Milestone C
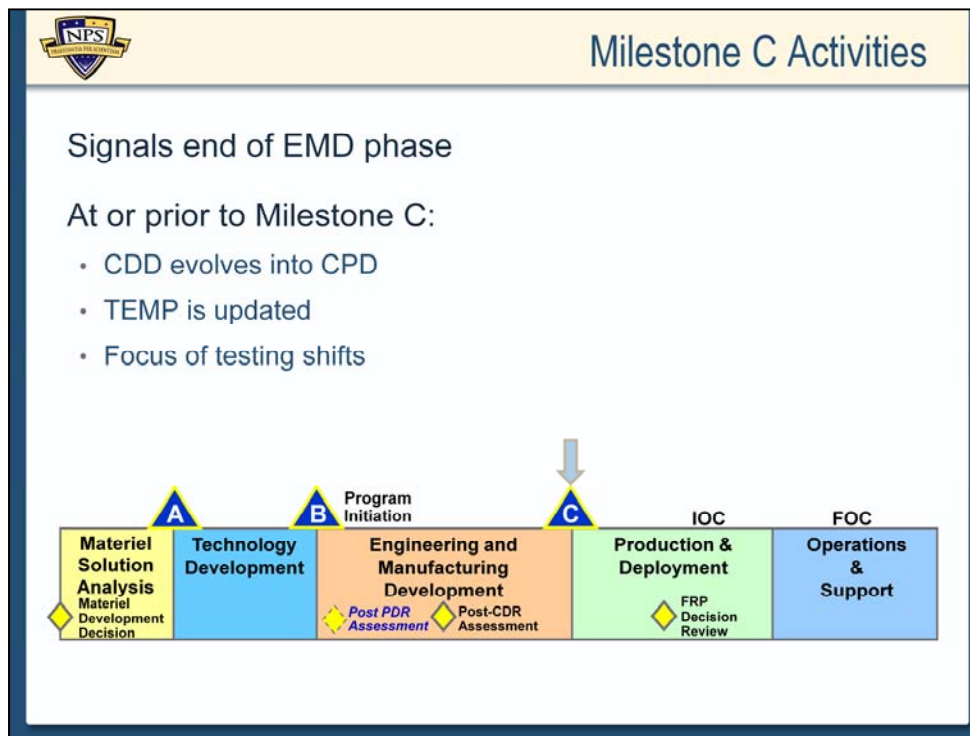
Lawrence G. Shattuck, Ph.D
Director, Human Systems Integration Program
Naval Postgraduate School

Milestone C Activities

Signals end of EMD phase

At or prior to Milestone C:
- CDD evolves into CPD
- TEMP is updated
- Focus of testing shifts

The Engineering and Manufacturing Development phase ends when the Milestone Decision Authority (or MDA) makes a determination that the program is ready to proceed to the Production and Deployment phase.
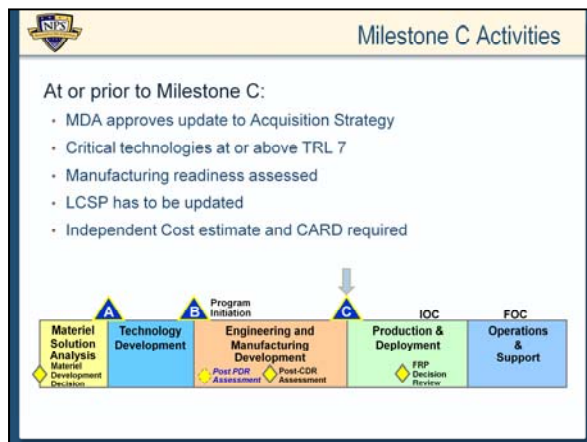
Milestone C signals the end of the EMD phase. At this point, trial capabilities are available for demonstration and testing, the system satisfies the approved requirements, and the system meets or exceeds the exit criteria that were established at the Milestone B review.

In addition to these things, there are several other things that have to happen in order for there to be a successful Milestone C Review.

The Capability Development Document has to evolve into the Capability Production Document. This is the final step in the capabilities refinement process. The CPD describes the refined operational capabilities and system performance expected from the production articles.

Prior to the Milestone C Review, the Test and Evaluation Master Plan (or TEMP) has to be updated.

At Milestone C, the technical testing begins to focus on production testing to demonstrate performance of the production system. Operational testing focuses on evaluating the Low-Rate Initial Production system's operational effectiveness, suitability, survivability, and mission capability.

The Milestone Decision Authority has to approve the update to the Acquisition Strategy prior to the Milestone C Review. The revised Acquisition Strategy should describe what has to be done to move from an EMD manufacturing environment to Low Rate Initial Production.

By Milestone C, any critical technology elements have to be at least at a Technology Readiness Level of 7 or better. To be given a TRL of 7, the system prototype has to be demonstrated in an operational environment. The system has to be at or near the scale of the operational system. Most of the functions need to be available for demonstration and test. And, the system has to be integrated with collateral and ancillary systems.

At Milestone C, the manufacturing readiness has to be assessed. This assessment should include the following things:

> Industrial base viability
>
> Design stability
>
> Process maturity
>
> Supply chain management
>
> Quality management
>
> Facilities
>
> And, manufacturing skill availability.

By Milestone C, the Life Cycle Sustainment Plan, including the Product Support Package, has to be updated. The Package should describe in detail how it will ensure the system meets readiness and performance objectives, lowers total ownership cost, reduces risks, and avoids harm to the environment and human health.

And, an independent cost estimate is required at Milestone C for all ACAT I programs. And while we're on the subject of cost, DoD Instruction 5000.02 specifies that for major defense acquisition programs, a Cost Analysis Requirements Description (or CARD) is also required for Milestone C.