

ECIA

Workforce Planning

Best Practice Guide - no.5



Foreword – Workforce Planning

The ECIA Productivity Improvement Committee (EPIC) commissioned this Best Practice Guide on Workforce Planning to facilitate the sharing and utilisation of knowledge. From the information contained within the Guide, better work practices can be developed to assist with improving productivity and performance.

Throughout this document the term ‘workforce planning’ refers to the pre-planning that is necessary to identify the amount and skills makeup of labour required to undertake the work, their mobilisation to site, management whilst on site and finally their demobilisation.

In producing this Guide, an Industry group has considered best practice and made recommendations aimed at reducing or eliminating barriers to productivity.

The contents of the document are aimed at helping you understand, implement and improve on workforce planning in your organisation; information and best practice guidelines given here are intended for those responsible for undertaking planning and management of the work, but will also be of interest to employee representatives and the wider Industry.

This Guide is intended to be part of a continuous improvement process. In the future, the effectiveness of a workforce planning strategy and its implementation can be monitored against it, and the contents adjusted as working practices evolve and improve. Companies are encouraged to actively apply the best practice principles described here.

The ECIA wishes to thank the many stakeholder representatives who contributed both directly and indirectly to the production of this document. Industry support for its production is indicative of a commitment to a continuous improvement process to increase the performance and competitiveness of the UK Engineering Construction Industry.

For further information please do not hesitate to contact ecia@ecia.co.uk

Definitions

The following key terms are used in this document:

Project: Describes all aspects of a contract from conception through to completion, including site operations directly involved in the construction, Repair & Maintenance activities, as well as management and administration activities. For the purposes of this Guide, the term **Project** is interchangeable with **Site**, **Work** and **Works** in that all terms are used to describe the environment and/or activity. We have considered the whole range of activities within Engineering Construction to ensure the Guide is equally relevant to New Build and Repair & Maintenance.

Construction Programme: This refers to any plan that has a detailed method of how the project or event is going to be undertaken, how long it is going to take, the material and equipment it will need and the projected hours of labour required.

Delivery Schedule: This refers to any materials, equipment or modular units that have been purchased to undertake the work and their expected delivery times to site.

Work Breakdown Structure (WBS): This is a deliverable-orientated decomposition of a project into smaller components to allow the development of project activities which can be estimated in terms of time and cost.

Activity Programme: Normally developed to a minimum level 3, as defined in *Appendix B of Best Practice Guide 4*, showing a logical sequence of activities and their inter-dependencies.

Table of Contents

1.	Introduction	6
1.1	Background	6
1.1.1	Establishment of EPIC to Examine Best Practice	7
2.	What Did the Group Look at?	8
2.1	Terms of Reference	8
2.2	Purpose of the Guide	8
2.3	Benefits of Best Practice	9
3.	Introduction - Workforce Planning	11
3.1	Workforce Planning	11
3.1.1	General Overview of Activities	11
3.2	Roles and Responsibilities	14
4.	Planning for the Work	15
4.1	Identifying and Engaging with Stakeholders	16
4.1.1	General Recommendations and Risks	18
4.1.2	Clients	19
4.1.3	Main and 1st Tier Contractors	19
4.1.4	Trades Unions/Workforce	20
4.1.5	Subcontractors	20
4.1.6	Employment Businesses	21
4.2	Creating the Scope of Work	22
4.2.1	Recommendations and Risks	23
4.3	Establishing the Workforce Requirements	25
4.3.1	General Recommendations and Risks	25
4.3.2	Management of Peaks and Troughs	27
4.3.3	Workforce Mobilisation, Demobilisation and Histogram	28
4.3.4	Capability to Meet the Skills Requirement	29
4.4	Creating the Employment and Skills Plan	30
4.4.1	Recommendations and Risks	30
4.5	Communication	34
4.5.1	Recommendations and Risks	34
4.5.2	Communication between Employers & Trades Unions	35
4.6	Best Practice	36

5.	Implementation	37
5.1	Confirmation and Communication	38
5.1.1	Recommendations and Risks	38
5.2	Resourcing	39
5.2.1	General Recommendations and Risks	40
5.2.2	Defining the Role	40
5.2.3	Factors to consider when Resourcing	41
5.2.4	Considering the Impact of Other Projects on Labour Needs	41
5.2.5	Securing Skilled Labour	42
5.3	Recruitment	42
5.3.1	Recommendations and Risks	43
5.4	Commencing Employment	45
5.4.1	Recommendations and Risks	45
5.5	On-going Review	46
5.5.1	Monitoring the Workforce Requirements	46
5.5.2	Performance Assessment	47
5.6	Best Practice	50
6.	Workforce Demobilisation	51
6.1	Planning the Demobilisation of the Workforce	52
6.1.1	Recommendations and Risks	52
6.2	Managing the Workforce Reduction	56
6.2.1	Recommendations and Risks	56
6.3	Best Practice	58
7.	Conclusions	59
7.1	Summary of Recommendations	60
A.	Checklists for Workforce Planning	64
A.1.	Planning for the Work	64
A.2.	Implementation	65
A.3.	Workforce Demobilisation	65
B.	Abbreviations and Acronyms	66

1. Introduction

Why promote best practice to improve productivity in workforce planning?

The 'Changing to Compete' report highlighted the need to use best practice in the management of projects

Section 1 gives the background and defines the main areas of investigation for the promotion of best practice

1.1 Background

The UK Government's Review of Productivity and Skills in the UK Engineering Construction Industry ('Changing to Compete' - published in December 2009) contained a total of 13 recommendations to drive improvement in the Engineering Construction sector and thereby improve the success of future projects. A number of the recommendations related to workforce planning and form the basis of the terms of reference for this document.

The means of managing effective labour relationships to ensure project completion to time and budget has rested with the National Agreement for the Engineering Construction Industry (NAECI) since 1981. The NAECI was ground breaking when it was first introduced, and with subsequent revisions has remained the agreement of choice for Engineering Construction for more than 30 years.

Strict compliance with NAECI terms and conditions by all stakeholders is essential to an effective and successful approach to workforce planning, thus securing high levels of productivity.

1.1.1 Establishment of EPIC to Examine Best Practice

The ECIA hosted a conference in October 2011 to explore productivity performance. Following this, the ECIA Productivity Improvement Committee (EPIC) was established to look at best practice within the Industry.

The committee was tasked with three main areas:

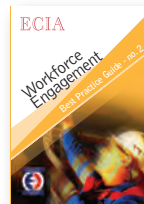
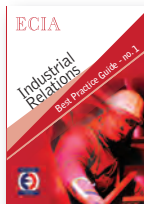
1. To identify barriers to delivering successful projects and Repair & Maintenance work in the Engineering Construction Industry.
2. To establish and disseminate best practice to overcome and mitigate barriers found.
3. To benchmark performance and measure improvement.

In November 2011 EPIC commissioned an independent report to identify the key barriers to productivity in the UK Engineering Construction Industry (ECI). This report 'Barriers to Productive Performance in the Engineering Construction Industry 14 March 2012' identified, amongst others, three initial areas that EPIC would investigate further:

- Industrial Relations
- Workforce Engagement
- Contract Management.

Subsequently, additional areas for investigation were identified:

- Planning and Operations
- Workforce Planning
- Supervision.



Work groups comprised of experienced people drawn from all aspects of the ECI produced Best Practice Guides for each of these areas, which were published in 2013 (Industrial Relations; Workforce Engagement), 2014 (Contract Management; Planning and Operations) and 2015 (Workforce Planning; Supervision)¹.

This Guide continues the process of examination of best practice, considering the activities and behaviours that can reduce or eliminate barriers to productivity.

¹ The Guides are available on the ECIA website (www.ecia.co.uk), under the EPIC menu on the left.

2. What Did the Group Look at?



2.1 Terms of Reference

The work group looked at the significant potential of a good workforce planning strategy in a number of organisations, basing their views on researched evidence which the group deemed to be appropriate to the Engineering Construction Industry.

Key areas that the work group were requested to address relate to the main activities involved in workforce planning. These include:

- Planning for the Work
- Implementation
- Workforce Demobilisation.

After examining these key areas, the work group identified and recommended a number of good practices for workforce planning.

2.2 Purpose of the Guide

The purpose and aim is to produce recommendations incorporated within a Best Practice Guide that is easily understandable and:

- Identifies best practice within workforce planning
- Recognises the important role of the Client in supporting best practice
- Recognises the significant value to all stakeholders of early engagement
- Considers the importance of a properly implemented best practice culture.

2.3 Benefits of Best Practice

Establishing and following best practice in workforce planning can bring the following benefits:

- Development of a best practice culture, which becomes habit and is self-perpetuating, driving engagement between all parties. Engagement is the foundation of good Industrial Relations (IR) and also has a significant role to play in workforce planning.
- Early identification and removal of barriers to productivity
- Improved availability of required skills and resources
- Improved, open and honest communications between all parties
- Enhanced ability to achieve a balanced and skilled workforce for the life of the project
- Focused information gathering techniques to enable contractors to plan and co-ordinate resource requirements more effectively
- Early involvement and continued engagement of all key stakeholders
- Effective management of workforce demobilisation
- Enhancement of both NAECI and Employers' reputation within the Industry, with NAECI continuing to be seen as the 'agreement of choice'.



3. Introduction – Workforce Planning

What are the key activities which apply to workforce planning?

Workforce planning covers the identification and fulfilment of the work and the subsequent demobilisation

Section 3 summarises the key activities relating to workforce planning and important tasks within each phase

For any project to be completed successfully, it needs to have a correct and balanced workforce, performing productively as a team. It is also important that careful planning is undertaken to ensure that the workforce requirements and skills are aligned with the project requirements.

It is important that all other ECIA Best Practice Guides are read in conjunction with this guide as there is significant interaction between them and the Workforce Planning Guide.

This section gives an overview of the key actions and tasks which pertain to the planning, implementation and demobilisation phases of workforce planning.

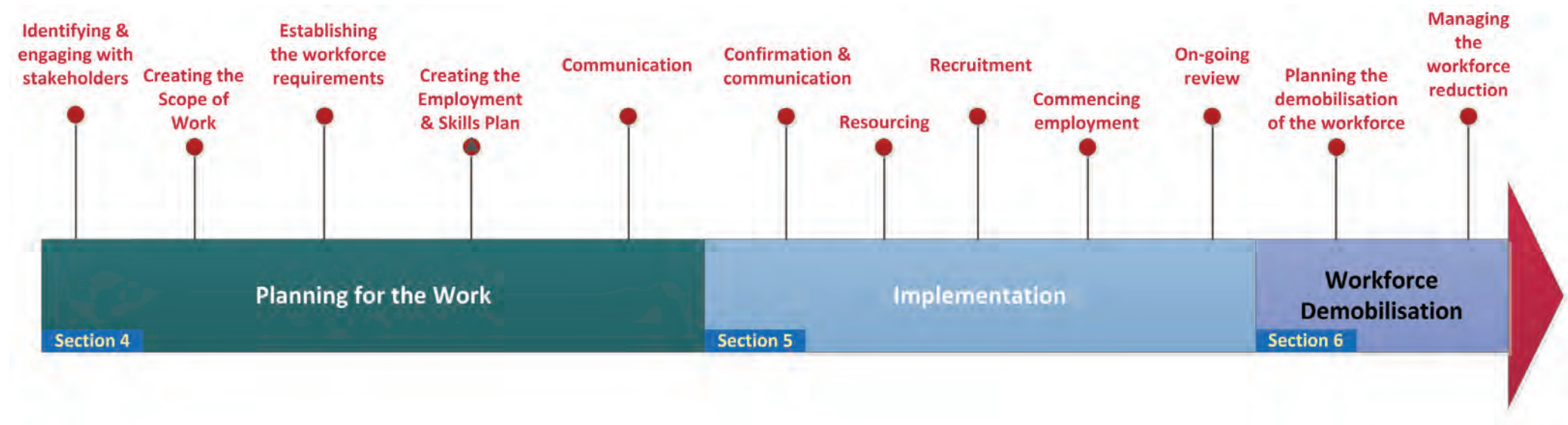
3.1 Workforce Planning

3.1.1 General Overview of Activities

This section contains a process flow that shows typical key activities within each of the three main phases of the workforce planning process.

NOTE:

*It is recommended that **sections 3 to 6** of this guide are read in their entirety to benefit from the cross referencing included in each section.*



3.2 Roles and Responsibilities

Typical roles and responsibilities during the different phases of workforce planning are summarised below. Two or more roles may be merged and undertaken by one person, depending on project type and size.

- **Project Manager:** Responsible for the overall direction of the Employer's project. The Project Manager will co-ordinate the input into key documentation from the various functions within the organisation and ensure that it is fit for purpose, implemented consistently and reviewed and adjusted as required; he/she will also ensure that key functions are involved when necessary.
- **Site/Construction Manager:** Responsible to the Project Manager for leading, overseeing and organising all on-site resources and activities. They are focused on the delivery of the work and will directly liaise with all functions in the organisation to ensure that work happens.
- **Project Engineer:** Responsible to the Site/Construction Manager for ensuring that everything necessary to complete the work is in place on site, namely materials, equipment and tools, to enable the workforce to perform productively and efficiently.
- **Planning Engineer:** Responsible to the Project Manager and/or Site/Construction Manager for the compiling and monitoring of the Construction Programme.
- **Health and Safety Manager:** Responsible to the Project Manager for ensuring that all HS&E rules and regulations are complied with and that best practice is adopted. They will liaise with all functions within the organisation to ensure that HS&E requirements and targets are being achieved. They are the key engager with stakeholders on HS&E and welfare-related matters.
- **Supervisor:** Responsible to the Project Engineer for ensuring that the day to day work activities are carried out safely, to the right quality and productively.
- **Resource Manager:** Part of the HR function with responsibility for ensuring that the workforce requirements are met for the different phases of the Construction Programme. They will work closely with the Site/Construction Manager in delivery of the work.
- **Human Resources/Industrial Relations:** This function includes recruitment and is responsible to the Project Manager for all human resource support and management of Industrial Relations within the organisation. This is a key role in ensuring on-going engagement with the Trades Unions and workforce as well as compliance with NAECI in its entirety.
- **Purchasing/Contracts Department:** Responsible for ensuring that materials and construction modules are purchased correctly and delivered to site on time. They will be a key communication hub to ensure that the workforce requirements are in line with the Construction Programme.

4. Planning for the Work

What are the key considerations in planning for the work?

Identify the key stakeholders, the workforce requirements and the appropriate planning documents

Section 4 summarises the approach to identifying stakeholders, creating the Scope of Work and establishing requirements and plans

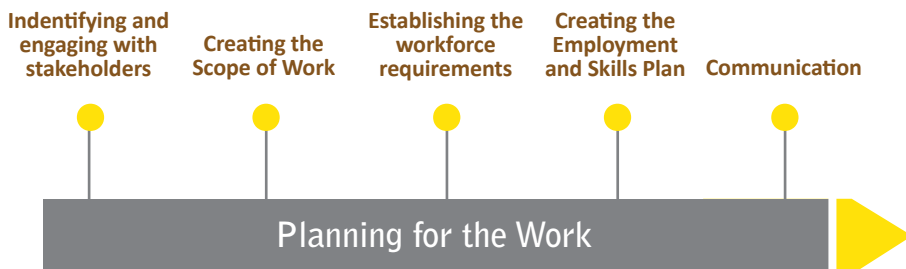
This section describes the key topics that need to be addressed prior to resourcing and recruitment. Employers may have differing methods of planning their work, and may not necessarily recognise or use the same terminology adopted in this guide, but the intention is to highlight the essential areas to be covered for creating a sound basis on which effective workforce planning can be achieved through to project completion. This involves the identification of key stakeholders and the information required of them, creation of a Scope of Work that is well understood and of sufficient detail, and identification of labour needed to fulfil demand. As a result of this process, Employers will be able to establish the workforce requirements more accurately, develop an Employment and Skills Plan for the project and have effective communication channels in place.

The successful initiation of work depends on all these factors to create the right environment to achieve the best possible productivity throughout the lifecycle of the project.

The key recommended outputs in this preliminary stage of planning are:

- The identification of all key stakeholders and their roles and responsibilities (including a Stakeholder Structure/Organogram)
- The Scope of Work
- Workforce Histogram
- The Employment and Skills Plan.

There are five key activities in this phase, which are shown in the diagram below:



4.1 Identifying and Engaging with Stakeholders

It is an important first step to identify all stakeholders, internal and external, who will be involved in a project. All roles and responsibilities should be identified within the company so that information can flow effectively amongst all stakeholders (*see diagram on next page*). The main stakeholders are typically drawn from Site Operations, the Client, Design & Projects, Human Resources (HR)/Industrial Relations (IR), Finance, Health and Safety, Environmental and the Trades Unions.

The Gibson Report makes specific reference to the importance of the Client and Contractor relationship, citing that *'Projects seem to work best – to come in on time and budget with good relations between all parties, minimal IR issues and an excellent safety record...'* The report also goes on to comment that where a breakdown in trust and confidence exists between Employer and employee then this can manifest in poor industrial relations on the project; this emphasises the importance of early and continued stakeholder engagement.

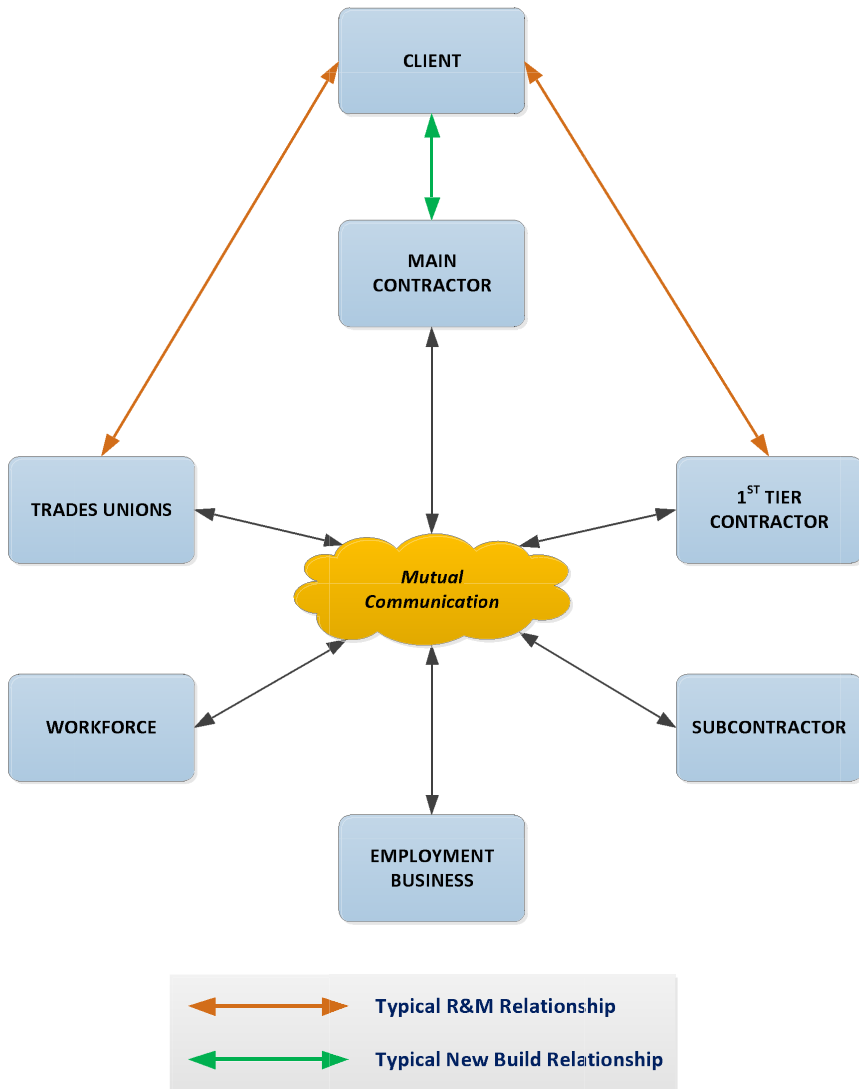
NOTE:

See also Best Practice Guide 2 – Workforce Engagement.

The main stakeholders can be narrowed down to the key parties listed below:

- **Client** – The ultimate plant or site owner whose main focus is on the delivery of the project to budget and on time. It is important that the Client is supportive and understands the mutual goal to improve productivity.
- **Trades Unions/Workforce** – The representation of the workforce concerned with protecting the interests, health, safety and welfare of its members.
- **Employer** – The Employer will have systems in place so that best practice is adopted in Health, Safety, Welfare and Employment practices.
- **Main or 1st Tier Contractor** – This will include the Contractor in control of the whole project or contractors that have been awarded large packages of work such as mechanical, steel erection, electrical and scaffolding, or, in the case of R&M activities, those directly employed by the Client. They are the main influencers throughout the project and will determine all aspects of construction, safety and welfare, communication and training.
- **Subcontractors** – Normally SMEs undertaking small packages of work that have been awarded by 1st Tier Contractors. They are likely to have some influence over how the task is undertaken but normally take instruction from above.
- **Employment Businesses (EBs)** – Operating as direct Employers of labour on NAECI projects and sites, and hiring those employees, but with no influence over how construction is undertaken.

All of these stakeholders will have an influence on the outcome of the project and operation of best practice. It is important that each stakeholder is engaged with at the earliest possible stage so that any potential barriers to productivity are addressed and removed.



4.1.1 General Recommendations and Risks

Recommended Practice

The main aim of stakeholder engagement is to ensure that all parties are identified and that each understands their respective duties and responsibilities, whilst working towards and reaching a successful completion of the project.

In order to achieve this goal, Managers, Supervisors and Trades Unions' representatives should all receive appropriate training; a specialised HR and/or IR function needs to be actively involved to ensure best practice.

NOTE:

More detailed best practice guidance is included in the following guides which should be read in conjunction with this guide:

- *Best Practice Guide 1 – Industrial Relations*
- *Best Practice Guide 2 – Workforce Engagement*

Other points for consideration are:

- Ensure that responsibility for gathering stakeholder input is correctly assigned
- Ensure that a stakeholder structure/organogram is created
- Open up cross functional communication channels about the project pipeline
- Ensure that all parties work as a team.

Risk Awareness

The biggest risk factor is an inconsistent approach to workforce planning across all stakeholders, which creates a situation that frustrates everyone and can ultimately lead to a direct impact on productivity. In particular, this could include a failure to understand the roles played by all high level stakeholders and their importance, including differing opinions and priorities.

Other risk factors that need to be taken into account are:

- There is inadequate understanding of the key role played by support functions and their importance to the success of the work
- There is a failure to engage the HR and IR teams proactively and to build their understanding of the work from the start
- Employers and project leaders may not be kept informed or made aware of wider Industry issues which could have a bearing on the work.

4.1.2 Clients

The Client sits at the highest level of the organisational structure and needs to be aware of all aspects of the work; they are a key influencer of cost management and productivity for the future.

They should:

- Check that all Employers who have been awarded work have the correct systems, plans, procedures and policies in place to promote best practice
- Interact with all Employers to identify high risk skill shortages and offer support mechanisms to actively encourage training and development
- Actively seek information on any workforce planning issues and support any action plans put in place. This is particularly important if skill shortages or recruitment difficulties become apparent.

Risk Awareness

There can be too much focus, at commencement, on achieving the lowest cost and awarding contracts accordingly, without taking into account value for money, whether or not the solution is fit for purpose and other key factors. This can impact on the nominal productivity rate, resulting in additional cost and prolonged duration of the work.

4.1.3 Main and 1st Tier Contractors

The Main or 1st Tier Contractor will play an integral part in developing the workforce strategy on the project, ensuring that it is fit for purpose.

They should:

- Have effective two-way communication systems in place with subcontractors, Trades Unions and the workforce
- Be responsible for setting up IR strategy and gathering information to develop the necessary plans
- Assess the capability of the subcontractors and Employment Businesses to undertake the work
- Ensure consistency of employment policy and adoption of NAEI across the project.

Risk Awareness

Failure to get systems in place and ensure that they are fit for purpose throughout the project can potentially have a negative effect on timely project delivery and cost through:

- De-motivation of subcontractors and the workforce through lack of direction and/or understanding of the work to be undertaken
- Low productivity because of lack of planning and direction
- Lack of harmonious Industrial Relations.

4.1.4 Trades Unions/Workforce

A suitable Industrial Relations framework and strategy needs to be developed at an early stage. Openness and transparency, through positive and meaningful consultation with the Trades Unions and workforce, is important in creating a working environment that develops a common aim and team approach for achieving a successful project.

The Industrial Relations strategy needs to be fit for purpose and employees need to be familiar with the Employer's and/or site policies and procedures. It is essential that the importance of harmonious Industrial Relations is properly understood and valued, and managed effectively by dedicated and experienced personnel.

Other points for consideration are:

- Common policies and objectives need to be developed in consultation with the Trades Unions/workforce
- Organisations should be open to and supportive of Trade Union membership and full support given for training that may be required by any newly elected, or existing, workforce representatives to undertake their duties
- Consideration should be given as to whether or not a project would benefit from the appointment of a Senior Shop Steward
- Employees should feel confident to be able to raise issues directly with Management. It should also be recognised, especially for issues that relate to the whole workforce, that Trades Unions' representatives play an important part in ensuring that employee concerns are heard and addressed.
- There should be recognition that NAECI is identified as the agreement of choice by the Industry to ensure a standard set of terms and conditions of employment exist and that there are procedures in place to deal with any possible changes and issues.

NOTE:

See also Best Practice Guides 1 & 2 – Industrial Relations and Workforce Engagement.

Risk Awareness

Good on-going communication between Trades Unions and Employers is essential. Where this is not the case, the result can be a disengaged workforce, where harmonious IR is compromised.

Other risk factors that need to be taken into account are:

- Is there a lack of an Industrial Relations strategy? If so, this could result in decisions being made reactively without any thought to their wider impact.

4.1.5 Subcontractors

Subcontractors need to be provided with sufficient information, to which they should have contributed, to be able to effectively plan for the workforce that will be required to undertake their scope of work.

In addition:

- A collaborative approach is essential to ensure that the subcontractor has all the tools to undertake the work

- The subcontractor should have a sound Industrial Relations Policy and a working knowledge of NAECl before commencing work
- Communication with other Employers should be on-going to ensure a consistent approach.

Risk Awareness

There is a risk that subcontractors are not kept fully informed by the Main Contractor and this lack of communication and support results in the subcontractor working in isolation; this can have a direct impact on productivity.

Other risk factors that need to be taken into account are:

- There is an inconsistent approach to the role and responsibilities of the subcontractor
- There are poor inter-company communications with other stakeholders
- There is inadequate understanding of the provisions of NAECl.

4.1.6 Employment Businesses

It is essential that when the services of an Employment Business are utilised they are furnished, at an early stage, with all the information necessary to search for and provide the right employees. They should also support and communicate with each individual during employment, ensure their Health, Safety and Welfare is being looked after, develop their skills and experience and demobilise them from the site correctly.

Other points for consideration are:

- Work should be undertaken in accordance with the provisions of NAECl with all in-scope employees being directly employed without any exploitable differences
- Contractors shall only utilise the services of Employment Businesses that are members of the ECIA. An ECIA member Employment Business is vetted so that they fully understand and strictly comply with NAECl and their obligations as an Employer. Contractors should also have additional procedures in place to ensure that the Employment Business has the ability to work under NAECl and apply the correct procedures and rules.
- All relevant elements of the Workforce Planning Best Practice Guide, and other ECIA Best Practice Guides, will apply equally to Employment Businesses as Employers.

Risk Awareness

Employment Businesses cannot operate without the full visibility and understanding of a project's workforce planning as detailed in this guide. Insufficient flow of information to the Employment Business can prevent effective communication with their employees and, in turn, impact on productivity and labour turnover.

Other risk factors that need to be taken into account are:

- The Employment Business must have sufficient support to maintain their obligations as an ECIA member regarding direct employment and other employment obligations, including the management of Health and Safety.

4.2 Creating the Scope of Work

The Scope of Work is an agreed document that specifies the work to be undertaken on a project and is the start point for successful workforce planning. It clearly documents the project requirements, milestones, deliverables, end products, supporting documents as well as reports that are required and expected to be provided. It should also contain, in the form of attachments, a Work Breakdown Structure (WBS) and Activity Programme to establish the necessary information required to identify the workforce requirements. The aim is to match the workforce requirements to the project requirements.

Once the Scope of Work has been finalised, it should be fully explained and communicated throughout the contract chain, i.e. from Client to Contractor to subcontractor to supplier to Employment Business. It is important that experienced people are involved in discussions at this stage and clear objectives for milestones, deliverables and channels of communication are agreed among all the involved parties.

Sample Scope of Work Contents

- Project justification
- Project primary deliverables, including duration of the project and the key activities within it
- Project objectives
- Constraints
- Assumptions
- Co-ordination between stakeholders
- Preparation, co-ordination and control of schedules of construction works and supply of materials and equipment
- Control of construction activities - control of the quality and quantity of the completed construction works, and control of the observance of safety measures and environmental protection
- Historical information/learning from previous work
- Work Breakdown Structure
- Activity Programme (contains sufficient detail for forecasting skills/labour requirements)
- Management and co-ordination of site documentation.

4.2.1 Recommendations and Risks

Recommended Practice

The Main Contractor, or 1st Tier contractors on R&M sites, should be involved in Client project planning and understand the Client's needs at an early stage. Each party in the supply chain should then take time to explain the Scope of Work and discuss it openly in order to build consensus on the phasing and execution planning for the work.

Clear parameters and boundaries for all activities should be defined and, where necessary, contingency plans or alternative approaches thought about. The detail should then be agreed among all stakeholders and a comprehensive brief produced.

Other points for consideration are:

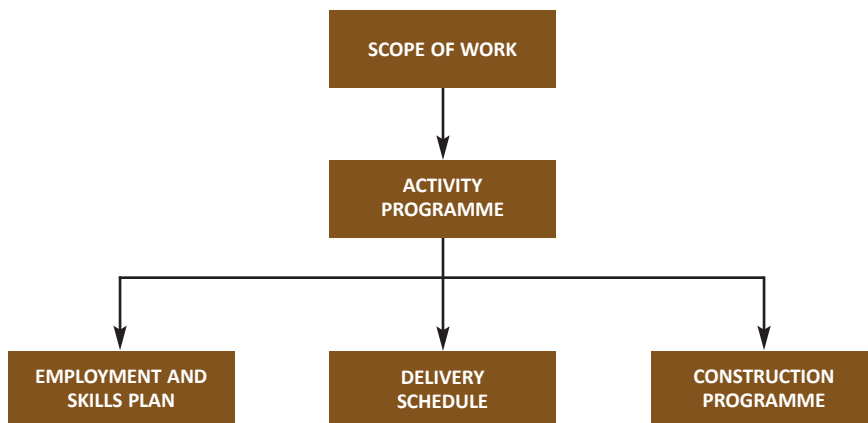
- The Scope of Work needs to be the product of a collective process and, when understood, communicated out to all parties for input. Early engagement creates positive information flow, strong buy in and considered analysis.
- The minimum standard of output at this stage of a workforce planning process should be a clear direction on the person hours and the split between the trades and associated competences required for the duration of the work
- Early involvement of HR and/or IR and other support functions with workforce planning skills can help to influence final choices on the Scope of Work; this can aid early development of workforce requirements and planning for communication and engagement
- Having a full schedule of project requirements allows for examination of the current workforce pool and identification of where new resources are required
- Common access to shared document management systems enables supply chain involvement and will improve the quality of the final Scope of Work
- A workforce mobilisation and demobilisation schedule should also be planned.

Risk Awareness

When producing the Scope of Work, lessons can be learned within the Industry by analysing key site issues such as Health and Safety, incorrect skills mix, insufficient resources or any miscommunication/misunderstanding about site duties, facilities or procedures.

There are a number of specific scenarios that can be identified as potential risks to a successful production of the Scope of Work:

- Design not finalised before project commencement or is late, leading to a lack of clarity of project requirements
- Absence of detailed visibility of associated project documentation and its communication
- Poor quality planning that limits management ability to look ahead
- Poorly managed change control which creates confusion and conflicting plans
- Lack of early HR and/or IR involvement or late and inconsistent approaches to workforce planning.



The above diagram is a basic representation of the planning phases of the project and the general outputs that are produced. All phases play a key part in matching the workforce requirements to the delivery of a successful project.

NOTE:

It is essential that the planning phase of any work is done correctly. It involves many key activities so the following Best Practice Guides should be read in conjunction with this guide:

- *Best Practice Guide 3 – Contract Management*
- *Best Practice Guide 4 – Planning and Operations*

4.3 Establishing the Workforce Requirements

Once the detail for the Scope of Work and Activity Programme has been finalised, contractors will be able to develop the workforce requirements for the work to be undertaken. The Activity Programme, or similar document, should show the expected hours required to complete the work in a logical sequence of activities.

The key activities and outputs of the process of establishing the workforce requirements are:

- Identification of the skills and workforce numbers required for the project
- Contingency plans in place for any peaks and troughs
- A Workforce Histogram
- An analysis of skills required and any gaps identified
- Plan for the workforce mobilisation and demobilisation.

Sufficient time must be allocated during this phase for contractors to prepare a full and detailed proposal so that it can be fully integrated and understood to allow for an accurate estimate of the workforce requirements.

Ineffective workforce planning can often have negative effects including schedule slippage, lack of contingency planning, an incorrect skills mix for the work and poor industrial relations, so it is important to take the right approach from the beginning and utilise the appropriate forecasting tools.

4.3.1 General Recommendations and Risks

Recommended Practice

The effective identification of the workforce requirements can positively influence the successful completion of a project by enabling contractors to have the workforce available, with the requisite skills, at the right time and in the numbers needed to undertake the work.

The key output is to have the workforce requirements directly linked to the project requirements so that any changes in any process will automatically trigger re-evaluation.

When forecasting the workforce requirements, some of the factors that need to be considered are:

- Realistic schedules and productivity measures should be used and an assessment of workface capacity should be made. Contingency should be sufficiently covered, for example the need for additional resources or management for schedule slippages. The ECIA KPI database is one possible source of data to utilise.
- The approach should be proactive, with early sharing of knowledge and detail. Past experience should be drawn on from site managers and trade-specific supervisors to allow accurate activity planning and financial forecasting.
- There should be clear understanding of the duration of the work, and its needs and processes, to manage expectations of workforce mobilisation and demobilisation and assist in future work planning.



- Detailed thought should be given to site layout and the provision of sufficient, suitable and well maintained welfare facilities (*see Best Practice Guide 2 – Workforce Engagement*)
- Before recruitment commences, there should be clearly defined Job and Person Specs that include required competencies, behavioural attributes and experience (*see Section 5.2.2*)
- There should be a clear understanding of the size of the current workforce and available capacity. Enough time should then be allowed to plan for a recruitment drive, if required.
- A suitable forecasting tool should be used throughout the project to ensure correct measurement and forecasts
- Planning allowances should be made for change and its implications considered
- Employment Businesses can be engaged to help assess the current market place in order to analyse trends and assist during workforce demobilisation.

Risk Awareness

Forecasting can often be subject to a degree of bias or uncertainty. One of the main risks when carrying out a forecasting exercise is that not all the potential areas of a requirement have been identified or there is a lack of detail, which can result in an incorrect assessment of numbers, skills mix and duration.

Other risk factors that need to be taken into account are:

- Reactive forecasting done in isolation and not discussed with other stakeholders
- Inconsistent norms or unreliable data used to estimate person hours in each task
- Limited labour resources deployed, leading to an overstretched capacity, with internal Contractor Resource Managers being forced to share resources across projects and sites
- The workforce requirements not being continually monitored and re-evaluated
- Welfare facilities not maintained to a sufficient standard, which can have an impact on Industrial Relations
- Insufficient thought and planning of workforce mobilisation and demobilisation.

4.3.2 Management of Peaks and Troughs

Long term planning for deployment of resources should be in place, communicated up front and subsequently followed and managed to ensure efficient and productive use of resources. This should include contingency for peaks and troughs in activity during the course of the project and a procedure for change management.

Recommended Practice

There should be a continuous assessment/review of the project requirements so that peaks and troughs are anticipated and planned for and the need for increased activity addressed early to recover any slippage. Adjustments should also be made to the Employment and Skills Plan and communicated to stakeholders, as appropriate.

Other points for consideration are:

- Stakeholders, including Trades Unions, HR and/or IR and Employment Businesses should be involved at the earliest opportunity and work jointly to mitigate problems
- There should be co-ordination with suppliers to ensure that materials and deliveries are in line with workforce mobilisation
- Before considering increasing labour to recover programme slippage, the following should be taken into consideration:
 - Use of existing available labour
 - Whether the implementation of shift working schedules on key activities or increased overtime would be a better option
 - Availability of welfare facilities – including whether or not the site utilities can cope with the demand and the affect on site access and egress.
- When shortages of work through unforeseen events occur, demobilisation may not be the most effective solution. Possible solutions, in consultation with the Trades Unions, could be:
 - Transfer to existing sites/works where additional resources are required
 - Support of other contract activities on cross hire if recruitment is taking place
 - Consultation on a temporary reduction in working hours.
- Investigation into ways of improving site productivity rates, including the Trades Unions' perspective.

Risk Awareness

Lack of understanding of the consequences of getting it wrong when managing peaks and troughs, and the effect on productivity, management time, supervision, welfare facilities, IR and other factors cannot be overestimated.

Risk factors that need to be taken into account are:

- A reactive approach where actions are not planned or communicated
- Insufficient planning, leading to insufficient resources.

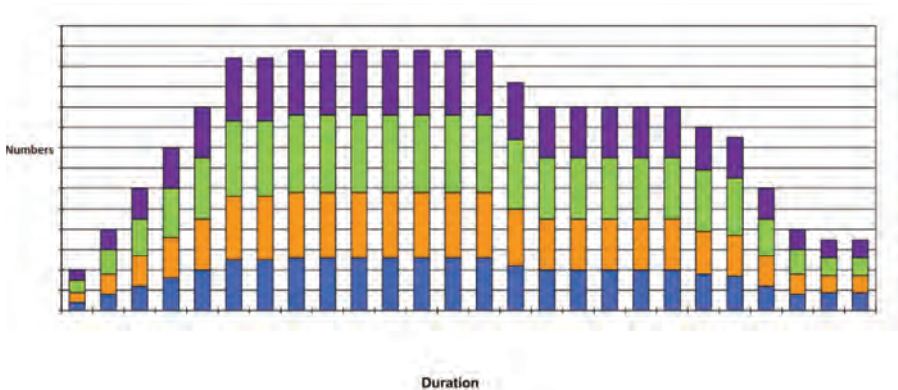
4.3.3 Workforce Mobilisation, Demobilisation and Histogram

Although workforce demobilisation is discussed later in the guide (*Section 6*) it is important that all aspects of the workforce mobilisation and demobilisation phases of the project are fully considered and integrated into the project requirements. The typical areas that will need to be properly planned are:

- Location and layout of welfare facilities – needs to be as near to the workforce as possible, ideally integrated into the project requirements, and will include maintenance and catering facilities (*see Best Practice Guide 2 – Workforce Engagement*).
- Induction and training capacity on site

- Access and egress to site, including parking and transport arrangements with contingency plans in place.

Following the establishment of the workforce requirements a Workforce Histogram is normally created. The following picture shows a typical Workforce Histogram, with a visual representation of numbers and duration. The different colours used in the diagram represent the different trades/activities.



4.3.4 Capability to Meet the Skills Requirement

Once the workforce requirements have been identified, it is essential to look at the 'big picture' of the total workforce skills needed and plan well in advance so that the appropriate resources can be made available at each stage of the project.

Without undertaking a full analysis of the requirement, involving both key internal and external stakeholders, there is a risk of producing a misinformed Employment and Skills Plan ([Section 4.4](#)) that can leave stakeholders disengaged and the work incorrectly resourced.

Recommended Practice

The first step is to gain a strategic understanding of the 'gap' that the Employment and Skills Plan will need to fill. It is essential to know core and specialist labour needs and where shortfalls are likely to be and then build the Plan for use in recruitment.

There should be correct information available, which is well understood, including clear understanding of trade competencies of the current labour pool and any specialist requirements.

Other points for consideration are:

- Detailed forecast meetings involving all stakeholders, both internal and external
- The availability of people with appropriate skill sets in the right location
- A future capability examination that looks at trends, upcoming projects/works and attrition rates

- Up skilling and training investment for the current and future work
- The ability to efficiently move resource and induct/get up to speed
- Appropriate resourcing and vetting as well as targeted campaigns.

Risk Awareness

When examining the capability of the marketplace to fulfil demand, there is a danger of operating with a limited understanding of the total workforce required. Failing to involve other stakeholders who could assist in the assessment of the market can also contribute to a restricted overall view.

Other risk factors that need to be taken into account are:

- Failure to involve all contractors, therefore not allowing them time to prepare and apply their own market knowledge
- Internal competition for limited resources resulting in overestimation to keep own labour
- Incorrect or poorly informed assumptions made about the labour pool, geographical spread and other projects.

4.4 Creating the Employment and Skills Plan

The Employment and Skills Plan identifies the core and specialist skills needed for the project and is a source for identifying potential shortfalls in resource and how to rectify them. It is important to undertake a thorough analysis of the workforce requirements to identify potential areas of skills shortages so as to give sufficient lead time to allow for development and training opportunities. The Plan should be discussed with each Employer on the project so that they have the opportunity to contribute to its creation and buy into its principles.

For the Industry to satisfy demand for skills now and in the future, it is important that there is collaboration across all key stakeholders to fully understand future needs, the number of workers available within the Industry and where skills shortages are being experienced.

NOTE:

A sample contents for an Employment and Skills Plan is shown at the end of this section.



4.4.1 Recommendations and Risks

Recommended Practice

An Employment and Skills Plan incorporating a detailed Workforce Histogram (see [Section 4.3.3](#)) for the work should be prepared at an early stage and prior to starting on site, taking into account the previous analysis of the workforce requirements.

Some points for consideration are:

- Interaction with local community – there will be an expectation of fair access to opportunities on site so it is important that this is recognised and managed correctly
- Use of local labour – where additional resources are required, the skills available in the local employment market should be considered, with clear and transparent recruitment practices in place
- Diversity – it is important that minority groups are encouraged to take up careers in Engineering Construction
- Consideration given to apprenticeships – it is important that the Industry can satisfy the skills requirements of the future. Consideration should be given to setting reasonable targets for apprentice numbers.
- Development of skills – people who fall short of the required competences may be trained to achieve the desired levels of competency. Performance assessments will assist in identifying development opportunities.
- Training Plan – NAECI has a sample Project/Site Training Plan (*NAECI Appendix D – Annex E*)
- Workforce mobilisation – needs to be fully planned and integrated into the project requirements
- Workforce demobilisation – it will plan for the inevitable conclusion of work but should also give consideration to methods of retaining skills within the Industry.

Risk Awareness

There are a number of risk factors that need to be taken into account:

- Future skills shortages
- Programme cost and slippage
- Potential loss of future investment in the UK, if the approach is incorrect
- Impact on stakeholder relationships.

Employment and Skills Plan

Key elements normally include:

- Plan description – giving a brief outline of the project, commencement date/s, expected duration and what the plan will cover
- Scope of Work – identifying the main activities that will be undertaken on site and the purpose of the work
- Prerequisites – fundamental aspects that must be in place at the start and that must remain in place for the work to succeed, for example welfare provisions
- Identification of core values such as:
 - Health and Safety performance objectives
 - Protecting and enhancing the environment
 - Focusing on engagement with the workforce and stakeholders
 - Helping the local community and creating a positive legacy.
- Expected workforce numbers on the project, duration and skills mix
- Commitment to ensuring fair access to vacancies within the local area
- Commitment to NAECI for Engineering Construction Work
- Site layout and provision of welfare facilities
- Site workforce mobilisation and demobilisation
- Training Plan
- Identification of responsibilities and the appropriate review mechanisms.

4.5 Communication

Successful projects have the common thread of planned, clear, early and on-going communications. In contrast, projects with substantial productivity failings can often be found to have fallen short in the lines of communication and their detail and timing.

Communication plays an important part in ensuring that interested parties or those not directly involved in planning the project have the information to satisfy concerns or answer any questions that they may get.

Such interested parties can include:

- Local councillors and MPs, who may face questions from their constituents
- Local community liaison groups, who will be interested in local recruitment, impact on the environment, transport and congestion, the number of travelling workers and assessment of benefits for business and tourism
- Environmental groups
- Trades Unions.

Communication needs to be effective, with contributions from all key stakeholders to ensure that the message is consistent and understood.

4.5.1 Recommendations and Risks

Recommended Practice

Milestone reporting on key steps during the course of the work should be initiated, monitored and reviewed. There should then be clear and on-going communication along defined reporting lines, with levels of responsibility clearly indicated.

Other points for consideration are:

- Communication should be agreed and written to ensure a consistent message. It needs to be proactive, transparent, detailed and shared with partners.
- On-going and frequent project review meetings should be held with all stakeholders to identify and capture changes to the project requirements, which may impact on previous communications.

Risk Awareness

Other risk factors that need to be taken into account are:

- Communication that is ineffective and last minute, lacks detail and transparency and is verbal only
- A plan that is not agreed by all parties and consequently does not have overall buy-in, creating an inconsistent message.

4.5.2 Communication between Employers & Trades Unions

Great importance needs to be attached to the channels of communication between Employers and the Trades Unions. NAECl has processes built in to promote communication via a Pre Job Conference and on an on-going basis through Project Joint Councils (PJC)s or Local Forums (*see NAECl – Appendix D, sections D3 and D4*).

Regular topics of communication should include, as a minimum:

- Health, Safety and Environmental issues
- Progress, achievement and performance
- Continuous and on-going improvement strategies
- Resource forecasting, identifying the recruitment and demobilisation phases of the work
- Changes in type and amount of work to be undertaken
- Changes in employee numbers
- Changes in welfare provisions
- Changes in Management.

It is recommended that the Trades Unions are informed at an early stage about:

- Duration of the work
- Projected numbers and skills mix
- Planned transfer of labour from existing work sites, and where these are located. This applies to employees with a period of service to whom there are redeployment obligations.
- Commitment to NAECl recruitment guidelines (*NAECl, Appendix G*), for example by advertising in the local Job Centre for a specified number of days
- During redeployment, supply of contact details for reps or officials involved in other work(s) or sites.

4.6 Best Practice

PLANNING FOR THE WORK	
Identifying and engaging with stakeholders	<ul style="list-style-type: none"> ■ All stakeholders should be fully identified, recognised and engaged with ■ Clear responsibilities should be assigned ■ Recruitment policies and procedures are required.
Creating the Scope of Work	<ul style="list-style-type: none"> ■ Clear boundaries and parameters for all activities should be defined ■ The Contractor should be involved in Client overall project planning cycles and awarded work as early as possible ■ Contingency plans should be thought about at an early stage.
Establishing the workforce requirements	<ul style="list-style-type: none"> ■ All sources of potential labour should be identified ■ Realistic productivity targets should be set for the work and planning activities co-ordinated ■ Workforce requirements should be co-ordinated with the project requirements ■ Provision needs to be made for change, workforce mobilisation and demobilisation and monitoring of the workforce ■ One reliable programme planning tool should be widely used, in conjunction with a KPI database ■ Sufficient time must be allocated during this phase for contractors to prepare a full and detailed proposal ■ Site Managers and trade-specific Supervisors should be involved in planning of labour and programming to gauge the best fit.
Creating the Employment and Skills Plan	<ul style="list-style-type: none"> ■ An Employment and Skills Plan should be in place ■ There should be collaboration across all stakeholders.
Communication	<ul style="list-style-type: none"> ■ Effective communication with all interested parties is essential ■ Communication needs to be comprehensive and timely, with contributions from all key stakeholders, and especially between Employers and Trades Unions.

5. Implementation

What are the key considerations for implementation?

Reviewing the requirements, preparing for resourcing, recruitment and commencement of employment

Section 5 summarises the approach to reviewing the requirements and best practice for resourcing, recruitment and start of employment

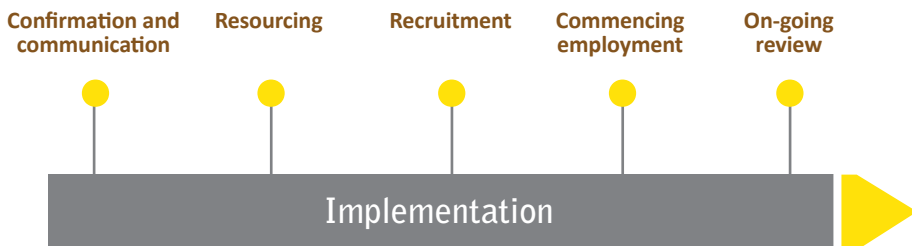
This section describes the key activities involved in implementation, including the review process, resourcing and recruitment activities.

Maintaining productive performance during the work relies heavily on preparation of detailed needs and requirements, and the establishment of a broad network of stakeholders who understand the intent of the project, key planning elements and the challenges ahead. Flexibility, and understanding of what is required, is essential to maintaining momentum during the resourcing phase. Excellent communication and decision making are essential to avoid unnecessary delays.

The key elements that are reviewed in this section are the:

- Workforce requirements (established previously – see [Section 4.3](#))
- Employment and Skills Plan (created previously – see [Section 4.4](#))

There are five key activities in this phase, which are shown in the diagram below:



5.1 Confirmation and Communication

A prerequisite to resourcing and recruitment is to check that the project requirements are up to date.

The review activity at the start of the implementation phase serves as a reminder of the details of the project requirements and provides the opportunity to make changes to the workforce requirements and the Employment and Skills Plan, and to ensure communications are updated, if applicable.

The workforce requirements and Employment and Skills Plan (previously created in [Section 4.4](#)), should be reviewed by all stakeholders and information documented and shared prior to commencing workforce mobilisation.

5.1.1 Recommendations and Risks

Recommended Practice

Following on from the initial pre job conference, in which all stakeholders are involved, and opinions and views sought, reviews need to be arranged in advance and regular updates issued to an agreed schedule.

Other points for consideration are:

- The stakeholders should develop a long term view and be supportive of challenges, examining scenarios that help in developing realistic plans
- Responsibilities should be fit for purpose and clear, interfaces understood and actions assigned with clear outputs and deadlines
- The workforce requirements and Employment and Skills Plan need to be challenged and reviewed against other/previous project plans, from which lessons learned may help
- The details should be checked and re-confirmed for accuracy of detail
- Risks in delivery need to be identified and there should be honest communication between the decision makers, agreeing a plan of action which puts the project ahead of individual commercial concerns.

Risk Awareness

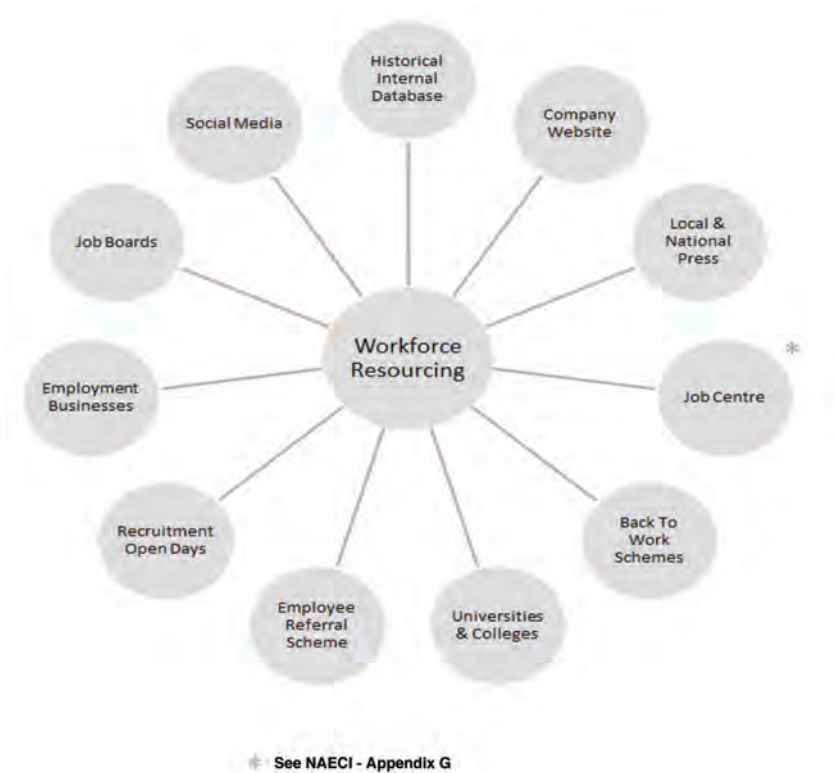
There are a number of risk factors that need to be taken into account that could affect the accuracy of the workforce requirements:

- Not all material changes have been incorporated
- The workforce requirements and plans have not been checked for completeness with all appropriate stakeholders
- Commercial restrictions have prevented appropriate sharing of the project requirements and detail.

5.2 Resourcing

Having well-developed plans under the control of trained staff will enable the whole process of resourcing and engaging the workforce to be productive and motivating.

The following graphic shows some of the potential sources for workforce resourcing that can be utilised:



5.2.1 General Recommendations and Risks

Recommended Practice

Firstly, any potential vacancies should be advertised via the local Job Centre, to encourage the utilisation of local labour. The Gibson Report makes specific reference to when *'clients and contractors have put in place mechanisms on a particular project to ensure as far as possible recruitment from the local labour market this has been welcomed by local officials and shop stewards and has helped improve industrial relations on site'*. NAEI was specifically adapted to encourage the placing of advertisements in local Job Centres for a specific period of time to give the opportunity for local workers to apply for vacancies.

If the local Job Centre has not sourced suitable applicants, it should be made easy for candidates to apply by using a simple process via the appropriate media. Use of software is recommended, possibly a planning tool, which can handle the requirements, prompt questions and track applications.

Risk Awareness

There is a potential danger that the resourcing process is not responsive to the project requirements and is not appropriately flexible in its operation.

There is also a risk that key decisions, with their associated data and information, are not recorded accurately or handled with appropriate confidentiality.

5.2.2 Defining the Role

Before commencing recruiting it is important to invest time in gathering information about the nature of the job. This means thinking not only about the content (such as the tasks) making up the job, but also the job's purpose, the outputs required by the job holder and how the role fits into the organisation's structure. This analysis should form the basis of Job and Person Specs.

Being clear about resourcing needs and what the opportunities can offer employees are important first steps in engaging with the people who will be deployed.

Other points for consideration are:

- A standard recruitment process should be followed
- A Job Spec needs to be developed that explains the job to the candidates, and helps the recruitment process by providing a clear guide to all involved about the requirements of the job. It can also be used to communicate expectations about performance to employees and managers. The Job Spec will form the basis for the job advertisement.
- Carefully considered and agreed Person Specs should be used, which are detailed and realistic; these could be from a standard template that can be updated for specific requirements. They should differentiate between essential and desirable criteria and identify the qualifications and experience required for the role. Use of historical data can be extremely valuable here as well, to save time and effort.
- When including behavioural traits that are important to the organisation, such as team working or communication skills, recognition should be given to an individual's potential to develop certain competencies and not be solely reliant on evidence from past behaviour
- It is important to ensure that none of the competencies discriminate against any particular group of employees or potential employees.

5.2.3 Factors to Consider when Resourcing

When resourcing for a project, contractors typically use a variety of methods to complete their package of work. Contractors will use their existing workforce and redeploy where possible and then consider any additional requirements. There are also occasions when specialist contractors are utilised to undertake parts of the work, resourcing in the same manner.

Therefore, it is important that the Contractor awarding work down the supply chain evaluates the capability of any incoming Contractor or Employment Business to deliver, as well as comply with the requirements of NAECL.

- Has there been a pre-qualification check to ascertain their ability to adopt best practice? Typical areas that would be checked are:
 - Industrial Relations procedure and policy
 - Membership of the ECIA and an understanding of NAECL. ECIA membership is a mandatory requirement for full access to the policies, benefits and procedures contained within NAECL.
 - Training plan
 - Communication policy
 - Engagement policy
 - Recruitment procedure
 - Competency of Management/Supervision
 - Workforce mobilisation and demobilisation procedures.
- Does their tender sufficiently cover NAECL employment costs?
- Do they have a good track record, understand the need for reasonable flexibility and have contingency plans?
- Have they the ability to build good relationships with key stakeholders and understand the need to buy into the project's objectives and priorities and work with others?

5.2.4 Consider the Impact of Other Projects on Labour Needs

A broad awareness of other projects and their programme of recruitment or release of people is an essential prerequisite to effective workforce planning. Much of this information can be obtained through stakeholders and direct engagement with other project teams. This approach equally applies to contractors engaged in multiple projects where there may be opportunities to reassign employees.

Other points for consideration are:

- What other projects are being worked on and how may their timing, scope and specific requirements impact this project?
- How does the timing and resourcing or demobilisation of this work affect other projects, nationally or locally?

5.2.5 Securing Skilled Labour

The core objective of the implementation phase in workforce planning is to secure a sufficiently skilled workforce of the right type, in the right numbers and at the right time.

Other points for consideration are:

- How to ensure that suitable local labour has the opportunity to apply for vacancies
- Does the project duration give time to enable training and/or development of local labour such that local labour can be optimised within the project?
- In terms of the location of the project, will there be a need to consider the use of travelling or non-UK based labour to meet the overall peak demand?
- Do the workforce requirements cover all eventualities?
- What role will Employment Businesses play in the Employment and Skills Plan and how engaged are they as key stakeholders?

5.3 Recruitment

Successfully attracting Suitably Qualified and Experienced Persons (SQEP) and encouraging them to apply for specific roles is strongly dependent on the first impression presented to the candidate and their understanding of the wider organisation and its values.

5.3.1 Recommendations and Risks

Recommended Practice

Formal recruitment processes need to be in place, with staff trained in their use and stakeholders briefed on how to provide support. Such a process should incorporate learning from past experience and include consultation with critical stakeholders such as the Trades Unions.

Other points for consideration are:

- Recruitment planning must anticipate labour needs and have the ability to handle the expected volumes of candidates in an efficient manner
- The most appropriate form of candidate selection should be used, ranging from formal interview to trade and/or technical tests to assess technical skills and capabilities.
- Interviewers should be trained to make judgements about a candidate's competency, qualifications and level of experience when compared to the Job and Person Specs
- Recruiters must be absolutely clear and consistent when defining the role (*see Section 5.2.2*)
- The assessment of candidate suitability for the role should be based on the requirements of the role
- Consideration should be given to the location and the ease of logistics for candidates to access recruitment events
- Candidate's details and performance at interview need to be recorded in a common format which can then be collated before hiring decisions are made
- Decisions to hire or reject candidates must be clearly recorded and communicated to each candidate
- It must be made clear to candidates when they are likely to receive a final decision
- Where Employment Businesses are engaged, they should be selected as early as possible through a transparent and open procurement process based on their ability to bring value and confidence to the recruitment effort. Treating them as a partner from the outset will enable them to gain a stronger sense of responsibility and identify more closely with the project and its objectives.

Sample Interview Approach/Check List

For the candidate:

- Ask questions about the job and organisation
- Gather information to decide if they want to take the job

For the organisation:

- Prepare a structured interview:
 - questions are planned carefully before the interview
 - all candidates are asked the same questions
 - answers are scored using a rating system
 - questions focus on the attributes and behaviours needed in the job.
- Describe the job and the responsibilities the job holder would need to take on in more detail
- Assess a candidate's ability to perform in the role
- Discuss with the candidate details such as start dates, training provisions and terms and conditions such as employee benefits
- Give a positive impression to the candidate of the company as a 'good Employer' (who they would like to work for should they be offered the position)
- Provide feedback as soon as possible.

Risk Awareness

Unplanned recruitment actions in response to sudden demand should be avoided. It is better, when such demand occurs, to pause, consider all factors and revise the appropriate plan before moving ahead.

Other risk factors that need to be taken into account are:

- Poor communication with Employers and/or candidates
- Poor quality of recruits because of inappropriate selection methodology
- Peaks and troughs (*see Section 4.3.2*) not allowed for.

5.4 Commencing Employment

The first impression created at the start of an employee's period of employment can have a significant impact on the productivity of both individuals and teams over the duration of the project. Inductions must be well organised and efficiently delivered, setting out clear expectations for the productivity-related obligations of both the Employer and the employee.

5.4.1 Recommendations and Risks

Recommended Practice

Employee inductions are essential to establishing the culture on site. They must be as comprehensive as possible and give an overview of and insight into the work. *Best Practice Guides 4 and 6* give typical examples of induction to the site but, in addition to that, Employers should have their own company inductions that cover the following:

- Employment offer and induction checks should have been carried out in advance of the first day of work. Welcome information (e.g. contracts) should all have been dealt with prior to a meaningful induction and settling into work.
- A 'meet and greet' by senior managers of the Employer should take place and include a specific overview of the work that the employee will be undertaking and the key people and their responsibilities identified. It is important that all employees can recognise senior members of staff to encourage engagement.
- The Employer's Health and Safety Policy and Procedures and details of those responsible on site should be made available as well as who to contact if the employee has concerns
- Details of any company specific information should be provided that has not been included in the employment packs, such as demobilisation plans, processes and procedures, communication policy and performance appraisals
- There should be timely communications to non-site workers about Supervisor/Management appointments, and work and site arrangements
- Clear allocation of Supervision to labour and statements of responsibility should be made, taking into account a sensible ratio of Supervisors to employees, depending on the work site, the complexity/criticality of the work and the number of Chargehands available.

Risk Awareness

Short-cutting the employee induction process to put employees to work in response to urgent project demands should be avoided.

Other risk factors that need to be taken into account are:

- Engaging with the employee remotely; this misses a key opportunity to establish a culture of good face to face communication and trust
- Inadequate administration which confuses rather than enhances induction.

5.5 On-going Review

A preliminary review of the workforce requirements and Employment and Skills Plan will have been carried out prior to the resourcing and recruitment processes (see [Section 5.1](#)) to ensure that they are up to date at that point. After this, they should be monitored and reviewed on an on-going basis.

There are three components to reviewing the requirements and plans:

- Monitoring the workforce requirements
- Ensuring that the Employment and Skills Plan remains in line with any changes
- Reviewing performance of the workforce against defined targets.

5.5.1 Monitoring the Workforce Requirements

The workforce requirements should be constantly monitored against the aims and objectives of the project or site. It is important to be aware of what is being monitored and why, including the consequences of fluctuations in demand.

Recommended Practice

It is important that all functions on the project or site and within the organisation are kept informed of and have access to the workforce requirements and Employment and Skills Plan and not just, for example, the Planning Department.

Continual interrogation of project requirements to ascertain optimum levels is required, with consequent re-drafting where necessary. Allowance should be made for larger strategic planning to take place, looking ahead to future projects and labour coming free.

Other points for consideration are:

- It is important to review and understand the following key points:
 - End date
 - Volume
 - Skills required (considering how these will change over time)
 - Site trends
 - Local projects starting/completing.
- Actual should be measured against the forecast and consideration given to any variance and its potential effects going forward
- Sometimes it may be more productive to bring in extra labour instead of introducing overtime working
- As the project develops, programme changes should be automatically linked to updating the workforce requirements and allowances made for management costs
- The Employment and Skills Plan should be reviewed and updated on an on-going basis to ensure that it remains in line with any changes that affect the workforce requirements and communicated to all stakeholders.

Risk Awareness

It is important that workforce planning activities serve their purpose from the beginning to the end of the project and do not become reactive or forgotten about, thereby affecting workforce retention, demobilisation and ultimately productivity.

Other risk factors that need to be taken into account are:

- Instead of regular monitoring, there are last minute reactions to circumstances, with the consequent risk of delay if resources are not available at short notice
- The bigger picture is not understood, because it has not been properly analysed
- The cost impact of resource changes is not generally understood or communicated, for example in a situation where reports are only sent to Accounts for billing purposes.

5.5.2 Performance Assessment

A process of continuous review of the workforce is appropriate in order to maintain a collective focus on productive performance. Organisations should monitor and evaluate the workforce, according to a pre-defined strategy and criteria, to ensure that targets and tasks are reasonable and that employees have sufficient skills and experience to undertake the tasks given to them. It is also important to ensure that the appropriate mix of skills is currently valid.

Reviews should be conducted in the spirit of co-operation and trust in a fair and honest process. They should also take the opportunity to identify employees that need support and those capable of further development.

By adopting this best practice guidance, Employers will have defined a consistent description of the tasks expected of their employees that are clearly linked to the project or site they are working on.

NOTE:

A sample contents for a Performance Appraisal Check List is shown at the end of this section.

Recommended Practice

The importance of effective performance management and the positive outcomes of this in terms of trust, improved productivity and effect on the rest of the workforce cannot be overestimated.

For any review process, there should be shared consensus on objectives and clear and agreed criteria, which are communicated to all parties and managed and recorded to ensure a fair approach.

Other points for consideration are:

- Everyone should undergo a review, from the most senior to junior employees, and there should be a consistent approach according to a defined template. Best practice would be for weekly assessments during the probationary period and at regular intervals thereafter against defined criteria.

- Reviews should be carried out honestly without fear or favour. All stakeholders should know it's going to happen and that its purpose is to enable individuals to improve.
- Those being evaluated should value the process. It should be seen as a positive route to improvement, development and productivity.
- The link between the review process and planned demobilisation must be transparent
- The review needs to identify opportunities for improvement in Management and Supervision to enable improved productivity
- There should be early consultation between Employer and Trades Unions' representatives on the on-going validation of employee performance and explanation of redundancy selection arrangements (a statutory consultation obligation)
- A key outcome of the appraisal or evaluation is that employees understand how their work and performance fit into the strategy for project completion and performance
- The process should objectively demonstrate gains in productivity and have a clearly understood outcome, which is followed up by any necessary training, performance management and reward
- There must be a defined written procedure in place that is easily accessible to all.

Risk Awareness

The approach to reviewing performance can create negative or overly critical behaviours and it is therefore important to adopt a consistent approach and capture a true record of the discussion.

Other risk factors that need to be taken into account are:

- Not making sufficient time to conduct a worthwhile meeting
- Failure to recognise opportunities to improve methods of working to increase productivity
- Managers and/or Supervisors having received insufficient training and being unclear of the authority they have to suggest training or development opportunities
- Monitoring being used for the wrong reasons when there is a perception of poor performance
- No reviews in place, precluding development of training needs analysis and development plans.

Performance Appraisal Check List

Preparing for the appraisal meeting:

Points for appraisers and appraised to consider include:

- How well the individual has performed since the last meeting and what they have achieved, with examples or other evidence
- How successfully objectives and plans from the last meeting have been implemented
- Factors that have helped or hindered performance
- How the employee has responded to challenges
- Current learning and development and any support needed
- Potential actions that could be taken by either party to develop or improve performance
- Potential directions the individual's career might take
- Potential objectives for the next review period.

Approach:

- **Measurement** – assessing performance against set targets and objectives
- **Feedback** – providing feedback to employees on their performance
- **Positive reinforcement** - emphasising what has been done well and making only constructive criticism about what might be improved
- **Exchange of views** - what has happened, how employees can improve their performance, the support they need from their managers to achieve this and their aspirations for their future career
- **Agreement** - jointly coming to an understanding by all parties about what needs to be done to improve and sustain performance generally and overcome any issues raised

The meeting itself:

- Gather and collate information about objectives, competence, training needs and any further actions to be carried out
- Assess employee values and behaviours
- Ask questions based on a standard template (the same used for all candidates)
- Listen to the employee and respond appropriately
- Provide feedback to help employees understand actions and behaviour.

5.6 Best Practice

IMPLEMENTATION	
Confirmation and communication	<ul style="list-style-type: none"> ■ There should be a review of the workforce requirements and Employment and Skills Plan in real time ■ All known changes should have been incorporated and the project requirements checked for completeness.
Resourcing	<ul style="list-style-type: none"> ■ The supply chain should be carefully assessed and understood ■ A clear strategy for resourcing should be developed ■ All aspects of the securing of skilled labour should be considered, including location, timing and demobilisation planning ■ Well-developed systems and processes should be in place ■ Key decisions should be recorded accurately and confidentially ■ The use of appropriate media should be maximised ■ Agreed Job and Person Specs should be created ■ The impact of other projects should be considered.
Recruitment	<ul style="list-style-type: none"> ■ Candidates should be sought from appropriate sources ■ An appropriate recruitment strategy and methodology should be in place for selection, with a clear and consistent approach.
Commencing employment	<ul style="list-style-type: none"> ■ The induction process must set clear expectations and clarify the productivity-related obligations of Employer and the employee ■ A welcome procedure should be in place for new employees ■ There should be efficient administration/communication processes.
On-going review	<ul style="list-style-type: none"> ■ There should be a process of on-going review and monitoring of the workforce requirements and Employment and Skills Plan ■ Workforce performance should be reviewed against defined targets ■ All stakeholders should be aware of the review process and any changes communicated to all parties.

6. Workforce Demobilisation

What should be the approach to workforce demobilisation?

Identifying the need for redeployment and redundancy planning on demobilisation, managing it considerably

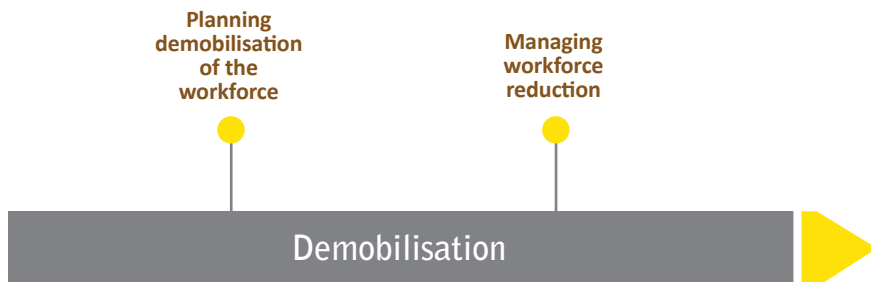
Section 6 summarises the approach to workforce demobilisation with best practice for managing the process

This section deals with each step of the process for demobilisation of labour at the end of a project.

Demobilisation, especially if, following redeployment efforts, redundancies are necessary, is a very sensitive and emotive aspect of the project; it can have negative consequences if handled incorrectly or done for the wrong reasons, even if those reasons are perceived to be right at the time.

The approach to demobilisation should therefore consider the longer term prospect of the individual and the Industry at large and encourage commitment to future employment in the Industry. Therefore, if possible, opportunities should be sought for individuals beyond the existing project as part of a policy of retention of the workforce and valuable skill sets. There are statutory obligations that must be strictly adhered to and satisfied, but best practice goes beyond the statutory minimum requirements and requires the process of redundancy to be handled considerably and in a fair, respectful and transparent manner.

There are two key activities in this phase. These are shown in the diagram below:



6.1 Planning the Demobilisation of the Workforce

Careful consideration should be given to the process of workforce demobilisation before commencing, as any misjudgement could have a detrimental impact on team working, productivity and Industrial Relations. The aspiration should be to retain and deploy staff, and best practice means doing as much as possible to achieve this goal.

When formulating the approach to demobilisation, actions should be taken with reference to the workforce requirements and the Employment and Skills Plan which will have remained live for the course of the work, and should have taken into account the work progress communications from Employers to Trades Unions and all stakeholders.

The following diagram illustrates good demobilisation practices that should be considered:



Provided that plans have been reviewed and communicated correctly, the Employer and Trades Unions will have a good understanding of when the work will end and when the phased reduction needs to commence.

6.1.1 Recommendations and Risks

Recommended Practice

A workforce demobilisation strategy and selection procedure should have been created, in consultation, well in advance of commencement of work, with early engagement with all the relevant stakeholders (*Section 4.1*). It is important to ensure that all factors have been taken into account and all interested parties consulted.

The procedure for reducing the workforce should have clear criteria on where, when and how this should take place; Management and/or Supervision should have sufficient training and/or experience to undertake the task.

Other points for consideration are:

- Workforce demobilisation should be clear from the forecast and supported by the Client
- The demobilisation of subcontractors and Employment Businesses should be an integral part of the planning process and they should be fully aligned at an early stage; this will allow for effective communication and consultation with stakeholders and their workforces.
- All redeployment opportunities within the business and across the project should be considered. Increased communication across projects and businesses could identify future employment opportunities with the assistance of the Trades Unions and Employment Businesses through understanding of Industry requirements.
- The benefits of market evaluation by Employment Businesses should be taken into account
- Adoption of best practice for communication and engagement on project progress and resource planning should ensure that the demobilisation phase of the work is communicated to all stakeholders
- Consultation on the method and procedure to be adopted for workforce demobilisation should have taken place with the Trades Unions or workforce representation with the aim of reaching agreement at an early stage of the work. This will give employees early understanding of the factors affecting selection for redundancy.

Risk Awareness

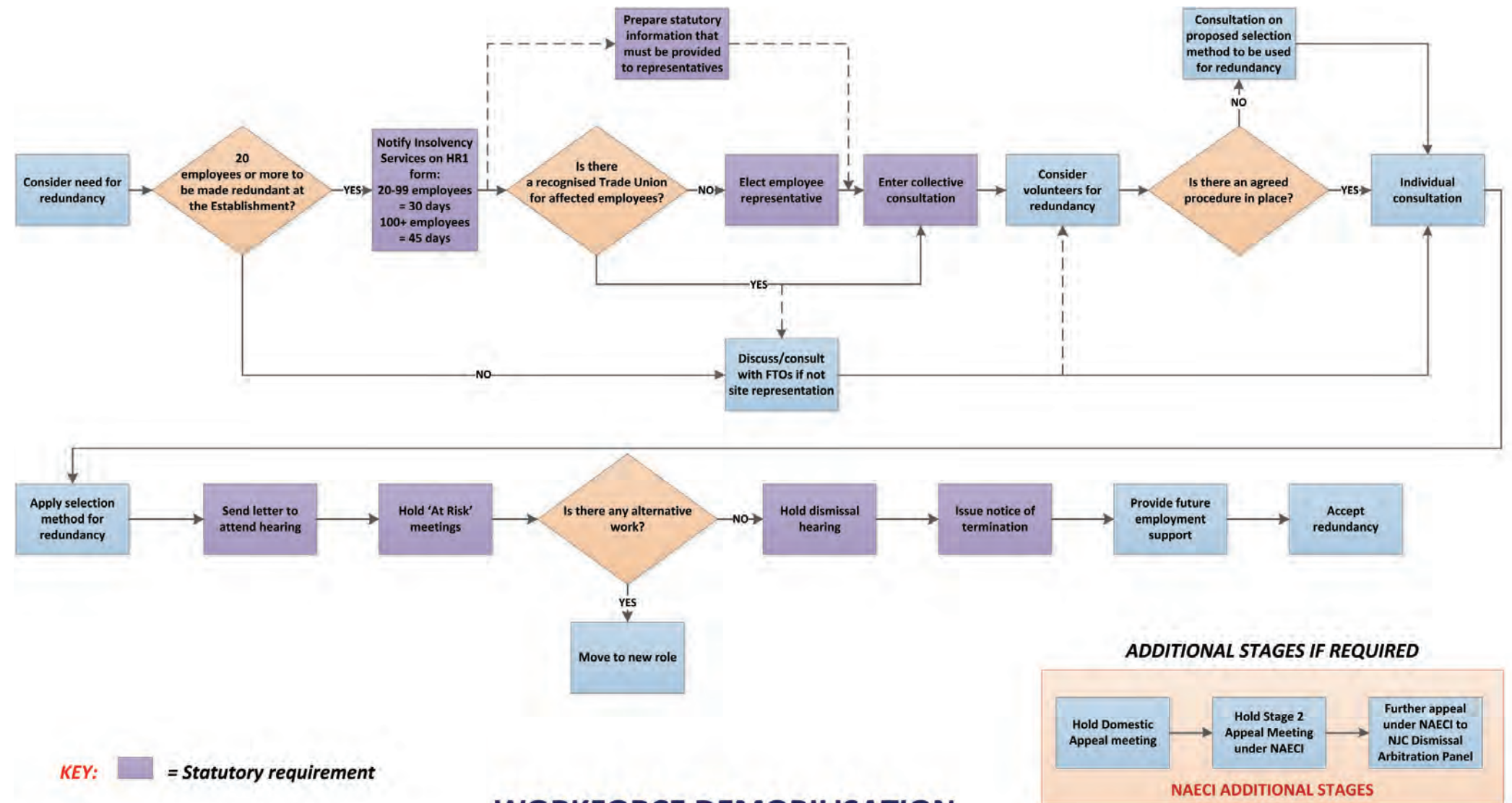
Lack of consideration given to workforce demobilisation by the business can be a negative factor, in that it becomes reactive and poorly managed and affects productivity and completion of the work. This could create difficulties in future recruitment by the organisation and have a detrimental effect on the commitment of the workforce to remain within the Industry.

Other risk factors that need to be taken into account are:

- Unclear messages as to why the reduction is necessary, creating uncertainty and confusion on the project
- Failure to consider the need to reduce labour sufficiently in advance to allow for meaningful consultation with stakeholders
- Failure to follow a consistent, fair and transparent procedure
- Workforce demobilisation driven by commercial reasons rather than the workforce requirements to complete the work.

NOTE:

A flowchart describing the key stages of redundancy management is shown on the following page.



WORKFORCE DEMOBILISATION

6.2 Managing the Workforce Reduction

When the process of demobilisation commences, it should come as no surprise to employees provided that they have been effectively communicated with during the life of the project. It is important that no half measures are taken and that the needs of the business and of the employee are satisfied to the best of everyone's ability. The objective of the process is for this to be the natural conclusion to a satisfying work experience.

When unforeseen circumstances out of the control of the Employer necessitate redundancies, every effort should be made to ensure that the process is as considerate as possible.

6.2.1 Recommendations and Risks

Recommended Practice

The procedure for managing workforce demobilisation should be observed in a fair and transparent manner, and in accordance with defined criteria. Employees must be aware of the procedure and it should be communicated in good time, well in advance of any demobilisation of labour, with support from stakeholders. Taking this approach will encourage the Trades Unions and employees to take a more positive view, with the result that there is a stronger likelihood of improved Industry retention.

The relevant sections of the Employment and Skills Plan should be reviewed then executed, with meaningful consultation taking place throughout. All relevant parties should be involved at the earliest possible stage.

Other points for consideration are:

- The emphasis should be on the retention of skills within the Industry
- The final step in the demobilisation plan may require the need for redundancies. A procedure should be established, in consultation with stakeholders, which clearly sets out the steps to be followed. The early introduction of the procedure will ensure that Managers and Supervisors fully understand the assessment process and that employees understand its application so that there is no ambiguity should the need arise.
- Demobilisation should be seen as a natural conclusion to an employee's time on the project. If it's the end of their employment, they should feel as valued as they did at the beginning of the project.
- There should be honest and considerate communication. Employees should be treated with integrity and leave the business happy to have been part of it.
- Subject to project requirements, there should be a flexible approach during the demobilisation phase that allows for employees to leave the project voluntarily, if other employment opportunities arise and if demobilisation has commenced within their defined selection pool.
- Consideration should be given to ways in which employees may be assisted to have the requisite skills to continue working in the Industry.
- Consideration should be given to utilising Employment Businesses to identify current opportunities and future possible placements.

Risk Awareness

Failure to follow a fair and transparent procedure for handling workforce demobilisation will create an adversarial atmosphere, with negative opinions potentially affecting everyday working practices. This can affect productivity for those remaining on site, especially at the vital completion stage of the work.

Other risk factors that need to be taken into account are:

- Insufficient thought into the development of selection pools and the creation of an objective and/or verifiable selection process. The priority, as defined in NAECl, is for the *'needs and requirements of the project and to maintain a balanced workforce'*.
- Dissatisfaction among employees could affect their future employment choices
- A bad impression is given if the process is not handled properly
- If there is no hands on approach from Site Management and the process is solely seen as an HR/IR function, this can alienate employees.

6.3 Best Practice

WORKFORCE DEMOBILISATION

Planning the demobilisation of the workforce

- Demobilisation from site should form part of the whole planning, communication and engagement process to ensure that all stakeholders are involved and consulted with at an early stage
- Meaningful consultation, with an aim to reach agreement, should take place as early as possible with the Trades Unions and/or workforce representatives
- Networking systems should be in place to identify future employment opportunities
- Any subcontractor or Employment Business should be treated as a stakeholder and given all the necessary information to enable them to adopt this best practice guidance.

Managing the workforce reduction

- The relevant sections of the Employment and Skills Plan should be reviewed and implemented accordingly
- There should be honest and considerate communication with employees and their representatives. Demobilisation should be seen as a natural conclusion to their time on the project and they should leave the business happy to have been part of it and looking forward to working with the organisation again.
- Subject to project requirements, there should be a flexible approach during the demobilisation phase that allows for employees to leave the project voluntarily, if other employment opportunities arise
- Consideration should be given to assisting employees to have the necessary skills to continue working in the Industry
- Consideration should be given to utilising Employment Businesses to identify current opportunities and future possible placements.

7. Conclusions



To assist in achieving efficient workforce planning, this document contains guidelines and best practice recommendations (see [Section 7.1](#)) to facilitate the sharing and utilisation of relevant knowledge, experience and expertise.

The key findings are:

1. Stakeholders, both internal and external, need to be identified with defined roles and responsibilities
2. Detailed up to date planning is essential to enable effective workforce planning
3. Good communication channels are required
4. Workforce demobilisation needs to be planned in advance taking into account the retention of skills within the Industry

The document has built on the Engineering Construction Forum's conclusion² that *"The NAECI and its major project Supplementary Project Agreements provide both a framework and a stable and structured environment for project execution."* with the aim of looking at ways to *"establish and encourage the adoption of practices by Clients that would promote a strong, productive and harmonious UK Engineering Construction Industry"*.

Checklists contained in [Appendix A](#) should be utilised to assess the extent of the implementation of best practice; there is an individual checklist for each main section covered in the document.

The recommendations contained in this Best Practice Guide are designed to encourage a proactive approach to capturing lessons learned and implementing best practice. The overall objective is to increase the performance and competitiveness of the UK Engineering Construction Industry.

All stakeholders have a key role to play in achieving these goals.

² ECF Report in response to 'Changing to Compete – Review of Productivity and Skills in UK Engineering Construction' February 2012.

7.1 Summary of Recommendations

A summary of the Guide's recommendations follows but the fundamental activities for removing the barriers to productivity within workforce planning can be summarised as:

- Engaging early with stakeholders
- Developing a best practice culture
- Communicating clearly
- Investing in planning.

RECOMMENDATIONS

Planning for the Work

Identifying and engaging with stakeholders

- All stakeholders identified, recognised and engaged with
- Clear responsibilities assigned
- Recruitment policies and procedures in place.

Creating the Scope of Work

- Clear boundaries and parameters defined for all activities
- Contractor involved in Client overall planning
- Sufficient information exists to identify workforce requirements
- Scope fully explained and communicated through contract chain
- Industry lessons learned.

Establishing the workforce requirements

- All areas of requirement identified and full understanding of the work
- Forecasting according to realistic schedules and productivity measures
- Employment Businesses can be engaged to help assess current market
- Contingency allowed for management of peaks, troughs and change
- Workforce Histogram and workforce mobilisation and demobilisation plans produced
- Total workforce/skills needs examined and planned in advance.

RECOMMENDATIONS

**Planning for the Work
(continued)****Creating the Employment and Skills Plan**

- Responsibilities for drawing up the plan clearly defined
- Clear structure and contents
- All involved stakeholders engaged.

Communication

- Effective and comprehensive lines of communication established between all involved parties
- Initiation of milestone reporting on key steps in the work
- Frequent project review meetings held with all stakeholders
- Importance attached to communication between Employers and the Trades Unions.

Implementation**Confirmation and communication**

- Review of workforce requirements and Employment and Skills Plan and details confirmed
- Project requirements checked for completeness.

Resourcing

- Clear resourcing plans developed
- The role clearly defined in the Job and Person Specs
- Vacancies initially to be advertised in the local Job Centre
- If an Employment Business is used, it is important to ensure they have the capability to deliver the resource in accordance with best practice
- Impact of labour needs of other projects considered in terms of timing and resourcing
- Ensuring sufficiently skilled labour force is secured.

RECOMMENDATIONS

Implementation (continued)

Recruitment

- Importance of attracting the right people from appropriate sources
- Appropriate recruitment strategy and methodology in place
- Defined interview approach and check list followed.

Commencing employment

- Clear expectations set by the induction process
- An effective welcome procedure in place
- Efficient administration and communication processes in place.

On-going review

- On-going review of the workforce requirements and Employment and Skills Plan
- Review of performance of workforce against defined targets
- All stakeholders on the project kept aware of the requirements and Employment and Skills Plan and any changes made communicated.

RECOMMENDATIONS**Workforce
Demobilisation****Planning the demobilisation of the workforce**

- Follow a demobilisation strategy that has been created and agreed well in advance
- Seek redeployment/other employment opportunities over redundancy
- Take into account statutory obligations for redundancy, if necessary
- Ensure consultation takes place with Trades Unions/other representatives.

Managing the workforce reduction

- Implement the relevant sections of the Employment and Skills Plan
- Subject to project requirements, take a flexible approach to demobilisation, for example if other employment opportunities come up
- Ensure considerate communication with affected employees
- Emphasise retention of skills within the Industry.

A. Checklists for Workforce Planning

A.1. Planning for the Work

- ☐ Have all stakeholders, both internal and external, been identified and their roles and responsibilities defined?
- ☐ Is there a method of ensuring effective communication amongst all stakeholders?
- ☐ Have all departments with responsibility for any aspect of the project been included in the planning phase?
- ☐ Has the Scope of Work been developed involving all parties in the supply chain and is it sufficiently detailed to allow for effective workforce planning?
- ☐ Has a Workforce Histogram been created for the work?
- ☐ Has a workforce mobilisation and demobilisation plan been created?
- ☐ Has contingency been allowed for changes in the project timeframe and/or any potential peaks or troughs in construction?
- ☐ Has an Employment and Skills Plan been created that covers all the key areas?
- ☐ Has there been a thorough assessment of availability of skills to satisfy the requirements and has an action plan for any potential shortages been included in the Employment and Skills Plan?
- ☐ Does the company have a communication policy that ensures effective project communication, especially with the Trades Unions?
- ☐ Have all parties committed to the use of NAECI?
- ☐ Have review mechanisms been put in place, which cover the life of the project?

A.2. Implementation

- ☐ Have any amendments been made to the project requirements and do any changes impact the workforce requirements and Employment and Skills Plan?
- ☐ If additional labour is required, has contact been made with the Job Centre nearest to the project to advertise vacancies? Should the Job Centre be unsuccessful have other resourcing options been considered?
- ☐ Does the company have a recruitment policy that ensures a fair recruitment procedure?
- ☐ Have pre-qualification checks been carried out on any subcontractors or Employment Businesses to ensure capability to deliver the work?
- ☐ Have other project commitments been taken into consideration?
- ☐ Are managers sufficiently trained or experienced in the recruitment process and are interviews conducted in a fair and consistent manner? Is feedback provided to candidates?
- ☐ Does the company have a performance assessment procedure?

A.3. Workforce Demobilisation

- ☐ Does the company have a workforce demobilisation plan in place and are managers, supervisors, stakeholders and employees aware of the plan?
- ☐ Has there been continuous consultation with the Trades Unions on the workforce requirements for the project?
- ☐ Are systems in place to explore redeployment opportunities within the Industry?
- ☐ Does the company have a workforce demobilisation strategy that supports the long term future of the Industry?
- ☐ Is there an established redundancy procedure, agreed with the Trades Unions, and have managers/supervisors been trained in this?

B. Abbreviations and Acronyms

Abbreviation	Description
EB	Employment Business
ECF	Engineering Construction Forum
ECI	Engineering Construction Industry
ECIA	Engineering Construction Industry Association
EPIC	ECIA Productivity Improvement Committee
HS&E	Health, Safety & Environment
IR	Industrial Relations
KPI	Key Performance Indicator
NAECI	National Agreement for the Engineering Construction Industry
R&M	Repair & Maintenance
SME	Small and Medium-sized Enterprises
SQEP	Suitably Qualified and Experienced Person(s)

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Acknowledgements

References to and quotations from relevant sources are included in this document. All quotations are shown in *italics* and within quotation marks.

Disclaimer

Please be aware that nothing contained with this Best Practice Guide should be considered as superseding the National Agreement for the Engineering Construction Industry (NAECI).

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