A 3-day Systems Engineering/Lifecycle Management Course

Course Description

Systems Engineering is concerned with the engineering of products, processes and services that are too complex to be adequately addressed by traditional design approaches. Integral to systems engineering is the governance and management of the overall project or programme. Best practice governance and management recognises that systems have a cradle to grave lifecycle, and the management of that lifecycle is a key determiner of overall success. In simple terms, Lifecycle Management is about looking after that life, particularly the early concept creation and design stages where a little thought early can be highly beneficial later on. The prime benefit of Lifecycle Management is the control of risk particularly on the development of long timescale, expensive complex systems. When integrated with Systems Engineering processes and tools, it is proven to be the most successful way to design, develop, realise, operate and support systems, whether product, service or software based.

This 3-day course introduces the concepts and principles of Lifecycle Management, bringing them to life through an engaging case study project. The course highlights the engineering lifecycle and the roles of reviews in controlling risk at key stages. It teaches people both sides of the fence, reviewer and reviewee, and gives every participant an opportunity to conduct their first review.

Who Should Attend?

This course applies to personnel involved in engineering of new systems and the review processes.

Benefits to the Individual and Business

During an intensive three days of teaching and practical 'hands on' exercises, participants will be challenged to develop the skills and mindset that can be applied to any situation irrespective of context.

At the end of the course participants will:

- Understanding of the concepts and principles of Lifecycle Management including risk, uncertainty and maturity.
- Understand the generic system lifecycle and relate it to their organization's lifecycle.
- Understand the necessary integration of Systems Engineering and Lifecycle Management.
- Understand the role and principles of review in the lifecycle, the purpose, context and outcomes of reviews.
- Recognise the need for different types of review and how they feed maturity and risk management
- Have an understanding of the need to tailor Lifecycle Management to the particular project or programme.
- Have followed the generic lifecycle and have practiced:
  o generating evidence for a review
  o being reviewed
  o being a reviewer
  o appreciate the implications of Lifecycle Management on their organization.

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Learning Approach

The learning approach is based on the Kolb learning cycle with a significant proportion of the course set aside for exercises to reinforce the learning. Indeed, the course employs a number of small group exercises involving a case study to provide a practical focus for the course and enables the delegates to practise the methodology and tools.

Course Structure

Day 1	Day 2	Day 3
Introduction and Delegate expectations System Lifecycles and the Principles of Lifecycle Management (LCM) An introduction to Systems Engineering processes and the V Diagram A Systems Approach to Managing Risk Reviews, purpose and types Engineering Management in Life Cycle Management	Day 1 Review Systems Engineering and LCM Demonstration Exercise Project start up Gathering Requirements Exploring Solution Concepts Bid-no bid Decision and review Project Mobilisation and review Maturing Requirements Maturing Solution Preliminary Design Review	Day 1 and 2 Review Detailed Design and Critical Design Review Integration and Test and preparing for Manufacture and review First Article Qualification Review Progression to full-scale production and the Acceptance process and Review Engineering Planning and Tailoring Summary and Close

Course Delivery

The course has been designed for minimum numbers of 8 and maximum of 16 and can be delivered on site or at a suitable venue.

Course Costs

The cost of delivering the 3-day course, excluding delivery tutor accommodation and expenses, but including all courseware is £5,000. VAT will apply at the prevailing rate.

The course can be tailored to suit individual customer's operations.

More Information and Contact Details

For more information about the 3-day Course in Lifecycle Management or any of our other Systems Engineering courses please contact **Dr Stuart Burge** on +44 (0) 7803 131614 or
sburge@burgehugheswalsh.co.uk.