Unit 19:   Managing Resources for Project Work

Unit code:	Y/504/4380
QCF level:	6
Credit value:	15

Aim

The aim of this unit is to enable learners to develop the understanding and skills required to manage construction resources. Learners will develop an understanding of key strategic resource management issues, including supply chain management and organisational change. Learners will also gain skills for human resource forecasting, succession planning and training needs.

Unit abstract

Good resource management is a core factor in determining the success of an organisation. Resource management is the process of formulating and putting in place policies to manage any resource in an organisation. In the construction sector these are in the form of human resources, financial services, professional services and physical resources, which are crucial in the production process. Many of these resources are procured through networks within the supply chain.

The diversity of clients, project sites, materials and components means that organisations within the construction sector have a wide range of supply systems to service the range of technologies and processes associated with the different phases and parts of a project. Modern procurement methods are tending towards the appointment of integrated supply chains where the parties in the supply chain have a long-term objective to work together to deliver added value to the client. These long-term relationships enable the power of supply chain management to be leveraged. With the emphasis on delivering value within the integrated teams and supply chains in the construction sector new improvements are realised.

Part of the pressure to change originates from an evolving market structure, technology and government measures, whilst other pressures come from within the organisation, such as work attitudes and industrial relations. To achieve cultural change within an organisation human resource management strategies should embrace investing in people. Appropriate human resource planning and forecasting leads to an effective human resource plan which facilitates cultural change.

Learning outcomes

On successful completion of this unit a learner will:

1 Understand supply chain management techniques and practices to meet project requirements
2 Be able to develop proposals for change for a given project
3 Be able to create a human resource plan for a given project.

Unit content

1 **Understand supply chain management techniques and practices to meet project requirements**

Environmental issues: factors (internal and external); corporate business planning; SWOT analysis; Key Performance Indicators (KPIs)

Suppliers: current issues; construction supply chains, e.g. integration, professional services, materials, equipment, labour; competitive advantage; costs; project innovations; technological complexity; production methods, e.g. fasttrack techniques, value management, lean construction; design responsibility; supply chain management, e.g. strategic, logistical, selection, partnering

Public sector procurement: marketplace; market competitiveness; value for money; public private partnerships (PPPs); Private Finance Initiatives (PFI); framework agreements; prequalification questionnaires; procurement regulations and restrictions, e.g. European Union, international; Building Information Modelling

2 **Be able to develop proposals for change for a given project**

Need for change: drivers for change, (culture e.g. national, international, corporate), stakeholders; markets; industrial relations; areas for change, e.g. technological advancements, entrepreneurship, organisational structures, restructuring (such as downsizing); functional area restructuring; Key Performance Indicators (KPIs)

Areas for change: use of technological advancements; use of entrepreneurship; organisational structures; lines of reporting/communication; restructuring, e.g. downsizing, expansion; functional area restructuring; Key Performance Indicators (KPIs)

Resource requirements: analysis of resources; human resources, e.g. restructuring, training, redundancies, recruitment, interviewing, appraisal; physical resources, e.g. buildings, equipment and plant, vehicles; financial resources, e.g. training costs, redundancy costs, relocation costs, new build and/or refurbishment costs; qualified workforce; training analysis

Models for change: unplanned versus planned; pace of change, e.g. incremental, slow, gradual, transformational, radical; strategic approach to managing change; corporate environmental forces (proactive and reactive management of change); managing resistance to change, e.g. education, communication, participation, involvement, negotiation, agreement; managing people, e.g. leadership, motivation, teamwork; management processes; industrial relations

3 **Be able to create a human resource plan for a given project**

Human resource management: strategic company planning, e.g. growth plans, diversification; external factors, e.g. economic and social environment, organisational and project effects; personnel cost, e.g. anticipation of redundancies, shortages, surpluses, corrections, natural wastage; human resources optimisation; cost balance; resources balance; current staff resources (skills analysis, succession planning, staff turnover analysis); computer modelling for personnel planning; risk management (skills gaps, recruitment gaps, personnel risk analysis, risk mitigation, ill health, injury, absenteeism); labour availability, e.g. relevant skills, geographical location; external labour supply, e.g. local population profile, local employment levels, competition for recruitment, transportation; human resource development, e.g. education, appraisal scheme, training, management development, promotion, interpersonal, analytical, interpretative; staff remuneration; trade unions, e.g. negotiations, joint consultation

Learning outcomes and assessment criteria

Learning outcomes On successful completion of this unit a learner will:	Assessment criteria for pass The learner can:
LO1 Understand supply chain management techniques and practices to meet project requirements	1.1 Critically appraise environmental issues in supply chain management for a given proposal 1.2 Examine the benefits of involving suppliers in the early stages of a specific project development 1.3 Critically appraise the implications of procurement within a public sector organisation
LO2 Be able to develop proposals for change for a given project	2.1 Evaluate changes made in an organisation to successfully undertake a given project 2.2 Evaluate resource requirements to implement change in an organisation 2.3 Develop an appropriate model for change in a business proposal for a specific project
LO3 Be able to create a human resource plan for a given project	3.1 Produce a human resource plan to enable implementation of a project 3.2 Evaluate a human resource management proposal for a specific project

Guidance

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

The learning outcomes associated with this unit are closely linked with:

Level 4	Level 5	Level 6
Unit 24: Design Procedures for Construction (A/601/1284) Unit 28: IT Applications for Construction (Y/601/1292)	Unit 4: Management Principles and Application for Construction and the Built Environment (T/601/1249) Unit 11: Contractual Procedures and Procurement for Construction and the Built Environment (T/601/1266) Unit 14: Economics for Construction and the Built Environment (J/601/1272) Unit 20: Construction Methods and Design Solutions (M/601/1279) Unit 61: Project Design, Implementation and Evaluation (L/601/0995)	Unit 1: Major Project (Y/503/7221) Unit 7: Construction Management (H/504/4351) Unit 8: Construction Financial Management (K/504/4352) Unit 18: Managing Business Opportunities (H/504/4379) Unit 20: Critical Evaluation Management (D/504/4381) Unit 21: Project Management in Construction (A/504/4386)

This unit has been informed by the following National Occupational Standards:

COSCCOL4O07 Identify, assess and evaluate project requirements

COSCCOL4O10 Prepare procurement schedules and programmes of works

COSCCOL4O11 Implement strategic and integrated supply chain management and sourcing partnerships.

COSCCOL4O15 Analyse, monitor and optimise materials, plant and services

COSCCOL4O17 Optimise and control contract progress and costs

COSBED4C04 Develop and maintain professional relationships and practice

COSBED4O13 Manage project information

COSBED4O17 Prepare and agree forms of contract

COSBED4O20 Develop self and other people and contribute to improving design services

COSTTML4C03 Develop and manage productive working relationships in transportation

COSTTML4O05 Manage change in transportation requirements

COSTTML4O20 Manage procurement for transportation projects

COSTTML4O27 Manage the preparation and delivery of training in transportation.

Essential requirements

There are no special resources needed for this unit.

Delivery

Following an introduction to the unit, a good starting point for learning outcome 1 is a whole-class discussion on the significance of environmental issues in supply chain management. Learners would expand on this during their evaluation of environmental issues for related given proposals. Tutors could introduce the benefits of involving suppliers in the early stages of a project before learners examine case studies for specific project developments. Finally, tutors could outline the implications and significance of public procurement and associated legislation before leading a group discussion on how these can be applied to given organisations. Case studies may be used to demonstrate the differences between working with the public sector and the private sector. A useful way to conclude learning outcome 1 is to return to the opening discussion on the understanding of strategic issues in supply chain management. Learners could be asked if their initial views and understanding has changed and to feed back to the class their understanding of current good practices.

For learning outcome 2, tutors could present the rationale for, and types of organisational change before facilitating learner research into the classification of organisational change for given organisations and projects. Tutors could lead a debate on appropriate organisational change models and associated resource issues for business. Learners could then investigate and present a suitable change model for an organisation undertaking a specific project. Tutors could summarise by referencing to the suitability of the models and appropriateness of the resources to the given organisations.

For learning outcome 3, tutors could lead a group discussion on the need for human resource management using examples from selected industries and giving a historical context. This could be followed by a group debate to critically evaluate proposals for specific organisations and recommend/suggest improvements or alternative approaches. Tutors may outline the purpose of resource forecasting before workshops in which groups of learners examine and formulate strategic aims and objectives for human resource forecasting within given organisations. Finally, tutors could introduce sample human resource plans before learners produce individual plans for an organisation undertaking a particular project. Tutors could conclude by encouraging learners to evaluate human resource plans in a group discussion.

Learners would benefit from talks given by industry practitioners on supply chain and human resource management. Industry leaders with experience of managing organisational change would also enhance learner's knowledge.

Assessment

The preferred method of assessment for this unit is three equally-weighted assignments/tasks. The first of these will enable learners to research and demonstrate, in report form, their understanding of the strategic issues in supply chain management and show their understanding of the differences between working in the public and private sectors. The second assignment will enable learners to examine the need for change in an organisation to undertake a given project and develop and justify a model for change. The third assignment will test learner understanding of human resource plans, by evaluating a human resource management proposal for a specific project.

Resources

Books and guides

COIB – *Code of Practice for Project Management for Construction and Development* 4th Edition (Wiley-Blackwell, 2010) ISBN: 978-1405194204

Cooke B and Williams P – *Construction Planning, Programming and Control* 3rd Edition (Wiley-Blackwell, 2009) ISBN: 978-1405183802

Fellows R, Langford D, Newcombe R and Urry S – *Construction Management in Practice* 2nd Edition (Wiley-Blackwell, 2001) ISBN: 978-0632064021

Fewings P – *Construction Project Management: An Integrated Approach* 2nd Edition (Routledge, 2012) ISBN: 978-0415613446

Fryer B, Ellis R, Egbu C and Gorse C – *The Practice of Construction Management* 4th Edition (Wiley-Blackwell, 2004) ISBN: 978-1405111102

Loosemore M, Dainty A and Lingard H – *Human Resource Management in Construction Projects: Strategic and Operational Approaches* (Routledge, 2003) ISBN: 978-0415261647

Othman A A E – *Managing Human Resources in Construction: The Complete Guide for Building the Effective Architectural Team in Design Firms* (LAP LAMBERT Academic Publishing, 2010) ISBN: 978-3838390987

Peterson S – *Pearson's Pocket Guide to Construction Management* (Prentice Hall, 2011) ISBN: 978-0132156103

Winch G – *Managing Construction Projects: An Information Processing Approach* (Wiley-Blackwell, 2002) ISBN: 978-0632058884

Walker A – *Project Management in Construction* 5th Edition (Wiley-Blackwell, 2007) ISBN: 978-1405158244

Journals

Building (UBM Built Environment)

Construction Manager (CIOB, Atom Publishing)

Construction Research and Innovation (CIOB)

Engineering, Construction and Architectural Management (Emerald)

International Journal of Construction Project Management (Nova Science Publisher)

International Journal of Project Management (Elsevier)

Websites

www.apm.org.uk/BOK.asp	Association for Project Management
www.cabinetoffice.gov.uk/resource-library/best-practice-and-methodology-projects-programmes-and-portfolios	Cabinet Office – examples of good practice
www.ciob.org.uk/education	Chartered Institute of Building
www.constructingexcellence.org.uk	Constructing Excellence
www.ice.org.uk/getattachment/bec21615-fe1b-4644-89f8-e74b6b8bd066/Supply-chain-management-in-construction-industry.aspx	Institution of Civil Engineers – supply chain management
www.ijcscm.com/	International Journal of Construction Supply Chain Management
http://shop.bsigroup.com/en/ProductDetail/?pid=000000000030170007	British Standards Institution BS 6079-1:2010 Principles and guidelines for the management of projects

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BA034134 – Edexcel BTEC Level 6 Diploma in Construction (QCF) units –
Issue 1 – November 2012 © Pearson Education Limited 2012

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