

# MASTER OF SCIENCE IN PRODUCT DEVELOPMENT

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## **THE SUNSET SUPPLY BASE: LONG TERM COTS SUPPORTABILITY, IMPLEMENTING AFFORDABLE METHODS AND PROCESSES**

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This thesis represents a cross Systems Command (NAVSEA/NAVAIR) developed product. The product, the Sunset Supply Base (SSB) system, provides a complete system for addressing the risks and supportability issues involved with Commercial-Off-the-Shelf (COTS) products in Navy combat and support systems. The SSB system was implemented on three Navy combat weapon systems at various phases of the product development life cycle. The main body provides the Program Management Offices (PMO) and other decision makers with a high level summary of performance expectations. The Sunset Supply Base Architecture identifies at a high level of abstraction a collaborative architecture providing a roadmap for design and development of the SSB system. The Systems Engineering Development and Implementation (SEDI) plan is a prescriptive or "How To" manual describing activities that have been used to successfully implement the SSB system. Business Case Analysis (BCA) presents the data collected as a result of SEDI plan implementation, then addresses the business/programmatic attributes showing the viability and value proposition possible through the SSB system. The Marketing Plan for the SSB system defines methods and practices necessary to establish the SSB system as the alternative of choice.

**KEYWORDS:** Commercial-Off-the-Shelf, COTS, Non Development Item, NDI, Supportability, Life Cycle Cost, LCC, Sunset Supply Base, SSB, Systems Architecture, Systems Engineering Development and Implementation Plan, SEDI, Business Case Analysis, BCA, Marketing Plan, Life Cycle Management, Diminishing Manufacturing Sources and Material Shortages, DMSMS, Risk Management, Collaboration, Partnering, Teaming, Tools, Methods, Processes, SWOT Analysis, Sustainability, Financial Impacts, Sunset Supplier, Original Equipment Manufacturer, OEM, PD-21