SUCCESSFULLY MANAGING R&D PROJECTS

(SAMPLE PROGRAMME)

SYNOPSIS
R&D projects involve high levels of uncertainty in terms of both the desired outcomes and the best route for attaining commercially useful results. Despite the challenges involved, project management tools and techniques, appropriately deployed, can help to articulate project objectives, improve cross-functional teamwork and deliver results more successfully.

The aim of this programme is show how the key principles and techniques of successful project management can be adapted and applied effectively to R&D projects. It is designed for project managers, project team leaders and project technical staff. Delegates will typically be involved in managing R&D projects or project activities in a multi-project/multi-task environment.

The scope of the programme includes:

- key concepts and challenges for managing R&D projects
- project definition and stakeholder management
- project planning and risk management
- project control and change management
- project leadership and teamwork

TRAINING OBJECTIVES
The principal objectives of this workshop are:

- to explain the key principles required to successfully manage R&D projects
- to present a structured methodology suitable for managing R&D projects
- to define the key management roles and respective responsibilities of those involved
- to show how to apply project management concepts to the R&D context
- to demonstrate a range of useful project management tools and techniques

STYLE AND STRUCTURE
The programme takes the form of a participative workshop, using exercises, case studies and, where appropriate, delegates’ current projects to enable discussion of how principles can be implemented in practice.

The content of the programme can be adapted to present details of company procedures, systems or software specific to the organisation and to encourage discussion of them as appropriate.
PROGRAMME: DAY 1

SESSION 1

AIMS AND INTRODUCTIONS
Outline of the workshop; discussion of objectives
Delegate introductions and personal objectives

KEY CONCEPTS
The world of R&D; particular challenges of R&D projects
Projects and project management; the ‘triangle of balance’
Key phases in an R&D project lifecycle; the ‘STAR’ stage-gate process
Success and failure: the critical factors and role of the project leader
The key management roles and responsibilities

SESSION 2

INITIATING PROJECTS
Opportunity appraisal and validation; getting early decisions right
Getting organised: identifying and managing project stakeholders
Understanding and managing expectations; articulating project goals
Preparing preliminary estimates of time and cost; recognising risk
Financing the work; estimating the costs, cash flow and financial risks
Project leadership, sponsorship and team structures

SESSION 3

DEFINING PROJECTS
Developing project strategy; linking long term and short term goals
Defining the deliverables for each phase; using scope charts
Converting customer needs into a design brief; the role of specifications
Setting priorities for development; the needs/benefit matrix
Detailing the work to be done; using ‘rapid team thinking’
Defining ‘who does what’; identifying resource requirements

SESSION 4

PLANNING THE WORK
Particular problems and challenges of planning R&D work
Avoiding the classic pitfalls, especially ‘hopeless optimism’
Planning the plan: choosing an appropriate format and level of detail
Developing the programme and creating a realistic timeline
Estimating R&D activity durations, resource requirements and costs
Alternative methods for dealing with estimating uncertainties
‘Concurrent engineering’ – challenges and benefits
PROGRAMME: DAY 2

SESSION 1

REVIEW OF DAY 1
Review and consolidation of key points from DAY 1

IDENTIFYING AND MANAGING PROJECT RISKS
Understanding and defining risk; focusing on the risks that matter
Classifying risks and agreeing boundaries for risk ownership
Identifying risks (and opportunities); deciding how to best manage them
Monitoring and controlling risk exposure; keys to successful risk transfer

SESSION 2

PROJECT EXECUTION, MONITORING AND CONTROL
Initiating work assignments and mobilising resources; delegating tasks
Pro-active and re-active control – striking the right balance
Minimising ‘scope-creep’ and managing change
Creating a systematic control process; project reviews and meetings
Tracking performance; trend monitoring techniques that give early warning
Keeping the plan up-to-date; minimising the need for perpetual re-planning

SESSION 3

EXPLOITING THE RESULTS OF R&D
Defining the boundaries between R&D and operations departments
Managing the transitions between conceptual design and manufacture
Planning for scale-up; involving production departments and suppliers
Managing/supporting commissioning activities; resolving problems
Transferring know-how to operations groups; planning an exit strategy
Completing and closing projects; de-briefing the team

SESSION 4

PROJECT LEADERSHIP AND TEAMWORK
The teamwork challenges of a typical R&D multi-project environment
Defining team member roles and responsibilities; the team leader’s role
Building effective communication throughout the project team
Understanding team dynamics and building team performance
Developing and using the most appropriate project leadership style
‘Managing upwards’ – working with and influencing senior stakeholders