

THE IN-HOUSE TRAINING COMPANY

R&D project management

Introduction

R&D work is often carried out in entrepreneurial companies with the aim of developing solutions to scientific or technological problems for a wide range of customers. Projects can include longer term 'frontiers of science' research, medium term product development/manufacturing or more immediate troubleshooting or contract research assignments.

In all these contexts, the ability to create innovative solutions in a timely and cost-effective manner is the essence of successful R&D. Whilst R&D groups typically excel in technical expertise, those involved often recognise that there is scope for improving the way that projects are managed. The aim of this training programme is to address this need whilst ensuring that the creative, entrepreneurial spirit that is fundamental to good R&D continues to flourish.

Programme structure

The content and format of this workshop has been developed specifically for the R&D environment and will show how project management methods, tools and techniques can be deployed to help deliver results without stifling creativity. It incorporates the 3D-PM® methodology that has been developed to help teams clarify project objectives and priorities, reduce time and cost uncertainties, improve cross-functional teamwork and deliver results more successfully.

The workshop will cover the key topics for successfully managing R&D projects, including:

- key ingredients for the successful management of R&D projects
- project initiation, definition and stakeholder management
- project planning and risk management
- project implementation, control and change management
- leadership and teamworking in R&D projects

Whilst the workshop will not present company specific procedures for managing projects, the discussion of current practice relating to the topics being presented will be encouraged.

The 'hybrid' programme comprises the following elements:

- Intro session (on-line) – 1 hour, about two weeks before the F2F training
- Pre-course – preparatory self-study using videos and exercises covering the content of Modules 1 & 4, comprising about 2 hours self-study in total
- 2 days interactive F2F incorporating short reviews of Modules 1 and 4, plus in-depth coverage of Modules 2,3,5 & 6

Training objectives

This programme will be particularly useful to scientists, engineers, technical specialists, project leaders and other personnel who are involved in or responsible for managing projects in an R&D environment. Participants will benefit from a sound foundation in the core principles and techniques of project management in an R&D environment.

The principal objectives of the R&D project management workshop are to present and explain:

The principal objectives of the workshop are to present and explain:

- the key principles of successful project management in an R&D environment
- a structured, generic methodology for managing R&D projects
- techniques for managing the initiation and definition stages of the project lifecycle with particular emphasis on how to manage the key decisions during these stages
- a range of useful project management tools and techniques for project planning, risk management, project tracking and control
- some helpful models for supporting the development of team performance

Programme benefits

At the end of this modular R&D project management training programme, attendees will have:

- acquired a good understanding of the key principles of R&D project management
- gained a greater level of confidence in managing their R&D projects
- increased their ability to use project management tools and techniques in their work
- defined some immediate actions to improve performance on current projects
- identified some key areas for personal skill development in project management

Course format

This R&D project management training programme can be delivered as a two-day classroom session, on-site. Increasingly, however, we find that clients prefer John's unique mix of Zoom sessions and video 'tutorials', so it's that version of the programme that we show here.

The programme comprises six modules. The first and fourth are video tutorials, designed to support personal study of the topics concerned. The other modules are live interactive tutorials (using Zoom), interspersed with discussions and group exercises to enable participants to relate the topics being presented to their current projects.

Each module comprises two sessions as set out in the programme; whilst session timings are fixed, there may be some adjustment to detailed content to match the specific needs and interests of participants.

Trainer profile



John de Newtown BSc, MSc, CEng, MIMechE, MInstP, MAPM is an independent consultant specialising in project and change management. He established his consultancy practice in 1990, following 20 years of industrial management experience and has extensive experience of designing and delivering management training and team development programmes.

John works with a wide range of international organisations in sectors including Engineering, Pharmaceuticals, Bio-Sciences, Manufacturing, Construction, Defence, IS/IT and Education. He has worked extensively with some of the world's top high-tech organisations including their R&D, product development, engineering, operations and IT functions. His extensive knowledge of project management combined with technical and presentational skills enables him to engage and build rapport with technical audiences of all types.

Before setting up his consultancy and training business, John was a senior manager with Ilford Limited, a multi-national manufacturer of photographic products, where he held technical and team leadership roles before being appointed Manager of Engineering Development. In this role he managed a diverse portfolio of engineering R&D projects, manufacturing improvement programmes and new product development programmes. John was also involved in co-ordinating international technology transfer activities and in strategic business development within the Ilford Group.

Prior to joining Ilford Limited, John trained in the automotive industry and gained an honours degree in Applied Physics. He subsequently carried out research at the Oxford University Cryogenics Laboratory for which he was awarded an MSc in Engineering Science. He is a Chartered Engineer and holds memberships of the Institution of Mechanical Engineers, The Institute of Physics and The Association of Project Management.

Course outline

MODULE 1: **Creating the foundations for success**

- Off-line video tutorials and exercises
- Total time ~ 1 – 1.5 hours

Video 1: **Making the most of project management in R&D**



- Characterising R&D projects
- Applying project management to R&D work
- Exploiting the potential of project management in R&D

Video 2: **Promoting success in R&D project management**



- Modelling successful project management
- Evaluating performance and promoting success
- The role and skills of the project manager/leader

MODULE 2: **Initiating and defining R&D projects**

- Live interactive sessions (via Zoom):
- Session 1: 10:00 – 12:00
- Session 2: 14:00 – 15:30

Session 1: **Selecting and initiating projects**

- Recognising worthwhile opportunities; initiating projects
- Identifying stakeholders and their goals
- Characterising and engaging stakeholders

Session 2: **Defining goals and agreeing deliverables**

- Establishing the full scope of the project
- Clarifying and prioritising project deliverables
- Defining and agreeing deliverable specifications

MODULE 3: **Planning R&D projects**

- Live interactive sessions (via Zoom):
- Session 1: 10:00 – 12:00
- Session 2: 14:00 – 15:30

Session 1: **Identifying and organising activities**

- Creating effective plans; avoiding planning pitfalls
- Identifying tasks and assigning responsibilities
- Sequencing tasks and estimating durations

Session 2: Developing the timeline and resource plan

- Identifying the 'critical path'; creating a resource plan
- Dealing with estimating uncertainty
- Accelerating the programme

MODULE 4: Leadership and teamwork in R&D projects

- **Off-line** video tutorials and exercises
- Total time ~ 1 - 1.5 hours

Video 1: Working effectively in project teams



- Building teamwork in contemporary organisations
- Recognising each other's skills; building synergy
- Building good working relationships; handling conflict

Video 2: The role of the R&D project team leader



- Building teamwork: the role of leadership
- Creating an effective team culture
- Delegating work and motivating team members

MODULE 5: Managing uncertainty in R&D projects

- Live interactive sessions (via Zoom):
- Session 1: 10:00 – 12:00
- Session 2: 14:00 – 15:30

Session 1: Characterising uncertainty; identifying risks

- Exploring uncertainty; applying risk management
- Focusing the risk management process
- Identifying and defining risk events

Session 2: Managing and controlling risks to the project

- Evaluating risk events
- Selecting between risk strategies; setting contingencies
- Updating and controlling exposure to risk

MODULE 6: Implementing and controlling R&D projects

- Live interactive sessions (via Zoom):
- Session 1: 10:00 – 12:00
- Session 2: 14:00 – 15:30

Session 1: Initiating assignments and managing changes

- Creating a pro-active implementation and control culture
- Establishing effective implementation and control procedures
- Assigning work and managing changes

Session 2: Monitoring, managing and developing performance

- Adopting meaningful monitoring techniques
- Responding to problems; building performance
- Managing and controlling multiple project assignments

Any questions?

Please just give us a call on 01582 463463 – we're here to help!

Or visit www.theinhousetrainingcompany.com