

REQUIREMENTS MANAGEMENT

WITH SYNTHESYS TECHNOLOGIES

*GET IT RIGHT FIRST TIME WITH
A SUPPLIER YOU CAN TRUST*



SyntheSys
TECHNOLOGIES

Requirements Management: Fundamental to Successful Collaborative Engineering

Requirements Management can be defined as the subset of systems engineering concerned with discovering, developing, tracing, analysing, qualifying, communicating, planning, monitoring and controlling requirements that define the system at successive levels of abstraction.

Stakeholder requirements drive the quality of your end product. In the growing face of complexity, systems engineers are faced with the challenge of managing an increasing number of requirements as an essential component of engineering development. Developing and maintaining good requirements management practices is no mean feat but it controls projects, mitigates risk and reduces cost.

Getting stakeholders to articulate their needs can be a difficult and lengthy process. Half the time – even more if the buyer isn't the same person as the one with the technical need – they don't even know what they want themselves. No process can pull information out of the void when it doesn't exist, but systems engineering takes a robust and scientific approach to requirements management that cleanly and specifically identifies ambiguities and gaps in stated stakeholder needs.

The best way to get a straight answer is to ask a straight question, and the systems engineering process is very good at generating straight questions. Working with vague or incomplete requirements doesn't just lead to a risk of building the wrong product, it can risk building the right product badly, too. Effective projects run individual management tasks rigorously and efficiently, and the ability to follow a rigorous process is severely hindered by a lack of robust inputs. Problems that arise in this way only multiply over time, as knock-on effects are generated and start introducing chaos of their own.

INTRODUCTION



Specialists in Requirements Management

"With years of experience in assisting key players in the Defence, Automotive, Rail and Energy sectors to improve, enhance and automate Requirements Management procedures, SyntheSys offers a blend of training, engineering development tools and consultancy services which enable organisations to formulate, maintain and improve good Requirements Management practices."

MARK WILLIAMSON, MANAGING DIRECTOR



A SPECIALIST SERVICE

Gold
Business
Partner



Tool-Supported Requirements Management

We specialise in tool-supported systems engineering – providing our customers with affordable systems engineering tools to increase their efficiency and effectiveness in delivering solutions to their customers.

As an IBM® Gold Business Partner, SyntheSys provides a unique blend of application knowledge, experience and a flexible delivery mechanism, which provides customers with the right software solution and a deeper understanding of the tools to ensure maximum benefit.

Our ability to work with IBM® to distribute Engineering Lifecycle Management software is built on a firm foundation of industry know-how and extensive knowledge of the engineering tools, enabling us to distribute the tools in a value-added way.

Our services offering stretches much further than the deployment of technology.

IBM® PARTNERS

Flexible Licences, Integration and Extension Options

Providing effective ways to manage requirements, improve staff efficiency and reduce unnecessary re-work with the following tools:



IBM® Engineering
Requirements
Management DOORS®
Family

IBM® Engineering
Requirements
Management DOORS®
Next

IBM® Requirements
Quality Assistant

LICENCES, INTEGRATION & EXTENSION

IBM® Engineering Requirements Management DOORS® Family

IBM® DOORS® Family is a Requirements Management application which provides an effective way to manage requirements, improves efficiency and enhances overall project output.

The tool automates the requirements management process and enables your teams to concentrate on building the right product, not spending time on manual tasks and rework. This scalable solution provides functionality which allows teams to communicate, document, collaborate and verify stakeholder requirements whilst handling real-time version control and change management.

At a Glance

- Improves the overall quality of the systems and software you deliver to your customers.
- Facilitates collaboration by providing transparency throughout the development process.
- Effective change notification allows you to analyse and administer change management.
- Enables you to respond to changes to requirements in a more controlled, effective way.
- Helps you to provide evidence of regulatory compliance.
- Integrates seamlessly into your development, test and design environments and creates a level of traceability throughout the life cycle.

DOORS® FAMILY

IBM® Engineering Requirements Management DOORS® Next

DOORS® Next delivers a similar Requirements Management capability as DOORS® Family whilst presenting alternative implementation and strategic opportunities for engineering design, development and test teams.

Available both in the cloud and on-premise, DOORS® Next automates the administration and management of your stakeholder requirements whilst providing a traceability across the life cycle.

The application provides a scalable solution and can be used at enterprise level with ease whilst also integrating with other tools.

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DOORS® NEXT

IBM® Requirements Quality Assistant

Reduce the cost of defects by up to 60% and cost of manual reviews by 25%*

Poor requirements can cost engineering projects dearly and account for a sizeable amount of engineering errors. As evidence shows, the cost of resolving engineering errors increases in the later stages of the project, and writing good requirements in the first instance is one of the main ways to avoid costly re-work.

IBM® Requirements Quality Assistant cultivates Watson AI, combined with International Council On Systems Engineering (INCOSE) best practice, to assess the quality of your requirements as you are writing them to ensure your writing is clear, concise and complete. The tool captures errors in real time to ensure you are getting it right first time and is proven to dramatically improve the quality and clarity of project requirements.

**data provided by IBM®*

At a Glance

- Based on INCOSE Best Practice.
- Used in conjunction with DOORS® Family and DOORS® Next.
- Can be used as a training aid.
- Accelerate time to market by resolving errors early.
- Fully configurable and easy to use.

REQUIREMENTS QUALITY ASSISTANT

Requirements Management Tool Training and Consultancy

We offer specialist training in the adoption, implementation and acceleration of IBM® Engineering Lifecycle Management tools.

Our training solutions empower organisations to release the full value of their software investment by teaching teams how to implement, effectively use, and maximise benefits from IBM® Engineering Lifecycle Management tools.

Our training solutions are always job-specific, and we offer advice on best-practice application of the IBM® software to real-world product development.

Our trainers are some of the leading IBM® Engineering Lifecycle Management software specialists in the UK.

Tool Training Information Sheets

IBM® Engineering Requirements Management DOORS® Family

Visit: <https://bit.ly/37MI595>

IBM® Engineering Requirements Management DOORS® Next

Visit: <https://bit.ly/37Oj7WH>

TOOL TRAINING AND CONSULTANCY

Requirements Writing Training Course

Provides students with the knowledge and techniques needed to create clear, concise and correct requirements

This one-day course aims to provide students with the techniques necessary for the creation of clear, concise and correct requirements, independent of specific requirements management tools. Best practice is drawn from the International Council on Systems Engineering (INCOSE) handbook and the INCOSE guide for writing requirements.

The creation of accurate requirements, traceable across the systems engineering life cycle, is critical for successful projects, with associated verification and validation grounded against high quality requirements.

The course covers the topics shown right, and can be delivered, if necessary, as an online instructor-led delivery.

For prices, further information or to book on this course, please email: training.sys-eng@synthesys.co.uk

At a Glance

- A 1-day course delivered either on customer site or as part of our scheduled course
- Draws on best practices from the INCOSE Systems Engineering handbook, and the processes within
- Provides students with the knowledge and techniques needed to create clear, concise and correct requirements
- Delivered by an INCOSE Systems Engineering professional

We take a tailored approach whereby we hold this course on request at a time and venue of your convenience.

Course material can also be tailored to suit your exact requirements.

This course can be bolted on to other training or delivered online.

REQUIREMENTS WRITING TRAINING

A Fast Route to Self-Sufficiency

SyntheSys' Quickstart service focuses on rapid adoption of the DOORS® Family and DOORS® Next software solutions.

Based on best practices, the service helps customers achieve their communication, collaboration, compliance and verification objectives. The service accelerates the deployment of DOORS® Family and DOORS® Next.

This service reduces the time to self-sufficiency within the tool by creating a repeatable model for future projects, delivering an architecture that is ready for immediate use; one that supports the customer life cycle.



QUICK START SERVICE



IBM® Engineering Lifecycle Management Health Check Service

Respond to the changing needs of your engineering operation with our healthcheck service.

This comprehensive and thorough review with a specialist application consultant, shines a spotlight on your current implementation and associated mechanisms, to provide confidence and evidence that your software investment is fully optimised, together with recommendations for improvement.

For sales, services and technical queries:

call +44(0)1947 821464 | email: cet@synthesys.co.uk | visit: www.synthesys-technologies.co.uk | follow: <https://bit.ly/38XLkMv>

HEALTH CHECK SERVICE

Making Things Happen



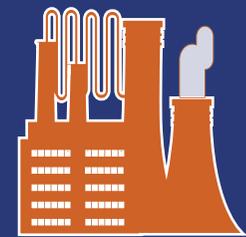
JAGUAR LAND ROVER

SyntheSys trains over 800 Jaguar Land Rover employees on defining and managing requirements.
[\[Read more\]](#)



NETWORK RAIL

SyntheSys completes an upgrade of Requirements Management software at Network Rail.
[\[Read more\]](#)



SUCCESS IN THE NUCLEAR INDUSTRY

Requirements meets Verification and Validation.
[\[Read more\]](#)



Transport for London (TfL)

MAKING REQUIREMENTS PRIORITY

The complex nature of TfL's major projects means that robust requirements management is essential to success.

[\[Read more\]](#)

TOOL-SUPPORTED ENGINEERING WINS

IBM® DOORS® Family is an integral part of the requirements management process on TfL's most complex projects, providing baselining, configuration control and the ability to link related information to each other.



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**LET'S
TALK**



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