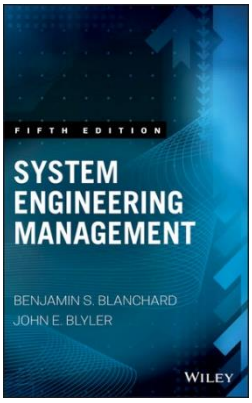
PM WORLD BOOK REVIEW



Book Title: ***Systems Engineering Management, Fifth Edition***

Authors: Benjamin S. Blanchard, John E. Blyler

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Reviewer: **Oluwasegun Odetola**

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Introduction

I chose the fifth edition of Systems Engineering Management by Benjamin S. Blanchard and John E. Blyler for this book review as I am interested in systems engineering and I must state that this is one of the most engaging technical books I have read in a long time. It is very well written and can be easily understood by professionals as well as college students. It reflects the expertise and experience of the authors in real world and academic applications of systems engineering. This is a book that should be in the library of every systems engineering department and project management professional who desire to know how systems operate and how to handle the ever-increasing complexities of new systems. The reader is guided from the definition of systems engineering to system engineering requirements and the design process through program planning to system engineering program evaluation.

Overview of Book Structure

The book is broken into eight chapters which take readers through the entire system engineering process.

1) **Introduction to Systems Engineering**: The first chapter lays the groundwork for the book by defining what a system is, identifying challenges in current systems' environments and outlining the need for system engineering and this chapter achieves the aim of equipping the reader with a thorough understanding of what system engineering means.

2) **The System Engineering Process:** The second chapter explains the problem identification process and how to gather deficiencies together to form the basis for needs analysis by asking a set of simple questions such as, "what is required of the system, stated in functional terms?" and "what specific functions must the system accomplish?". The authors also delve into system feasibility analysis, system operational requirements, the logistics and

maintenance support concept, identification and prioritization of technical performance measures, the design integration process, system test and evaluation, production and retirement in this chapter and inasmuch as this chapter does not pick a particular discipline for exhaustive examination it explains how any engineering discipline can integrate different disciplines required for integration in a system .

3) **System Design Requirements:** Chapter 3 takes the reader through development of systems requirements and specifications for various disciplines such as software engineering, manufacturing and production engineering and the integration and interoperability of systems interfaces and it achieves its aim of giving the reader a clear understanding of system design requirements.

4) **Engineering Design Methods and Tools:** The fourth chapter reviews current and conventional design practices and computer aided design, manufacturing and support and how system engineering objectives can be met.

5) **Design Review and Evaluation:** In chapter five the authors describe the design review and evaluation process describing how systems engineering requirements are established in order to validate systems design, what constitutes formal design review, the design change and system modification process as well as supplier review and evaluation and explain the need for proper monitoring and control of systems throughout the system engineering process. The emphasis on proper system monitoring and control throughout the system engineering process is valid and as noted failing to properly monitor a system could be costly.

6) **System Engineering Program Planning:** This chapter details the system engineering program planning process and takes the reader through system engineering program requirements, system engineering management plan, determination of outsourcing requirements, integration of design specialty plans and the risk management plan. It details what needs to be considered in drawing up a system engineering management plan and it is very exhaustive in detailing these out. This chapter could be used to easily validate the required contents of a system engineering plan.

7) **Organization for Systems Engineering:** In this chapter, the reader is taken through developing organizational structures, customer, producer and supplier relationships, customer organization and functions, producer organization and functions, supplier organization and functions as well as human resource requirements.

8) **System Engineering Program Evaluation:** This chapter takes the reader through the process of evaluating the system and how the results are reported and evaluating the changes that may need to be made based on the reports.

It emphasizes the need for feedback which I believe is very important in project and system environments.

Highlights

This book takes the reader through the processes for system engineering management and reveals the experience of the authors in system engineering and clearly outlines what is required to be known about system engineering in simple terms. It defines in clear terms what system engineering is about, it explains the requirements gathering process and enables anyone in project management and system engineering to be able to pick up the book and apply its principles in real time to ongoing projects.

Who might benefit

This book will be highly beneficial to project management professionals in information technology as well as any industry where systems need to be integrated to achieve a goal, and students who want to master the science of systems engineering. It takes the reader through gathering requirements, planning, metrics and reporting and how these can be integrated to achieve project goals.

Conclusion

The fifth edition of Systems Engineering Management is a well written book which every project management professional should endeavor to read. For the project management professional, it guides the reader through the software development life cycle and how planning and reporting integrates with this in a holistic manner. This book is a testament to the experience and brilliance of the authors in bringing systems engineering management to the level where it can be understood by all professionals who aspire to be successful systems engineering and project managers.

For more about this book, go to: http://www.wiley.com/WileyCDA/WileyTitle/productCd-111904782X.html

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About the Reviewer

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Oluwasegun Odetola is a project management professional with experience managing projects to achieve higher than expected goals. He holds a bachelor's degree in Mechanical Engineering and a master's degree in Project Management and became a certified Project Management Professional in 2012. He has over 14 years of experience in roles in Project Management, Information Technology, Engineering and Manufacturing. Oluwasegun is a member of the Project Management Institute, Dallas chapter. He can be reached at laniodetola@gmail.com.