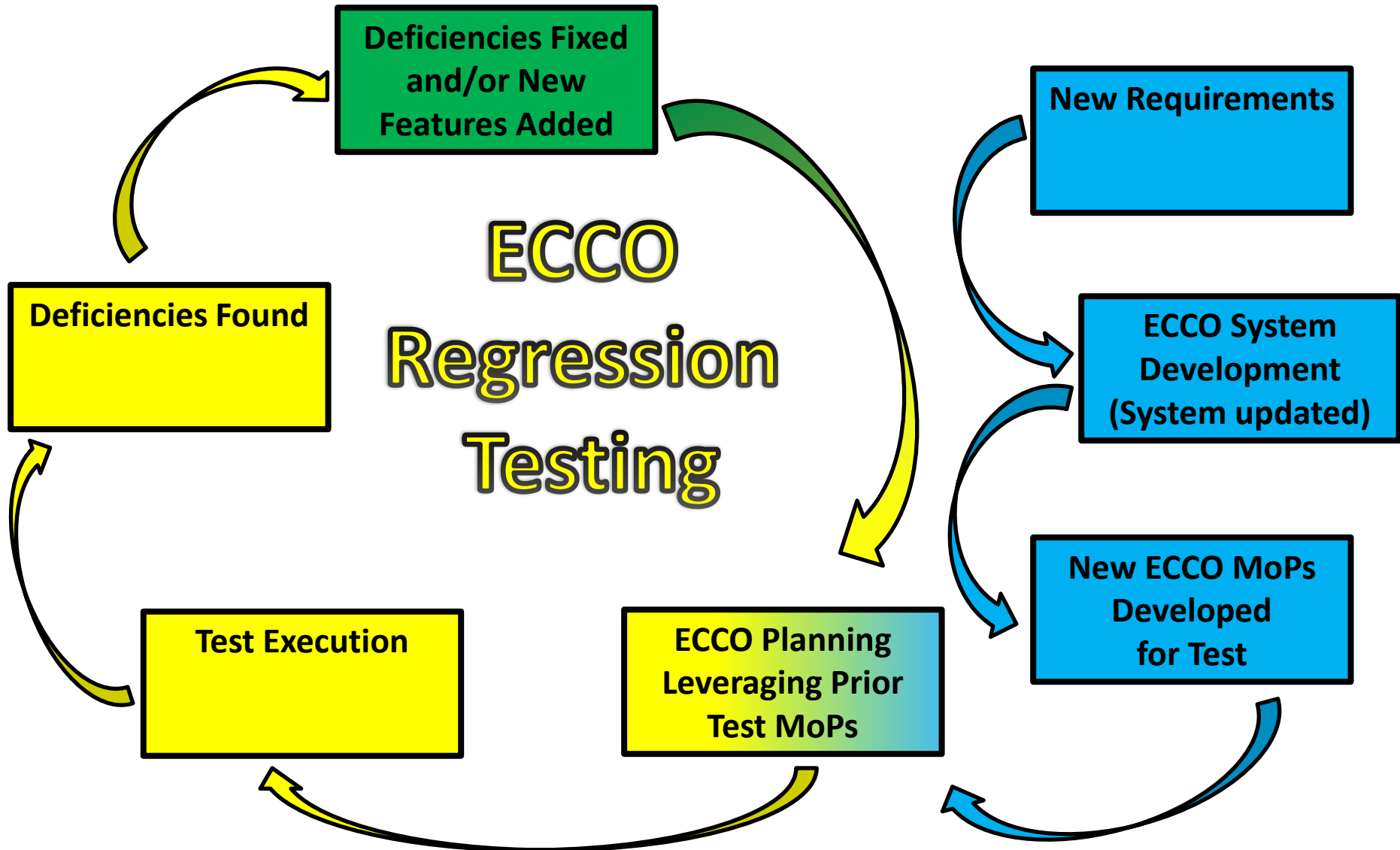


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ECCO Regression Testing



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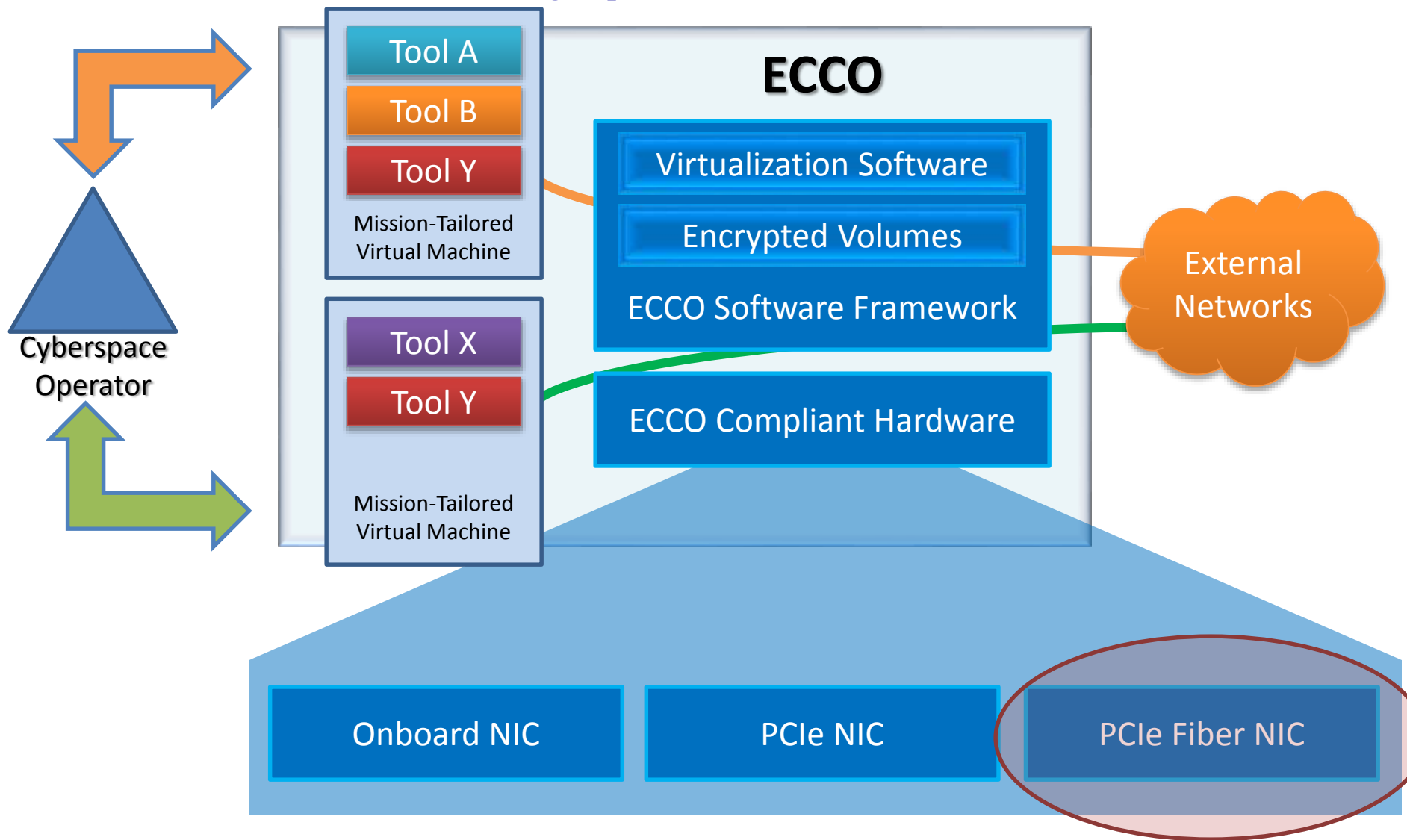


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NIC Regression Test

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Regression Test on ECCO



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- **Demonstrated Fiber NICs Requirements**
- **Tested using applicable MoPs from previous ECCO DT**
 - **Demonstrated the New Fiber NIC did not degrade existing functionality on the ECCO System**
- **Tested existing Ethernet Communication effectiveness with the addition of the Fiber NIC**
 - **Confirmed to the user the Fiber NIC did not adversely affect layer 2 or higher communication**

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Future ECCO Regression Testing



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- **Develop ECCO Regression Test Suites:**
 - **Test Suites include pre-canned Test Plan and Test Cases with MoPs from past DTs**
 - **TE uses past MoPs that are applicable to Regression Test**
 - **TE adds New MoPs with selected MoPs**
 - **TE uses Test Cases with MoPs applicable to Regression Test Scope**
 - **TE Executes pre-canned Test Cases with added New MoPs from new system fixes and/or features**

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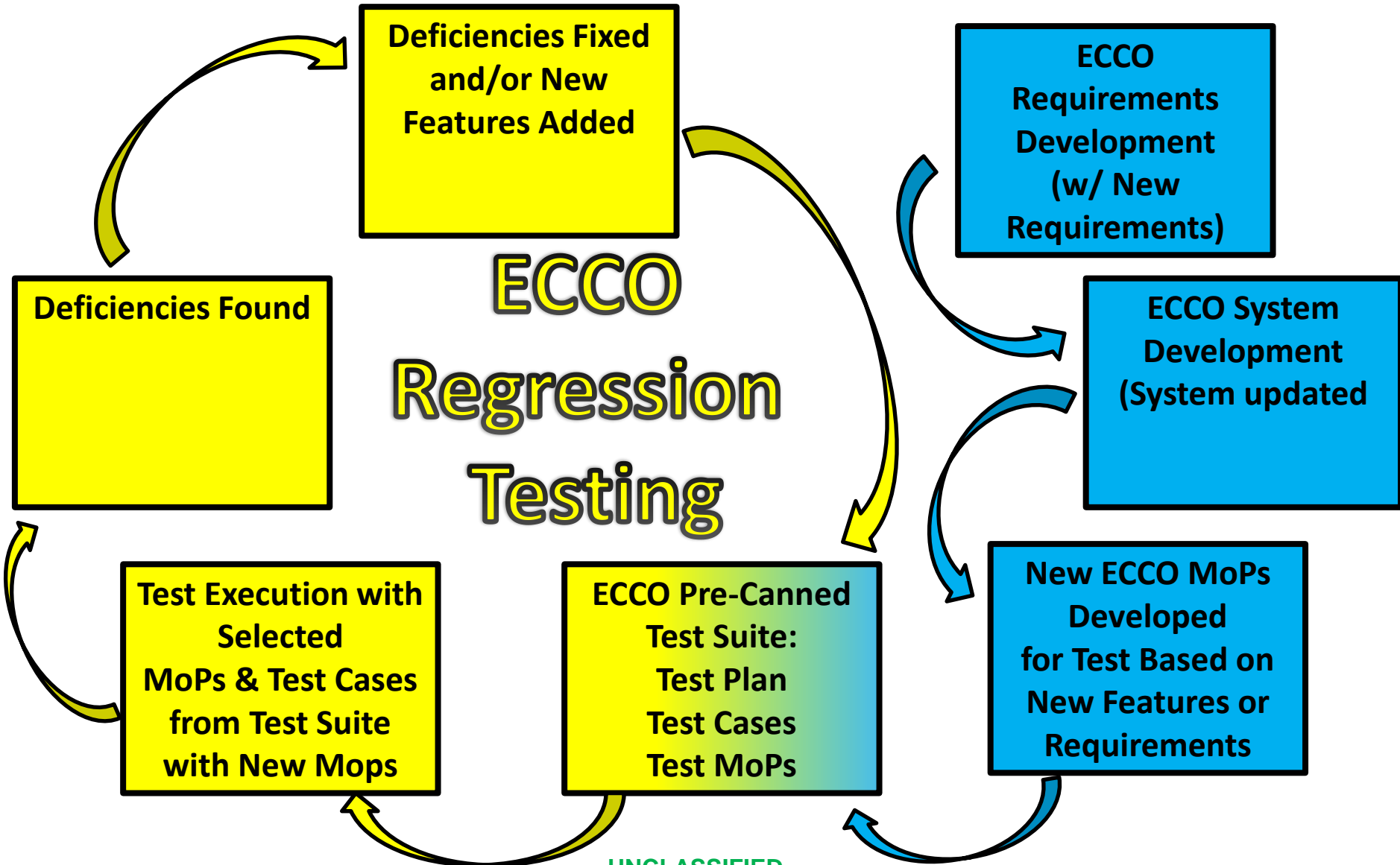


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Future ECCO Regression Testing

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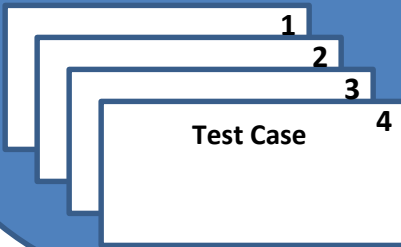
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Future ECCO Regression Testing

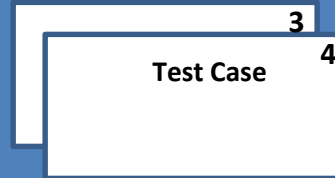


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Pre-Canned Test Cases w/
applicable MoPs

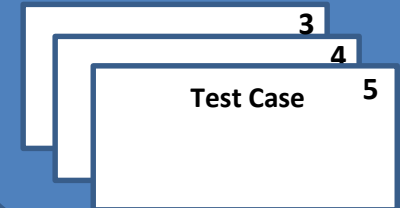


TE Selects Test Cases w/
applicable MoPs
for Regression Test Scope



New MoPs added to
Test Suite Based on
New Requirements or
System Fixes

New MoPs added to
Selected Test Cases



Execute Regression Test

Regression Test Suite: Test Cases

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Benefits Regression Test Suites



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- **Saves Man Hours of Re-developing Objectives, MoPs, Test Cases, and Test Plan**
- **Saves Time and Reduces Test Schedules**
- **Rapid Testing for Quick Operational Needs**

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Questions???