ECI Active Implementation Handbook



ECI ACTIVE Implementation Handbook

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ECI ACTIVE Implementation Handbook

INTRODUCTION TO ECI ACTIVE

ACTIVE, an acronym for **A**chieving **C**ompetitiveness **T**hrough **I**nnovation and **V**alue **E**nhancement, was an initiative launched in 1996 aimed at improving the performance of capital projects in the onshore process industries in the UK. The ACTIVE vision was that only by striving to create a sustainable and successful supply chain based on high performance and effectiveness will the long term future of our industry be assured.

ACTIVE was merged into European Construction Institute in 2001 and was relaunched as ECI ACTIVE in 2002. An important feature of ECI ACTIVE is the sharing of good practice, both internally within companies and across the wider industry. ECI ACTIVE encourages dialogue across the supply chain with the sharing of experience and the communication of measured benefits, all powerful drivers for performance improvement.

To achieve business competitiveness, project performance is as important to many companies as superior products or competitive process technology. For projects to be successful the entire supply chain must be aligned to project objectives, whilst proper apportionment of risk and reward provides the opportunity for all participants in the supply chain to gain benefit.

The purpose of ECI ACTIVE is to develop and share value enhancing practices (VEP's) with the UK members of ECI and with the engineering construction industry as a whole. The benefits to members of ECI ACTIVE come through participation in the ECI ACTIVE network which drives performance improvement through a continuous improvement cycle. The cycle is based upon, and makes extensive use of, ECI knowledge areas and VEP's as well as the ACTIVE principles and practices.

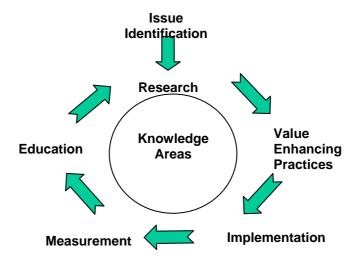
This handbook tells you how to implement ECI ACTIVE principles and practices in your company. It is of no benefit to ECI members merely to produce research papers, best practice guides, VEP's and improvement tools and techniques unless they are implemented. It is only by translating guidance into action in the work place that the benefits will be realised. To do this requires a process which will drive the required change in behaviours and practice to deliver the benefits of improved performance. The need for such an implementation process was recognised by the ACTIVE Initiative which produced an implementation pack to address this need. ECI ACTIVE has taken the ACTIVE implementation pack and reissued it in this new format, updating and adapting it to suit the wider needs of ECI members



ECI ACTIVE CONTINUOUS IMPROVEMENT CYCLE

Implementation is a key component of the ECI ACTIVE Continuous Improvement Cycle which has a number of elements:

Figure 1



The ECI has formally adopted the Continuous Improvement Cycle as the model for driving improvement throughout the ECI. The driver for change is the identification of need - those issues in the industry needing to be addressed to facilitate better project delivery and produce improved business results.

The ECI ACTIVE programme is focused into twelve key knowledge areas:

- Project Definition
- Design
- Procurement
- Construction
- Commissioning and Operation
- People and Team Management
- Contracts
- Project Improvement Processes
- Project Control
- Safety, Health and Environment
- Information Management
- Business Environment

Overseeing the research and the development of Value Enhancing Practices (VEP's) is the responsibility of industry led Task Forces. Recent ECI Task Forces have included:

- Benchmarking
- Safety, Health and the Construction Environment



- Sub Contracts Pricing
- Long Term Partnering
- Fast Track Projects
- Small Works Based Projects
- Public Private Partnerships
- Whole Life Value/Life Cycle Costing

ECI, through its task forces has already produced an impressive array of VEP's which have been further augmented by the ACTIVE Workbook which is now available to all ECI members. ECI also has access to the best practice material developed by the Construction Industry Institute (CII) in North America.

Current ECI VEP's include:

- Pre-Project Planning
- Cost Estimating
- Design/Information Technology
- Team Building
- Safety
- Constructability
- Small Works Based Projects
- Project Change Management
- Project Controls

It is important that VEP's and other ECI tools do not just sit on the shelf, never getting used, which is why this ECI ACTIVE Implementation Handbook has been published. The handbook will help member companies to obtain real performance improvement using tools for measurement and benchmarking and the application of an effective education and training programme.



KEY ELEMENTS OF THE ECI ACTIVE IMPLEMENTATION PROCESS

There are seven key elements of the ECI ACTIVE Implementation Process:

1. Gaining Commitment throughout the Company

To gain the commitment of all members of the company to ECI ACTIVE principles and Value Enhancing Practices (VEP's) and the changes necessary to achieve them within the organisation.

The ECI ACTIVE Value Enhancing Practices (VEP's) and other publications focus heavily on management practice. However, it is essential that the principles and practices promoted by ECI ACTIVE are applied at all levels of the company from top to bottom. Leadership and commitment to change and improvement are necessary throughout the organisation and support for this implementation process must come from the very top of companies. It is important that there is an understanding throughout the organisation of what ECI is seeking to achieve, the recognition of the need for change and clear support and leadership from the senior management of the company to deliver the benefits of such change.

2. Appointing an ECI ACTIVE Champion

To appoint an ECI ACTIVE Champion within the organisation to define and facilitate the change management process.

The key to the successful adoption of the ECI ACTIVE implementation process within a company is the appointment of a champion to drive the application of ECI ACTIVE principles and practices across the organisation. For large companies with separate business units or different geographical locations, it might be appropriate to appoint more than one champion.

Champions should be relatively senior people within the company who have the full backing of their board to undertake the role. They must be capable of influencing colleagues throughout the company as well as the company's clients, contractors and suppliers. It is important that champions have sufficient time, funding and other resources to undertake their role effectively. The ECI ACTIVE Champion may or may not be the ECI Board of Advisors representative, as the two roles do not overlap but are complementary.

3. Completing a Company Assessment

To undertake a Company Assessment to determine the extent to which ECI ACTIVE Value Enhancing Practices are being employed within the company using a measurement process which can be benchmarked by ECI ACTIVE.

In order to assist companies to review the application of ECI ACTIVE VEP's across their organisation, a self-assessment process has been developed as a relatively

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easy way of assessing the extent to which better principles and practices are being used and applied in the company. The outcome of this assessment is a benchmark against which further progress in implementing ECI ACTIVE principles and practices can be measured.

The purpose of the assessment is to test through a series of simple questions the extent to which improved working practices and VEP's have been applied in the company up to that point in time. The most important output from the assessment is the resulting action list which can be used by the ECI ACTIVE Champion for discussion with the company senior management on the next stage of the implementation. The assessments also provide a feedback mechanism to ECI ACTIVE to monitor how widely change is happening across the industry.

The current Company Assessment Checklist was developed by ACTIVE and continues to be used for these assessments. However, it is envisaged that in time the checklists will be expanded and revised to cover all the ECI ACTIVE Knowledge Areas and VEP's.

4. Action Planning to Drive Improvement

To agree an action plan to enable the company to address key areas where performance can be improved by application of the ECI ACTIVE implementation process where this is appropriate.

Following the assessment process, it is of vital importance that companies identify actions necessary to achieve sustainable performance improvement. Actions need to be company-specific and targeted to areas where ECI ACTIVE principles and practices are not being applied within the company. Since most companies already have improvement programmes in place, it is important that the ECI implementation programme integrates with, and builds on, those existing programmes.

The implementation of the Action Plan is the principle way in which companies will achieve sustainable benefit from ECI ACTIVE and hence it must have a high priority and profile within the company. Since ECI ACTIVE is concerned with the application of best practice which is constantly changing, the process is one of ongoing continuous improvement which ultimately needs to be embedded into the company's business processes.

5. Participating in the ECI Network

To link with the wider ECI network across the industry and to create an effective internal network within the company to ensure that the whole organisation is aware of and involved in the ECI ACTIVE Implementation Process.

An important feature of ECI is the sharing of good practice both internally within companies and across the wider industry. The encouragement of dialogue, the sharing of experience and the communication of measured benefits are powerful

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drivers of performance improvement. To facilitate this process, ECI provides opportunities through workshops, seminars and conferences to encourage an industry-wide network to ensure the widespread application of ECI principles and practices to specific areas of company performance. In addition, ECI is continuing to develop regional units such as ECI Benelux to provide a forum for discussion of local issues. Within the UK, ECI ACTIVE is the ECI regional unit for UK companies.

In addition to being linked to the industry-wide network through membership of the ECI, it is important that companies develop their own internal networks to ensure that the ECI culture permeates the whole organisation. Many companies have their own 'intranet' for internal communications. It is suggested that where possible existing networks are used to make ECI information widely available across the company.

6. Implementing an Education and Training Programme

To agree and implement a programme of education and training using ECI and ECI ACTIVE tools where appropriate to facilitate change in specific areas of management practice.

Education and training have a high profile within ECI which has strong and well established links with academia and a number of training organisations. ECI also works closely with the ECITB in the UK and the Construction Industry Institute (CII) in the USA to ensure ECI ACTIVE principles and VEP's are built into relevant training courses and educational programmes across the industry. In the same way, ECI ACTIVE Champions are encouraged to review in-house training courses to ensure consistency with ECI ACTIVE principles and VEP's.

ECI has a range of education and training tools including a series of Master Classes which have been successfully developed by ECI Benelux and are now also established in other Regional Units. In addition, with the merger of ACTIVE with ECI, the ACTIVE self-help training modules, 'ACTImods', are now available to ECI members for in-house training of staff. The longer two day training course, 'ACTIVE at Work', which gives a more in depth understanding of ECI ACTIVE principles, is also available in the UK through the ECITB.

7. Registering, Assessing and Benchmarking Projects

To register projects as ECI ACTIVE Projects with commitment to work to ECI ACTIVE principles and practices. To engage in the measurement and benchmarking of project performance and supply chain relationships by participation as a company in benchmarking initiatives.

All ECI companies are invited to register capital projects as ECI ACTIVE Projects. For each project, the project manager is asked to confirm that the project is committed to working within the spirit of ECI ACTIVE principles and VEP's. ECI ACTIVE is keen to establish registered projects across the range of size and type of projects. To register a project as an ECI ACTIVE project a registration form should



be completed and returned to the ECI office where a database of registered projects is maintained as a basis for sharing learning and experience.

Measurement and benchmarking of project performance are a powerful drivers of improvement and ECI members are strongly encouraged to measure and benchmark their project performance. Project performance benchmarking is available through ECI using the methodology developed by the Construction Industry Institute (CII) in the USA.

ECI ACTIVE projects are invited to use the ECI ACTIVE project assessment process. Developed by ACTIVE and now available to all ECI members, the project assessment process is a simple self-help assessment checklist applied at five key stages of a project. Currently based on the eight ACTIVE Principles, the process is being developed and extended to cover all the ECI Knowledge Areas and VEP's. ECI ACTIVE maintains a database of registered project assessments which provides projects with feedback on their performance at different stages of their project. All detailed ECI ACTIVE benchmark and assessment database information is held confidentially but aggregated non-attributable data and performance norms are made available to the ECI membership.



ECI ACTIVE IMPLEMENTATION

Section 1

Gaining Commitment Throughout the Company

To gain the commitment of the all members of the company to ECI ACTIVE principles and Value Enhancing Practices (VEP's) and the changes necessary to achieve them within the organisation.

Although many of the ECI ACTIVE VEP's are focused on addressing behaviours at middle management level and below, it is absolutely essential that there is commitment and support for the implementation of change at the very top of companies if real performance improvement is to be achieved. Whilst it is important for less senior staff to understand good practice and be committed to implementation, without support from above, the effects will be patchy and unsustainable. It is important therefore that at senior levels in the organisation there is a clear understanding of what ECI ACTIVE principles are seeking to achieve, as well as the recognition of the need for change. Support and leadership must be provided from senior managers in order to deliver the benefits of that change.

Specifically, the following actions are the responsibility of the company senior managers:

- To raise awareness and commitment at board level
- To nominate an ECI ACTIVE Champion (or Champions if the organisation has a disparate business or regional structure)
- To approve an Action Plan for the company and allocate necessary resources for its implementation
- To monitor and review the implementation of the Action Plan

It is also necessary for senior management to establish the appropriate corporate culture that will enable better practices and behaviours to flourish. This might entail dealing with internal barriers to change from powerful sectional interest groups within the organisation. It might also involve freeing up project teams from organisational or functional constraints from corporate departments.

To gain high level commitment within companies, there are several approaches which can be used:

 Demonstration of the effectiveness of ECI ACTIVE practices by successful case studies from within the company.

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- Using examples of success from other ECI member companies.
- Highlighting specific areas of improvement which would yield benefit to the company
- Sharing benchmarking data and undertaking comparisons of benchmarks with current company performance.
- Presentations from ECI ACTIVE, use of ECI publicity materials and demonstration of ECI tools and techniques.

In many companies it can be difficult to obtain 'air time' with senior managers and to catch the attention of busy executives. It is very important therefore that the focus is on benefits to the company in terms of costs, profitability and business success rather than merely focusing on improvements to the mechanics of project execution, for example. Relevant case histories and actual success stories will be much more persuasive in convincing senior managers of the effectiveness of ECI ACTIVE principles as opposed to merely theorising about intangible benefits.

Although gaining the commitment of senior managers in the company is essential in achieving real sustainable change and improvement, this does not mean that gaining commitment further down the organisation is not important. There are many instances where 'top down' initiatives have failed because middle and junior levels of management have failed to become committed. This underlines the importance of both good communications throughout the company and the need to build on good practice wherever it occurs in the organisation. Projects which are successful and show the real practical advantages of the application of best practice provide compelling case studies for persuading middle and junior managers elsewhere in the organisation of the benefits of change.

Much can be done through appropriate education and training and ECI ACTIVE provides a range of tools to address this need through self help modules, interactive seminars and courses and Master Classes. Opening the eyes of middle managers to what is possible and creating opportunities for sharing experience beyond company boundaries can be key drivers for improvement. The key is to learn from success as well as failure. It is important to identify those practices which result in a successful project and encourage other practitioners to adopt them company-wide. Learning from failure is also important but if that is the only mechanism for learning it can lead to a 'blame' culture and lack of openness.

Performance improvement requires change management driven from the top but applied throughout the company organisation. The ECI ACTIVE implementation process provides the basis of a structured process to help facilitate that improvement but it can only be achieved if there is commitment from all levels of the company.



ECI ACTIVE Implementation

Section 2

Appointing an ECI ACTIVE Champion

To appoint an ECI ACTIVE Champion within the organisation to define and facilitate the change management process.

A test of the commitment of the senior management of the company to show whether they are serious about performance improvement is whether they are prepared to commit resources to the process of achieving it. Many companies are happy to say the right words but do not achieve real change and improvement because the words are not followed up by actions. To achieve any lasting improvement in working practices requires follow through from words into action which in turn requires resources. To successfully implement ECI ACTIVE principles and practices within a company requires someone to drive the application of improved working practices across the organisation. The process requires a champion who has bought into the principles of ECI ACTIVE, has a vision for how things might be different and has the energy to make it happen.

The ECI ACTIVE Champion needs to have a good understanding of the principles and practices developed by ECI ACTIVE and the benefits they can bring. The champion also needs to understand their own company organisation and the opportunities which exist for improvement. He or she should be clear about the process of change necessary to achieve such improvement. Champions need to be senior enough within the organisation to be able to make change happen. It goes without saying that they should have the full backing of the company board to undertake the role and should be given the necessary time, funds and other resources to undertake the role effectively. They must be capable of influencing colleagues throughout their company as well as the company's clients, contractors and suppliers and be able to network effectively both internally and with other companies and organisations.

Champions will need to gain a thorough understanding of the ECI ACTIVE VEP's and other tools and techniques and acquire knowledge of what is required to drive the application of good practice throughout their company. The 'ACTIVE at Work' course has been specifically designed to provide training for ECI ACTIVE Champions and it is strongly recommended that prospective champions attend one of these courses which are available in the UK through the ECITB. For large companies with separate business units or different geographical locations, it might be appropriate to nominate more than one champion, in which case close liaison between them will be required. They will also need to liaise closely with others in their company who are involved with the ECI such as their company Board of Advisors representative, or colleagues involved with task forces. To keep up to date with what is going on in the ECI, such as the development of new tools and

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techniques, company champions should attend ECI events including Champions Workshops where there is the opportunity to network with champions from other ECI companies.

The responsibilities of ECI ACTIVE Champions should include:

- Ensuring commitment is maintained to ECI ACTIVE principles and practices at the highest levels in the company.
- Initiating the development of an action plan and its subsequent implementation following an assessment and analysis of the company situation.
- Ensuring that the implementation of ECI ACTIVE principles and practices is integrated with other performance improvement initiatives within the company
- Coaching personnel in the ECI ACTIVE VEP's and their application using ECI or other appropriate education and training tools.
- Ensuring that customers and suppliers are aware that the company is now working to ECI ACTIVE principles and practices.
- Assisting project teams to develop, execute and deliver projects using the ECI ACTIVE VEP's for guidance and encouraging them to register as ECI ACTIVE Projects.
- Overcoming barriers to change, encouraging innovation and the successful exploitation of ideas.
- Monitoring company wide progress on adoption of ECI ACTIVE principles and VEP's through the use of ECI ACTIVE Company Assessments.
- Ensuring that project performance on a company wide basis is measured and benchmarked against industry norms using the ECI benchmarking process or equivalent.
- Maintaining and sharing learning from in-house projects to stimulate further performance improvement.
- Ensuring the company is benefiting from the ECI network by encouraging participation in network activities.
- Encouraging the company, or projects within the company, to be nominated for an ECI ACTIVE Award when significant performance improvement has been achieved.
- Maintaining links with ECI ACTIVE Champions in other companies to share learning and provide mutual support and encouragement.

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ECI ACTIVE Implementation

Section 3

COMPLETING A COMPANY ASSESSMENT

To undertake a Company Assessment to determine the extent to which ECI ACTIVE value enhancing practices are being employed within the company using a measurement process which can be benchmarked by ECI ACTIVE.

The ECI ACTIVE principles and VEP's focus on current industry working practices and seek to define behaviours which will result in performance improvement. It is important, therefore, to have some way of assessing whether these changed practices are effective. The ECI ACTIVE Company Assessment has been designed to assist companies to review the extent to which ECI ACTIVE VEP's are being applied across the organisation. It is a self-assessment process which has been developed into a tool which is easy to use and does not take a a great deal of management time. It works best if the process is independently facilitated, a service which ECI can provide at modest cost, but this is by no means essential and inhouse facilitation can still measure the extent to which better principles and practices are being applied across the company. The outcome of the assessment becomes a benchmark against which further progress in the implementation of ECI ACTIVE principles and practices can be measured as subsequent assessments are completed.

The assessment consists of a series of checklists against key ECI ACTIVE principles which test, by asking a series of simple questions, the extent to which improved working practices and VEP's have been applied in the company up to that point in time. Where low scores are achieved, the issue will be reviewed to establish whether action should be taken. The resulting action list is the most important output from the assessment and can be used by the ECI ACTIVE Champion as the basis for further discussion with the company senior management on the next stage of the implementation. The numerical results from the assessments should be sent back confidentially to the ECI ACTIVE database which will enable ECI to monitor how widely change and improvement is happening across the industry.

Assessments should be co-ordinated by the ECI ACTIVE Champion within the company who should ensure that the review is a fair reflection of the current situation across the whole organisation. In preparing for an assessment, the champion should agree who should be involved. Assessments should take less than a day to complete. Clearly this will depend to some extent on the complexity and size of the company but this is not a detailed audit and all of the questions should be capable of being answered without a great deal of prior preparation. Certainly it is not necessary to assemble the sort of paperwork required for a quality assurance audit. It does

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require, however, input by those who actually know what is going on within the company in the projects area.

In order to monitor ongoing improvement, it is recommended that assessments are repeated at least annually. The format can be varied to suit local requirements but many companies have found that convening a meeting of key players is the best way of ensuring proper representation of all aspects of the project process across the company. The assessment should commence with a review of the actions from any previous assessment to check that they have been completed or progressed.

Part 1 of the assessment is a general review covering the broad commitment of the company to ECI ACTIVE and the implementation of change within the company. The questions in this section are basically yes/no questions and are not included as part of the marking system. Nevertheless, where questions are answered 'no', action should be considered as part of improving the company's general commitment to ECI ACTIVE.

Part 2 of the assessment is arranged to cover each of the eight ECI ACTIVE Principles. This part of the assessment is arranged in the same order as the VEP's in the ACTIVE Workbook and these are referenced for each question. The aim of the assessment is to form a collective view of how well the company is doing in implementing ECI ACTIVE principles. Although many of the questions are phrased as yes/no answers, the team is asked to mark the extent to which requirements are met on a 1 to 10 scale. The recorded mark should represent a consensus of the team. Where a consensus cannot be reached, there is clearly need for an action to resolve understanding of the issue. The following gives some guidance on marking:

- A mark of 10 implies a superlative performance, meeting the requirements in every respect across the whole organisation.
- A mark of 5 implies an average performance, meeting the requirements to some extent but with room for improvement in certain areas.
- A mark of 1 implies a very poor performance, not meeting the requirements to any extent.
- Other marks between 1 and 10 reflect the degree to which requirements have been met between these limits.
- A mark of 0 is recorded if the question is deemed not applicable to the organisation.

In general, where low marks are recorded, the team should identify actions to understand the root causes of poor performance and put in place a monitored action plan for improvement.

The Company Assessment is basically a subjective assessment by those involved. To be of use, therefore, the questions should be answered as honestly as possible. Since this is a self-assessment process, it is clearly possible for companies to



engage in self deceit and delude themselves by marking higher than the evidence suggests. Such an approach, however, only serves to avoid identifying the actions necessary to achieve real performance improvement.

To reach a performance score for each section of Part 2, each question has been assigned a weighting factor to rank its relative importance. To convert the marks against each question into scores for each section, the following scoring system should be applied:

- a) For each question, multiply the mark by the weighting to give the score (T).
- b) Total the scores for each section to give a total (Σ T).
- c) For each question, other than those scored zero, multiply the weighting by ten to give maximum possible scores for all applicable questions (M)
- d) Total those maximum scores to give a total maximum applicable score (ΣM) for each section
- e) Divide (Σ T) by (Σ M) and multiply the answer by 10 to give the overall section score (S).

i.e.
$$S = \underbrace{(\sum T)}_{(\sum M)} \times 10$$

The reason for calculating the results in this way is that questions which are not applicable are scored zero and, if added into the total, will unfairly skew the result because different weightings apply to the marks for each question. The above method of calculation will give a true result for each section. Once the scores for each section in Part 2 have been calculated, they can be plotted on a Spider Diagram to give a performance profile. Subsequent assessments can be plotted on top to show graphically how the performance has improved (or worsened!) since the last assessment.

The completed assessment and proposed actions should be circulated to the senior management of the company and a copy of the marked assessment sheets sent to ECI ACTIVE where the information will be held confidentially in the company assessment database. ECI ACTIVE will from time to time publish aggregated data on the best, worst and mean scores across the industry for each section but will not publish, share or attribute individual company scores without the written permission of the company concerned.

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Part 1: General Review:

		Yes	No
0/1	Is the company a member of ECI or an associate member of an ECI local unit?		
0/2	Are the Board and Senior Management of the company committed to the principles of ECI ACTIVE and support the change management processes necessary to achieve them?		
0/3	Has an ECI ACTIVE Champion (or Champions) been appointed to lead and drive the performance improvement process throughout the company?		
0/4	Has the ECI ACTIVE Champion been trained and is he or she fully aware of the ECI ACTIVE principles and VEP's?		
0/5	Has the company previously undertaken a Company Assessment and derived an index score for the company?		
0/6	Is there an action plan in place for the implementation of ECI ACTIVE principles and VEP's within the company?		
0/7	Has the action plan been approved by the senior management of the company?		
0/8	Does the ECI ACTIVE Champion have sufficient time and resources to complete the action plan		
0/9	Does the action plan deal with softer company-wide issues such as attitudes and power politics in the organisation?		
0/10	Does the action plan address wider policy issues relating to projects within the company's main functions?		
0/11	Has the action plan been widely communicated internally?		
0/12	Have key customers and vendors been involved in discussions on achieving the action plan?		
0/13	Is the company fully participating at all levels in the ECI network?		
0/14	Are ECI ACTIVE VEP's and publications widely circulated and used within the company?		
0/15	Are staff from the company taking part in ECI Task Forces and workshops?		
0/16	Do staff have access to the ECI website and regularly use it for information?		
0/17	Is the internal company 'intranet' used as a vehicle for communications about ECI throughout the company?		



		Yes	No
0/18	Are ECI ACTIVE publicity materials widely used within the company to raise awareness in the workplace?		
0/19	Have key project staff attended an ECI Master Class or ACTIVE course?		
0/20	Has the company made wide use of training modules on the eight ACTIVE principles?		
0/21	Has the company integrated the available ECI and ACTIVE training resources with internal training programmes?		
0/22	Does the company routinely register projects as ECI ACTIVE projects?		
0/23	Have ECI ACTIVE projects within the company completed the appropriate reviews and fed the results back to ECI?		
0/24	Has the company fed back learning from their projects through the ECI network either as case studies or features in the ECI newsletter?		
0/25	Has the company been nominated for an ECI ACTIVE Award?		

Totals:

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Part 2: ECI ACTIVE Principles Review

1. Project Concept and Definition

1.	Project Concept and Definition					
		VEP Ref:	Mark	W't	Score	
1/1	Does the company have a clearly documented, effective project process which is used on all projects?	1.1		3		
1/2	Do all projects in the company have a defined and appointed project owner and/or project manager?	1.1		3		
1/3	To what extent are objectives clearly agreed for all projects within the company?	1.1		3		
1/4	Does the company have a process for project assessment and authorisation that is clear and well understood?	1.1		3		
1/5	Is there a formal process in the company for review of project definition prior to authorisation?	1.1		3		
1/6	Does the company seek the early involvement of suppliers and other parties who will be involved in executing the project?	1.2		3		
1/7	Does the company use appropriate planning tools to plan projects?	1.3		2		
1/8	Does the company routinely use Value Analysis on all projects?	1.4		2		
1/9	Are projects evaluated on the basis of life cycle costs?	1.4		2		
1/10	Does the company have a formal system for implementing value improvements during project execution?	1.4		2		
1/11	Does the company have a Health, Safety and Environment policy which is applied on all projects?	1.5		4		
1/12	Does the company appoint specific individuals with responsibility for health, safety and environment on each project?	1.5		2		
1/13	Does the company have an effective process for the handover of information to the client/operating team at the end of projects?	1.6		3		
1/14	Does the company ensure that a procurement strategy is defined for each project?	1.7		3		
1/15	Is there a company procurement policy to give guidance on adopting non-adversarial styles of contract?	1.7		2		

Total Score for Section 1:



2. Project Team Management

		VEP Ref:	Mark	W't	Score
2/1	Does the company have a clear auditable process in place for the selection of project participants?	2.1		2	
2/2	Does the company use the results of systematic analysis such as psychometric testing to check the balance of project teams?	2.1		1	
2/3	Does the company culture encourage people to effectively challenge project assumptions?	2.1		3	
2/4	Are project objectives routinely shared with a view to achieving integrated and aligned project teams?	2.1		3	
2/5	Does the company routinely set aggressive, achievable targets for project teams?	2.1		3	
2/6	Has the company an effective system of assessment and appraisal of project team staff in place?	2.1		2	
2/7	Does the company routinely assess the capability of project teams, initiating training where there are deficiencies?	2.1		3	
2/8	Does the company use team building events to raise the effectiveness of project teams?	2.1		3	
2/9	Are processes in place to measure project team effectiveness throughout the company?	2.1		2	
2/10	Are company personnel motivated and is there a process for recognising and rewarding achievement?	2.1		3	
2/11	Is a system in place within the company for the management of change and is it working effectively?	2.1		4	
2/12	Is there a defined process in place to ensure project team members are clear on their individual roles and responsibilities on projects?	2.1		3	
2/13	Are key staff within the company project organisation displaying good leadership, drawing out the full potential of their teams?	2.1		3	
2/14	Within the company, Is the working environment and supporting tools and systems conducive to effective working on projects?	2.1		2	

Total Score for Section 2:



3. Supply Chain Relationships

		VEP Ref:	Mark	W't	Score
3/1	Does the company have a policy statement on business ethics which are applied across the organisation?	3.1		3	
3/2	Are projects routinely audited to ensure ethical standards are being maintained within the supply chain?	3.1		2	
3/3	Has the company moved to non-adversarial relationships in its procurement and contract strategies?	3.1		3	
3/4	Does the company routinely set targets with supply chain companies for improving safety and protecting the environment?	3.1		2	
3/5	Is there a strategy in place for simplifying contract documentation to improve clarity and reduce paperwork and inefficiency?	3.1		2	
3/6	What is the quality of the scoping of key contracts for projects before they are placed?	3.1		3	
3/7	Do the payment terms in contracts take account of the cash flow needs of both buyers and sellers?	3.1		2	
3/8	Are processes for effectively gathering and using supply market intelligence in place?	3.2		2	
3/9	Where alliances or partnerships are proposed, does the company have effective processes for partner selection?	3.2		3	
3/10	Does the company have in place a process of supplier evaluation which is employed before enquiry documents are issued?	3.2		2	
3/11	Is it company policy to ensure the process of tender evaluation is shared with all bidders?	3.2		2	
3/12	In awarding contracts, does the company have a proper supplier selection process?	3.2		3	
3/13	Does the company as a matter of policy incorporate dispute resolution processes in its contracts using ADR (Alternative Dispute Resolution) procedures?	3.3		2	

Total Score for Section 3:



4. Information Management and Communications

		VEP Ref:	Mark	W't	Score
4/1	Is an information management/knowledge management strategy prepared for each project?	4.1		2	
4/2	Does the company have an effective internal communications strategy on projects?	4.1		3	
4/3	Does the company have defined formats and systems for the management of information and knowledge?	4.1		2	
4/4	Are key supply chain partners involved in helping define the information requirements of projects?	4.1		2	
4/5	Does the company have mechanisms in place for the transfer of information from design to construction?	4.1		3	
4/6	Is it company policy to properly assess the value and relevance of paperwork generated on projects and minimise unnecessary or excessive documentation?	4.1		2	
4/7	Are the information systems used across the company on projects to provide rapid access to information by those who need to use it?	4.1		3	
4/8	Are the information and knowledge managent systems used by the company seen to be effective by suppliers in improving communications within the supply chain?	4.1		3	

Total Score for Section 4:



5. Project Risk Management

		VEP Ref:	Mark	W't	Score
5/1	Does the company have a risk management process in place which is routinely applied to all projects?	5.1		4	
5/2	Are appropriate techniques for quantification available and used on projects in order to analyse risks?	5.1		3	
5/3	Do projects in the company produce risk management action plans with responsibilities assigned for managing risks?	5.1		3	
5/4	Are reviews carried out for all projects within the company to capture learning on how risks were managed and how risks to future projects might be better managed?	5.1		3	
5/5	Are risk and benefit framework agreements with key vendors in use in the company?	5.2		2	
5/6	Is it part of the company procurement strategy to explore the potential for risk and benefit framework agreements with potential supply chain partners?	5.2		2	
5/7	Are regular reviews held with supply chain partners with whom the company has risk and benefit framework agreements?	5.2		2	

Total Score for Section 5:



6. Innovation and Continuous Improvement

		VEP	Mark	W't	Score
		Ref:			
6/1	Has a corporate strategy for continuous improvement of projects through all their stages been established across the company?	6.1		3	
6/2	Has the company set up integrated work groups to review improvement opportunities and identify specific areas for action?	6.1		2	
6/3	Have individuals been set personal performance targets for improvement in projects?	6.1		2	
6/4	Has the company followed up improvement ideas with methods defined and programmes in place to implement them?	6.1		3	
6/5	Are training programmes in place to generate a challenge culture and improvement thinking for all those involved in the project process?	6.1		2	
6/6	Have company benchmarks been established to ensure improvement targets are challenging?	6.1		2	
6/7	Is the company addressing confidentiality and intellectual property issues to encouraging innovative ideas from the supply chain?	6.2		2	
6/8	Is there a process in place to test innovative ideas to ensure that they contribute to project objectives at an acceptable level of risk?	6.2		2	
6/9	Where appropriate, is it company policy to encourage supply chain partners to challenge and test assumptions and ideas?	6.2		3	
6/10	Have contractual arrangements been established within the company which encourage and reward innovative ideas to foster the achievement of project objectives?	6.2		2	
6/11	Does the company seek whenever possible to locate project teams in multifunctional offices where sharing of ideas can flourish?	6.2		3	
6/12	Are innovative approaches being adopted by the company during the site construction and off-site assembly phase of projects?	6.2		2	
6/13	Is there an effective process for debriefing project teams at the completion of projects?			3	
6/14	Are lessons learned during projects effectively captured and shared across the organisation?			3	

Total Score for Section 6:



7. Project Execution

		VEP Ref:	Mark	W't	Score
7/1	Does the company have a defined and effective process for the control of projects?	7.1		3	
7/2	Is there a common company format for reporting on project progress through all project stages?	7.1		2	
7/3	Are project programmes used to monitor the progress of projects across the company?	7.1		3	
7/4	Does the company have a strategy for ensuring that the most appropriate design tools and systems for projects are employed?	7.2		2	
7/5	In addition to specific project design reviews, does the company regularly and routinely audit the effectiveness of the overall design process?	7.2		2	
7/6	On projects, does the company ensure that there is a good level of design support available during the construction phase?	7.2		3	
7/7	Is constructability a key component of the company strategy for projects?	7.3		3	
7/8	Is it company policy to appoint the construction manager to work as part of the project team during the definition and design phases?	7.3		3	
7/9	Does the company have a process in place to ensure the learning from constructability reviews has been captured for future projects?	7.3		2	
7/10	Is there a company wide process in place to ensure that parts of the plant or systems supplied by separate vendors are successfully integrated during the construction phase of the project?	7.4		3	
7/11	Does the company encourage projects to adopt recognised industry standards and materials specifications for design?	7.4		3	
7/12	Is it company policy to routinely involve the future operating team in project definition processes.?	7.5		4	
7/13	Does the company ensure that the requirements of the commissioning and operating teams are integrated into the design process?	7.5		3	



		VEP Ref:	Mark	W't	Score
7/14	Is it company policy to have in place a defined system for project handover including qualified and final handover procedures?	7.5		3	

Total Score for Section 7:



8. Performance Measurement

		VEP Ref:	Mark	W't	Score
8/1	Has a benchmarking model for the company project process been identified, either inhouse or with a benchmarking company?	8.1		3	
8/2	Does the company have in place a process for defining key measures on projects at the definition stage?	8.1		3	
8/3	Has design effectiveness for projects in the company been measured and benchmarked?	8.1		3	
8/4	Does the company routinely gather and share data from projects using key performance indicators?	8.1		3	
8/5	Are supply chain partner relationships on projects in the company routinely benchmarked?	8.1		2	
8/6	Does the company have a process in place to ensure that project performance is effectively benchmarked?	8.1		3	
8/7	Does the company prepare and implement action plans resulting from measurement and benchmarking to drive change and improvement within projects?	8.1		2	
8/8	Has overall project performance of the company been benchmarked against the industry norms?	8.1		3	
8/9	Have key performance indicators for procurement in the company been defined and has actual performance been measured?	8.2		2	
8/10	Is there a process in the company for actioning improvements in procurement identified during the benchmarking process?	8.2		3	

Total Score for Section 8:

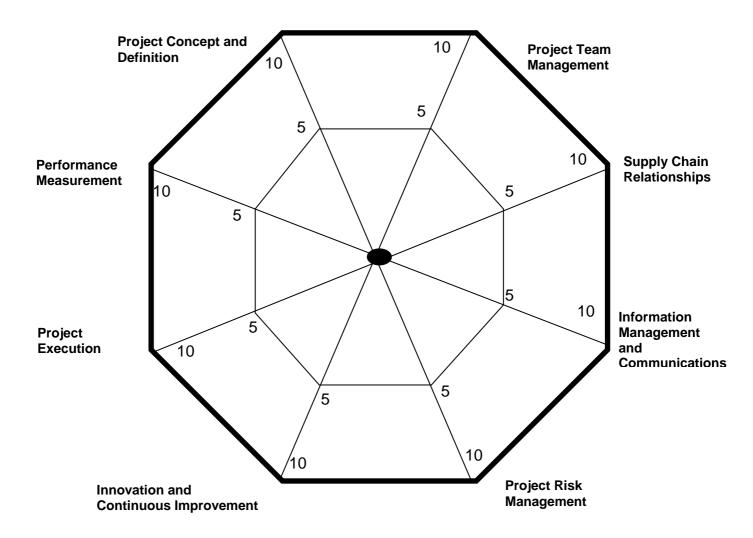


Summary:

Section		Total Section Score ΣΤ	Maximum Possible Score ΣΜ	Overall Section Score S
1	Project Concept and Definition			
2	Project Team Management			
3	Supply Chain Relationships			
4	Information Management and Communications			
5	Project Risk Management			
6	Innovation and Continuous Improvement			
7	Project Execution			
8	Performance Measurement			



Spider Diagram:





ECI ACTIVE Implementation

Section 4

Action Planning to Drive Improvement

To agree an action plan to enable the company to address key areas where performance can be improved by application of the ECI ACTIVE implementation process where this is appropriate.

The ECI ACTIVE company assessment is a useful way of identifying performance gaps. By reviewing the low scoring questions in the assessment, the team can decide where action needs to be taken. Without this next step, completing a company assessment might be an interesting exercise but if no action is taken, improvement will not be achieved. Action planning is important, not only for driving implementation of better practices, but also to prioritise and target those areas which will yield maximum performance benefit. It is unrealistic to hope that generating long lists of actions will result in improvement unless there are clear priorities. Without prioritising, people will tend to do the easiest actions which are not necessarily the most important ones. Most companies already have improvement programmes in place and it is important that the ECI ACTIVE implementation programme is integrated with other programmes. The ECI ACTIVE programme should not be seen as something separate from good business management improvement and can be used effectively to build on existing programmes and help embed them across the organisation.

The ECI ACTIVE Champion should be responsible for pulling together and overseeing the implementation of the action plan for the company as 'project manager' of the implementation 'project'. The action plan should be fully discussed and shared with the senior management of the company who should visibly endorse and support the implementation of the plan including making available the necessary resources. The company champion should be required to regularly report to their senior management on the progress of the implementation and the completion of actions.

The scope of the action plan should address the underlying root causes of poor performance. This includes tackling some of the 'softer' issues within the organisation such as entrenched attitudes, functional empires and poor management as well as the more tangible weaknesses apparent in procedures, standards/specifications, contract terms and conditions etc. It is also important that the scope of actions goes beyond just those involved directly in project teams since much of the culture is determined by the policies and behaviours of support functions and senior management practice. Hence the action plan should address policy issues in such functional areas as finance, legal, procurement, IT, personnel etc. as well as in the project organisation.

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Since much of the action plan will include change management processes affecting the working behaviours of people, it is important that the scope and contents of the plan are widely communicated within the company to get maximum commitment and 'buy-in' from staff at all levels. Indeed, success will only be achieved by involving staff at all levels in the implementation process. A change programme will not be successful if it is perceived as 'something done to you from above'! Clearly a key part of the action plan will be concerned with education and training as well as recruitment and personnel development policies. Relationships with other companies is also key and might necessitate involving customers and vendors in discussions on parts of the action plan.

It is important that action plans are realistic and achievable. In addition to being clear and specific, each action should be assigned a time by which it will be completed, the resources required to complete it should be identified and a person named as responsible for seeing the action through. Constraints or dependencies on other actions being completed should also be stated. Wherever possible, the perceived benefits accruing from the action should be recorded and should be measurable. This is important for the review process which monitors the completion of the action plan and checks that the benefits have been realised.

A good action plan should be:

- owned and endorsed by the senior management
- clear on what is to be done: the results should be measureable.
- realistic and achievable by those with responsibility for completion
- prioritised to focus on the most important actions
- have a clearly defined timescale against each action
- have a named individual responsible for the completion of each action.
- communicated to everyone involved.
- be regularly reviewed for progress and updated
- have the benefits of the actions demonstrated.

The implementation of the action plan is the principle way in which companies will achieve sustainable benefit from ECI ACTIVE and hence it should have a high priority and profile within the company. Since ECI ACTIVE is concerned with the application of best practice which is constantly changing, the process is one of ongoing and continuous improvement which ultimately needs to be embedded into the company's business processes.



ECI ACTIVE Implementation

Section 5

Participating in the ECI Network

To link with the wider ECI network across the industry and to create an effective internal network within the company to ensure that the whole organisation is aware of and involved in the ECI ACTIVE Implementation Process.

The European Construction Institute was established to share best practice within the engineering construction industry across Europe and operates as a network of companies, organisations and individuals who benefit from both contributing to the industry body of knowledge and learning from others who share their experience within the network. This dialogue and the sharing of experience and working practices are powerful drivers of performance improvement. To facilitate the process, ECI has a wide ranging programme of workshops, seminars and conferences. This programme encourages an industry-wide network which ensures the widespread application of ECI ACTIVE principles and practices to specific areas of company performance.

In addition to the Europe-wide network, ECI has also established local and regional units in different parts of Europe. In the UK, ECI ACTIVE has been established as a best practice network for UK companies across the engineering construction supply chain. ECI also has longstanding links with academia and other industry organisations such as the engineering institutions, trade associations, training organisations and best practice programmes in other industry sectors. The network also includes links with government and European Union departments and ECI is keen to foster cooperation and knowledge sharing with all these organisations as a way of ensuring that best practice can be identified and applied across the industry. ECI also uses its influence with many of these organisations and governmental departments on behalf of members to represent collective views from the engineering construction sector.

Within ECI, many of the network activities are focused around task forces which have remits to address specific issue areas identified by ECI members through the Board of Advisors meetings and other events. The activities of these task forces are coordinated by the ECI Programme Committee which has responsibility for the overall ECI programme. The output from these task forces and other ECI and ACTIVE working groups has built up into a considerable body of knowledge which members can access as an authoritative source of best practice within engineering construction.

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In addition, ECI regional units have established programmes to address specific local topic areas including the ECI ACTIVE programme which is specifically aimed at facilitating networking in the UK supply chain.

The ECI network is facilitated by the staff at the ECI office in Loughborough and the membership is kept regularly informed of all these activities through the ECI newsletter and the ECI website.

Network activities of the ECI include the following:

- The production of Value Enhancing Practices (VEP's), a key output of ECI task forces.
- ECI prepares and publishes research papers, guidelines and handbooks on specific topics and issues of interest to ECI members.
- Workshops, seminars and symposia on topics related to the ECI Knowledge Areas are a regular part of the ECI programme
- The annual ECI Conference is held in a European centre each spring with papers presented on a current theme of interest to the industry. The annual ECI ACTIVE Awards are also presented at the conference
- Regular reports and communications are available through the biannual ECI Newsletter and electronic 'ECI News' available by email.
- ECI has regional networks through the ECI Local Units such as ECI ACTIVE in the UK and ECI Benelux in Holland. These Local Units deliver regional programmes on topics of specific local interest. Within the UK, an ECI ACTIVE Forum meets twice a year with a workshop for ECI ACTIVE members. ECI Benelux holds a series of Dinner Lectures on a variety of local topics. Other regional units are being formed in Ireland, Italy and France
- Provision of support to ECI ACTIVE projects and feedback on the learning from specific projects is made available as case studies through the ECI Newsletter.
- Access to a wide range of information is available through the ECI website as well as providing links to other industry initiatives, government initiatives, academia and member companies and organisations.
- The various education and training events such as Master Classes run by the ECI provide a valuable networking opportunity for members.

In addition to being linked to an industry-wide network through membership of the ECI, it is important that companies develop their own internal networks to ensure that a best practice culture permeates the whole organisation. Many companies have their own 'intranet' for internal communications. Members are encouraged to use

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their own internal networks to make ECI and other best practice information widely available across the company.

Within companies, the dissemination of information on the application of VEP's provides clear, concise guidance on how the effectiveness of projects can be improved. The guidance should be made widely available to business decision makers, project managers and contract managers across the company who need to establish a sound basis for the delivery of projects as well as to practitioners at the working level who need detailed guidance on specific issues.

Networking is an essential way of ensuring that companies and their employees are up to date on current practice in a whole range of issues. It keeps people in touch, provides valuable contacts and is a powerful way of ensuring that the voice of the industry is heard on matters of common concern. To network effectively it is necessary to participate and be prepared to share learning and experience. The benefits of such sharing are that companies can informally benchmark their performance in the market place, they can see what others are doing and better appreciate the issues facing both their customers and their supply chain.



ECI ACTIVE Implementation

Section 6

Implementing an Education and Training Programme

To agree and implement a programme of education and training using ECI and ECI ACTIVE tools where appropriate to facilitate change in specific areas of management practice.

To complete the continuous improvement cycle it is necessary to ensure that changes in behaviour and attitude are embedded across the organisation through a programme of education and training. As a consequence, education and training have a high profile within ECI and are seen as an essential component of securing lasting performance improvement. Both ECI and ACTIVE have developed training tools to help companies deliver effective training to their staff and, in some cases, their customers and suppliers. Whilst ECI is not in itself a training organisation, it does however, have strong and well established links with a number of academic institutions and training organisations which are able to deliver appropriate and effective courses to educate and train staff in the application of ECI ACTIVE principles and practices.

ECI has close links with several universities especially Loughborough Univerity and Cranfield School of Management in the UK and Erasmus University in Rotterdam in Holland and is always ready to work with others. ECI also works closely with the Engineering Construction Industry Training Board (ECITB) in the UK and the Construction Industry Institute (CII) in the USA to ensure ECI principles and VEP's are built into relevant training courses and educational programmes across the industry. ECI has in the past sponsored the running of the CII Project Management Course in Europe.

The ECI range of education and training tools includes a series of Master Classes which have been successfully developed by ECI Benelux and are now being held in other regions. In addition, with the merger of ACTIVE into the ECI, the ACTIVE self-help training modules, ACTImods', are now available to ECI members for in-house training of staff in the eight ECI ACTIVE principles. The longer two day training course: 'ACTIVE at Work' is now also available through the ECITB in the UK on behalf of ECI. Also sponsored by the ECITB is the annual ACTIVE Cup competition held at Cranfield University which is run over a weekend in the autumn as a project simulation where team success is judged by how well ECI ACTIVE principles have been applied.

From the action plans developed from ECI ACTIVE Company and Project Assessments, it is important that training and educational needs are properly

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addressed. This is because much of the effectiveness of ECI ACTIVE is dependent upon behavioural change which will require more than mere communication and awareness of ECI ACTIVE VEP's. Most companies already have training policies in place, often using external training agencies but many also have their own in-house training capability. The ECI ACTIVE Champion needs to ensure that ECI training needs are fully integrated into existing training strategies and programmes and that full use is made of ECI education and training resources where this is appropriate. The ECI ACTIVE Champion should review existing programmes of training and education to ensure that the needs of the company to develop and improve skills and competencies in project management and engineering construction are effective. There is currently an overwhelming range of training options available and it can be difficult to decide the most appropriate training which will meet specific company skill requirements, the individual needs of staff and budget constraints. ECI and ECI ACTIVE education and training resources represent good value compared with those offered by many commercial training organisations and are specifically targeted at improving the application of ECI ACTIVE principles and practices.

ECI Master Classes:

The ECI Master Classes have been developed by ECI Benelux but although initially developed and run in Holland, they are now being run in other European countries on a regional basis. The Master Classes deal with a number of key ECI topic areas to raise awareness and competence levels and to share practitioner experience. Each Master Class consists of a mixture of lecture, interactive discussion and case study and is led and facilitated by an experienced practitioner in the particular topic area. Through the case studies and discussion, the participants share experience and build on their mutual tacit knowledge. Master classes are currently available on the following topics:

- MC01 Contracts and Procurement
- MC02 Partnering and Alliancing
- MC03 Risk Analysis and Management
- MC04 Constructing the Team
- MC05 Project Strategy and Success
- MC06 Project Improvement Processes
- MC07 Small Works Based Projects
- MC08 Information Management and Communications
- MC09 Project Measurement and Benchmarking
- MC10 Claims Management

Master Classes are essentially half day events and include time for delegates to network.

ECI ACTIVE Training Modules (ACTImods)

The ECI ACTIVE Training Modules, known as ACTImods, were designed as part of the ACTIVE Initiative in the UK but deal with topics of much wider interest and applicability across the whole ECI membership. They are a series of self-help

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modules which can be used for short seminars either in-house or regionally for awareness training. Modules are available for the following topics:

- Project Concept and Definition:
- Project Team Management
- Supply Chain Relationships
- Information Management and Communications
- Project Risk Management
- Innovation and Continuous Improvement
- Project Execution
- Performance Measurement

The training modules are designed to provide all the necessary resources for an organisation to run their own training events which can be used with an in-house group and are each designed to take about four hours to complete. If companies would prefer external facilitation of these modules, that can be arranged at modest cost by contacting the ECI office.

'ACTIVE at Work' Course

The 'ACTIVE at Work' course, a two day residential course, was designed by ACTIVE to raise competence and awareness in application of performance improving practices in company and project situations. Although based around the ACTIVE Principles, it has relevance and application across the wider ECI membership and is especially suitable for training ECI ACTIVE Champions and others with key responsibility for projects. It is suitable for anyone who needs an indepth understanding of how to apply performance improvement programmes. It is now being administered and run by the ECITB in the UK on behalf of the ECI.

The ACTIVE Cup

The ACTIVE Cup is a project simulation run by Cranfield University each October where teams compete to complete their construction project successfully. The winning team who then hold the ACTIVE Cup till the next year, are judged on the success of their project but also how successful they have been in demonstrating ECI ACTIVE principles. The event runs from Friday evening to Sunday lunchtime and is sponsored and organised by the ECITB at Cranfield. Companies are invited to enter a team where participant gain a good understanding of the project process and how ECI ACTIVE principles and practices can help them succeed.



ECI ACTIVE Implementation

Section 7

Registering, Assessing and Benchmarking Projects

To register projects as ECI ACTIVE Projects with commitment to work to ECI ACTIVE principles and practices. To engage in the measurement and benchmarking of project performance and supply chain relationships by participation in benchmarking initiatives.

ECI ACTIVE Projects

With projects that are complex and take time to complete, it is difficult for clients to be assured that project objectives, whether cost, time, quality or safety targets, will be met. The outcome of projects has been shown to correlate closely to the way in which the project is defined and managed. The behaviours and practices employed during project delivery will determine to a large extent whether the project is a success or failure. ECI ACTIVE principles and practices when applied to projects have proved to be good indicators of project success. Registering projects and completing ECI ACTIVE project assessments provide a means of assessing the extent to which ECI ACTIVE principles are being applied on the project.

The assessment process was developed under the ACTIVE Initiative to enable projects assess their performance at different stages since the application of good project practices and behaviours are a sound indicator of the likely project outcome. Members of ECI ACTIVE are invited to register projects and for each project, the project manager is asked to confirm that the project is committed to working within the spirit of ECI ACTIVE principles, applying the Value Enhancing Practices (VEP's) as appropriate. Projects can be registered across the range of size and type of projects. Registering projects as ECI ACTIVE Projects enables the sharing of learning and experience.

The assessment process is also valuable to the project team as a 'gap' analysis. By reviewing low scoring areas from the assessment, the team can take corrective actions before it is too late. Each review is tailored to a specific project phase and hence asks pertinent questions relevant to that stage of the project, helping the project manager to see if things are being missed and giving the opportunity to address the issues. It is especially helpful in ensuring clients and contractors work together more effectively.

The form for registration of a project is attached. In addition to basic details about the project, the form asks for approximate dates when the ECI ACTIVE Project Reviews are planned for completion. There is also a section for projects to state what benefits they are looking for from working to ECI ACTIVE principles and VEP's on the project. These form the basis of a useful review at the end of the project to see what has

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been achieved. When completed, registration forms should be sent to the ECI Office where more details or help can be obtained should projects require it.

ECI ACTIVE Project Assessments

The project assessment process is a simple self-help assessment checklist applied at five key stages of a project. The five checklists were developed by the ACTIVE Initiative and through a series of questions measure the extent of application of each of the eight ACTIVE principles and supporting VEP's on the project. The process can be developed and extended to cover all the ECI Knowledge Areas and VEP's. The ECI office is building a database of completed project assessments to provide projects with feedback on their performance at different stages of their project. All detailed ECI benchmark and assessment database input data is held confidentially but non-attributable aggregated data and performance norms will be made available to the ECI ACTIVE membership from time to time. Checklists for the project assessments can be found in the ACTIVE Workbook but are also available on request from the ECI office.

ECI ACTIVE projects are invited to use the project assessment checklists and to send the data back to the ECI office for inputting to the ECI ACTIVE database. The checklists are used on a self-assessment basis at defined stages of the project process by members of the project team in a series of reviews. If project teams would prefer external facilitation of reviews which brings a degree of moderation and independence into the process, this can be arranged at modest cost by contacting the ECI office. The project assessment process has been designed to be quick and easy to use, a one or two hour meeting with key team members being sufficient for completion. The suggested timings for these reviews are as follows:

- Review 1: Project objectives agreed but project scope and implementation strategy still being defined
- Review 2: Project authorisation/sanction stage
- Review 3: Detailed design complete and construction work starting
- Review 4: Plant physically complete but still to be started up
- Review 5: Project complete

Feedback from completed ECI ACTIVE projects is used to ensure that the ECI ACTIVE VEP's continue to remain best practice and as a means of highlighting other areas in the project process where further improvement might be made. Although in the interests of commercial confidentiality, projects may wish to retain specific learning internally within their own organisations, it is hoped that much of the generic successful learning can be shared within the industry and that data obtained from ECI ACTIVE projects will continue to provide much useful learning for the industry on what can be achieved in applying ECI ACTIVE principles and practices on projects.



Project Benchmarking

Project performance benchmarking is well established with several systems in use. ECI ACTIVE uses the methodology developed by the Construction Industry Institute (CII) in the USA. The database now has data on over a thousand completed projects to provide a basis for performance comparison. CII project benchmarking is available through ECI ACTIVE, for an appropriate fee, via an on-line web-based process which reviews eight key project practices and correlates those with project performance in terms of cost, time, safety, change measurement and rework performance. The benchmarking is undertaken following completion of each project and provides important post project feedback on the effectiveness of the project process through data reports.



ECI ACTIVE Project Registration Form

To register your project as an ECI ACTIVE Project, please complete the details below and send the form to the ECI Office at the address below.

Project Title:
Location:
Project Authorisation Date:
Expected Completion Date:
Notional Value (Total Installed Cost):
Companies involved:
Client Company:
Main Contractor(s):
Subcontractors:
Principal Vendors:
Other Informations
Other Information:



Project Review Plant	ned Timings:	
	Approx. Date	Stage of Project
Project Review 1		
Project Review 2		
Project Review 3		
Project Review 4		
Close of Project Revie	eW	
Benefits Sought by v	vorking to ECI ACTIVE P	rinciples and Practices:
1.		
2.		
3.		
4.		
5.		
Signed on bel	half of the project:	Date:
Company:		Project Manager
Address:		
Tel:	1	Fax:
	Annexe, West Park, Lou	ell, ECI Administrator, at the European Construction ghborough University, Loughborough, Leicestershire,
_		1509 223526 1509 260118
	E-mail: <u>eci</u>	<u>@lboro.ac.uk</u> i-online.org
For Office use:		
		
Registered No:	ı	Date Received:



ACTIVE ASSESSMENT CHECK LIST : REVIEW No. 1									
Project:				Date	e :				
Review	No. 1 of 5	1							
ACTIVE	PRINCIPLE	SCO	ORE:					See VEP	
AP1:	Effective Duciest Consent and Definition	1	2	3	4	5	N/A	V 151	
API:	Effective Project Concept and Definition								
AP1/1	To what extent is the project process defined for the project?							1.1	
AP1/2	Has a project owner been appointed?							1.1	
AP1/3	Has a project manager been appointed?							1.1	
AP1/4	Are the objectives for the project clear?							1.1	
AP1/5	Are the deliverables for each stage of the project defined?							1.1	
AP1/6	Are the boundaries of the project clear?							1.2	
AP1/7	Have the project objectives been rigorously tested with the project owner?							1.2	
AP1/8	Have those parties who will be executing the project been involved in the definition?							1.2	
AP1/9	Is there a good understanding of the key business requirements of the project?							1.2	
AP1/10	Are the appropriate tools to plan the project available?							1.3	
AP1/11	Are key roles and responsibilities defined for the project?							1.3	
AP1/12	Have the project objectives and scope been tested by Value Analysis?							1.4	
AP1/13	Has evaluation of options on the basis of life cycle costs been applied?							1.4	
AP1/14	Has the project held Value Workshops?							1.4	
AP1/15	Has a Safety, Health and Environment policy been prepared for the project?							1.5	



AP1/16	Have individuals/organisations with specific responsibility for Safety, Health and Environment been appointed?				1.5
AP1/17	Has an information management policy for the project been issued?				1.6
AP1/18	Is the procurement policy for the project clear?				1.7
AP2:	Effective Project Team Management				
AP2/1	Has a clear auditable process been put in place for the selection of project participants?				2.1
AP2/2	Has the project team been appointed?				2.1
AP2/3	Has psychometric testing been used to check the balance of the team?				2.1
AP2/4	Has the project organisation been decided?				2.1
AP2/5	Have the team been able to effectively challenge project assumptions?				2.1
AP2/6	Is a process in place to enable innovative ideas to be developed and adopted?				2.1
AP2/7	Has a framework for effective team communications been put in place?				2.1
AP2/8	Have aggressive, achievable targets been set for the team?				2.1
AP2/9	Are a set of co-ordination procedures in place?				2.1
AP3:	Effective Supply Chain Relationships				
AP3/1	Has a policy statement on business ethics been agreed for the project?				3.1
AP3/2	Have alliance or partnering arrangements been considered for all or part of this project?				3.1
AP3/3	Has the need for non-adversarial relationships been recognised in setting up this project?				3.1
AP3/4	Is the scope of the project sufficiently well defined to define the roles and responsibilities of the major contractors and suppliers?				3.1

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AP3/5	Have the types of contract to be used on the project been decided?				3.1
AP3/6	Has the project started a process of gathering supply market intelligence?				3.2
AP3/7	Have the strategic contractor and supplier requirements been determined?				3.2
AP3/8	Where an alliance or partnership is proposed, has a process for partner selection been put in place?				3.2
AP3/9	Is the project committed to adopting a contract dispute resolution process using ADR (Alternative Dispute Resolution) procedures?				3.3
AP4:	Effective Information Management and Communications				
AP4/1	Has an information management strategy been prepared for the project?				4.1
AP4/2	Have the information needs of project participants been defined for each stage of the project?				4.1
AP4/3	Has an effective communications strategy been defined?				4.1
AP5:	Effective Project Risk Management				
AP5/1	Have the objectives for a risk management process for the project been agreed?				5.1
AP5/2	Have the risks in the project been identified and, where appropriate, quantified?				5.1
AP5/3	Have appropriate techniques been used to analyse risks?				5.1
AP5/4	Have risk management action plans been drawn up and is the responsibility for managing each risk assigned?				5.1
AP5/5	Are contingency plans agreed for the major risks?				5.1

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AP5/6	Has the balance of risk and benefit with the major supply chain partners involved in the project been agreed?				5.2
AP5/7	Has the use of risk and benefit framework agreements with contractors and key suppliers been considered for the project?				5.2
AP5/8	Have discussions been held with potential supply chain partners on the potential for risk and benefit framework agreements?				5.2
AP5/9	Have quantifiable key success criteria for risk and benefit framework agreements been developed for the project?				5.2
AP6:	Effective Innovation and Continuous Improvement				
AP6/1	Has a corporate and project strategy for continuous improvement been established?				6.1
AP6/2	Have integrated work groups been set up to review improvement opportunities and identify specific areas?				6.1
AP6/3	Have any specific areas for improvement been identified by workgroups?				6.1
AP6/4	Have improvement targets been established for the project?				6.1
AP6/5	Have individuals on the project been set personal performance targets for improvement?				6.1
AP6/6	Has learning from other projects been identified and been used to improve performance on the current project?				6.1
AP6/7	Have opportunities for innovation been identified which could overcome specific problem areas on the project?				6.2
AP6/8	Is there a process in place to capture and evaluate innovative ideas?				6.2
AP6/9	Have innovative ideas been sought from supply chain partners at an early stage of project development?				6.2

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AP6/10	Do the contractual arrangements in place encourage innovation and ideas for improvement from supply chain partners?				6.2
AP6/11	Have confidentiality and intellectual property issues been addressed?				6.2
AP6/12	Has a challenge culture been established in the integrated project team?				6.2
AP6/13	Is a process in place to test innovative ideas and ensure that they contribute to project objectives at an acceptable level of risk?				6.2
AP7:	Effective Project Execution				
AP7/1	Has the project control process been defined for the project?				7.1
AP7/2	Has the format for reporting on project progress throughout all project stages been defined?				7.1
AP7/3	Have the key measures for each stage of the project been defined and reporting and control mechanisms put in place?				7.1
AP7/4	Has the basis for project design been agreed?				7.2
AP7/5	Has constructability been included as a key component of the project strategy?				7.3
AP7/6	Are the basic standards for the project defined?				7.4
AP7/7	Are the future operating team involved in the project definition process as part of the team?				7.5
AP8:	Effective Performance Measurement				
AP8/1	Are the processes and procedures to be used on the project well understood?				8.1
AP8/2	Has a benchmarking model for the process been identified, either in-house or with a benchmarking company?				8.1
AP8/3	Are the key measures of performance for the project well understood?				8.1

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		1						1
AP8/4	Is the procurement process to be employed on the project well understood?							8.2
AP8/5	Are the procurement goals for the project defined?							8.2
	ACTIVE ASSESSMENT CHECK LIS	ST:	REV	ΊΕW	No.	2		
Project:				Date	9:			
Review	No. 2 of 5	ī						1
ACTIVE	PRINCIPLE	SC	ORE:					See
		1	2	3	4	5	N/A	VEP
AP1:	Effective Project Concept and Definition							
AP1/1	Is the process for project sanction/authorisation clear?							1.1
AP1/2	Have the project objectives been communicated to the project team?							1.1
AP1/3	Has the scope of the project been defined?							1.1
AP1/4	Has a project execution strategy been completed and agreed?							1.1
AP1/5	Have detailed estimates and schedules been prepared?							1.1
AP1/6	Has the concept of functional specifications been adopted by the project?							1.2
AP1/7	Have the design standards for the project been agreed?							1.2
AP1/8	Have forecasts of costs and resources been prepared to the appropriate accuracy?							1.3
AP1/9	Has a detailed Work Breakdown Structure been completed?							1.3
AP1/10	Has the final project plan been agreed?							1.3
AP1/11	Has the critical path for the project been determined?							1.3
		1						1

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AP1/12	Has the Value Analysis process been completed for definition?				1.4
AP1/13	Have Hazops and other front end SHE procedures been completed for the project?				1.5
AP1/14	Has an information management strategy been prepared for the project?				1.6
AP1/15	Is the project using IT systems and other tools to aid communications and information sharing?				1.6
AP1/16	Has a Procurement Strategy been prepared?				1.7
AP1/17	Has the Criticality matrix been used to help establish the appropriate strategy towards contractors and suppliers?				1.7
AP1/18	Have partnering and alliance type contracts been considered?				1.7
AP2:	Effective Project Team Management				
AP2/1	Is the project team working together well?				2.1
AP2/2	Are the team working to a set of agreed, common critical success factors for the project?				2.1
AP2/3	Are the roles and responsibilities of everyone on the project clear and unambiguous?				2.1
AP2/4	Has a system of assessment and appraisal of project team staff been put in place?				2.1
AP2/5	Has the capability of the team been assessed and training completed where there are deficiencies?				2.1
AP2/6	Have peer reviews been used to review the effectiveness of project activities?				2.1
AP2/7	Have team building events been held and how effective have they been?				2.1
AP2/8	Are processes in place to measure team effectiveness throughout the project?				2.1

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AP2/9	Are the team motivated and is there a process for recognising and rewarding achievement?				2.1
AP2/10	Is a system in place for the management of change and is it working effectively?				2.1
AP2/11	Is an effective two-way communication process happening on the project?				2.1
AP2/12	Are the team leaders displaying good leadership which draws out the full potential of the team?				2.1
AP2/13	Have 'stretch' targets been set for the team and are they being achieved?				2.1
AP3:	Effective Supply Chain Relationships				
AP3/1	Has a framework for business ethics and conduct been agreed and shared with supply chain partners?				3.1
AP3/2	Have targets been set with supply chain companies for improving safety and protecting the environment?				3.1
AP3/3	Have critical success factors been established and agreed for any alliance or partnership on the project?				3.1
AP3/4	Is the Alliance or partnership operating as a single integrated team?				3.1
AP3/5	Are contract behaviours on the project co- operative rather than adversarial?				3.1
AP3/6	Has a strategy for contract documentation that eliminates inefficiencies and waste been agreed?				3.1
AP3/7	Has sufficient effort been put into defining the scope of the key contracts for the project?				3.1
AP3/8	In defining the contracts for the project, do the payment terms take account of the cash flow needs of both buyers and sellers?				3.1
AP3/9	Has a process of supplier evaluation been employed before issuing enquiry documents?				3.2

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AP3/10	Has the process of tender evaluation been shared with all bidders?				3.2
AP3/11	Has a process for the equitable resolution of contract disputes been built into contracts?				3.3
AP4:	Effective Information Management and Communications				
AP4/1	Has the transfer of information from definition to the detailed design phase been effectively managed?				4.1
AP4/2	Are the formats and systems defined for information management?				4.1
AP4/3	Have life cycle codes which will maintain information currency been agreed within the project team?				4.1
AP4/4	Is the information management strategy working effectively?				4.1
AP4/5	Have all the supply chain partners been involved in defining the information requirements?				4.1
AP4/6	Has a strategy for contract documentation which eliminates inefficiencies and waste been agreed?				4.1
AP5:	Effective Project Risk Management				
AP5/1	Is a formal risk management process in place for the project?				5.1
AP5/2	Has risk awareness been raised within the project team?				5.1
AP5/3	Are any special tools etc in place to enable risks to be analysed and managed throughout the project?				5.1
AP5/4	Has the risk identification process been completed?				5.1
AP5/5	Are the project contractors, suppliers as well as the project owner fully involved in the risk management programme?				5.1

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AP5/6	Have all risk analyses been completed?				5.1
AP5/7	Has there been agreement within the project team on how each risk will be handled?				5.1
AP5/8	Have any risk and framework agreements been put in place on the project?				5.2
AP5/9	Do any risk and benefit framework agreements properly apportion risks and benefits equitably between the participants?				5.2
AP5/10	Are the framework agreements operating within the spirit of the ACTIVE principles?				5.2
AP6:	Effective Innovation and Continuous Improvement				
AP6/1	During the definition process have specific areas for improvement been identified?				6.1
AP6/2	Are improvement objectives defined and targets set?				6.1
AP6/3	Have improvement methods been defined and programmes in place to implement these?				6.1
AP6/4	Are integrated work groups identifying areas of performance improvement which will improve the chances of project success?				6.1
AP6/5	Has training been carried out within the project team to generate a challenge culture and promote improvement thinking?				6.1
AP6/6	Have benchmarks been identified for ensuring that improvement targets are challenging?				6.1
AP6/7	Has a process for capturing learning on the project been put in place?				6.1
AP6/8	Have supply chain partners contributed to the project definition process and been free to challenge and test assumptions and ideas?				6.2
AP6/9	Have contractual arrangements been established which encourage and reward innovative ideas which enhance achievement of project objectives?				6.2

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AP6/10	Has innovation been applied to the business processes which will be applied on the project?				6.2
AP6/11	Have intellectual property rights been protected and confidentiality maintained in such a way that innovation is encouraged?				6.2
AP6/12	Have positive incentives encouraging innovation been built into contracts with vendors?				6.2
AP6/13	Is the project team located in an open plan multifunctional office where sharing ideas can flourish?				6.2
AP6/14	Is the process for evaluating and assessing new options and ideas working effectively?				6.2
AP6/15	Have any 'peer' reviews been held to test proposals and share learning?				6.2
AP7:	Effective Project Execution				
AP7/1	Are the project reporting mechanisms defined, in place and working smoothly?				7.1
AP7/2	Have all the key measures for each stage of the project been defined and the tools and techniques put in place to obtain the information?				7.1
AP7/3	Are the project roles and responsibilities clear in terms of control of all aspects of the project?				7.1
AP7/4	Is the project programme being used to monitor the progress of the project?				7.1
AP7/5	Are resources being made available in accordance with the requirements of resource plans?				7.1
AP7/6	Are mechanisms in place and working for forecasting the anticipated final cost (AFC) for the project on an ongoing basis?				7.1
AP7/7	Are timely relevant reports being produced and used for project control?				7.1
AP7/8	Is a change control procedure in place and working effectively?				7.1

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		Î			
AP7/9	Have the project definition requirements been effectively communicated to the design team?				7.2
AP7/10	Has the design team been fully integrated and aligned with the overall objectives of the project?				7.2
AP7/11	Does the design team have the right mix of skills and competencies to meet the design needs of the project?				7.2
AP7/12	Are the most appropriate design tools and systems available for this stage of the project?				7.2
AP7/13	Have the design criteria and standards been agreed for the project?				7.2
AP7/14	Has the design team developed whole life costing criteria for design decision making and assessment?				7.2
AP7/15	Has the design communications strategy been defined?				7.2
AP7/16	Is the design process to be audited regularly?				7.2
AP7/17	Is the construction manager appointed and working as part of the project team during the definition and design phases?				7.3
AP7/18	Has the construction methodology been agreed and communicated to the design team?				7.3
AP7/19	Is a programme of constructability reviews being implemented?				7.3
AP7/20	Has the design programme been developed taking full account of the requirements of construction?				7.3
AP7/21	Has the project adopted recognised standards and materials specifications for design?				7.4
AP7/22	Has a policy of functional specification for standard items been adopted on the project?				7.4
AP7/23	Has a policy on the setting of design contingencies and safety factors been agreed?				7.4
AP7/24	Are the requirements of the commissioning and operating teams clear and are they integrated into the design process?				7.5



AP8/1	Have key measures been defined for the project definition stage and has performance during this stage been benchmarked?				8.1
AP8/2	Has a flowchart of procurement activities been defined and key performance indicators identified?				8.2

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ACTIVE ASSESSMENT CHECK LIST : REVIEW No. 3									
Project:				Date) :				
Review	No. 3 of 5	I						ı	
ACTIVE :	PRINCIPLE	SCO	ORE:					See VEP	
1.754	Fee (1 B 1 (C) 1 D.C.:2	1	2	3	4	5	N/A	VEI	
AP1:	Effective Project Concept and Definition								
AP1/1	Is the project process agreed at the outset still being applied?							1.1	
AP1/2	Are the construction and start up team clear on project objectives?							1.1	
AP1/3	Does the detailed design meet the requirements of the project scope?							1.2	
AP1/4	Have functional specifications been used within the project?							1.2	
AP1/5	Has the construction programme been agreed with subcontractors?							1.3	
AP1/6	Has formal Value Engineering been applied during the design process?							1.4	
AP1/7	Have the results of SHE reviews been built into the design?							1.5	
AP1/8	Are records of key decisions impacting on SHE being maintained?							1.5	
AP1/9	Has the information management strategy been effective during the design phase of the project?							1.6	
AP1/10	Has an effective process for prequalification and supplier selection been put in place?							1.7	
AP2:	Effective Project Team Management								
AP2/1	As the project moves into the construction phase, are the selection processes for participants in the project still being effectively applied?							2.1	



AP2/2	To what extent are the critical success factors established at the outset for the team being realised?				2.1
AP2/3	Are roles and responsibilities on the project still clear?				2.1
AP2/4	Are performance reviews and appraisals of individuals being routinely applied?				2.1
AP2/5	Are induction sessions and team building events being held for those joining the project?				2.1
AP2/6	Are the efforts of team members being recognised and rewarded as project milestones are reached?				2.1
AP2/7	Is the project being adequately resourced to meet the project targets?				2.1
AP2/8	Is the working environment and supporting tools and systems conducive to effective working?				2.1
AP2/9	Have the design team been challenging and testing alternative ways of better achieving project goals?				2.1
AP2/10	Are communications within the project team good?				2.1
AP2/11	Are the project team inspired by good leadership?				2.1
AP2/12	Are the targets set for each project milestone being achieved or bettered?				2.1
AP3:	Effective Supply Chain Relationships				
AP3/1	Has the project been audited to ensure ethical standards are being maintained within the supply chain?				3.1
AP3/2	If an alliance or partnership is in operation, are all the parties satisfied with the working relationships with their partners?				3.1
AP3/3	Are partner/alliance type relationships being considered for construction sub-contracts?				3.1

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AP3/4	Is there still a single integrated team approach operating across the supply chain on the project?				3.1
AP3/5	Has the contract scope grown as a result of detailed design work?				3.1
AP3/6	Are the roles and responsibilities across the supply chain still clear?				3.1
AP3/7	Is the contract documentation serving a useful purpose in the execution of the project?				3.1
AP3/8	Has a 'functional' approach been employed in defining the scope for vendors?				3.1
AP3/9	Has the right type of contract been employed for the definition and detailed design stage of the project?				3.1
AP3/10	In awarding contracts, has a proper supplier selection process been employed?				3.2
AP3/11	Has the contract dispute procedures built into contracts been invoked and, if so, have disputes been successfully resolved?				3.3
AP4:	Effective Information Management and Communications				
AP4/1	Is a mechanism in place for the transfer of information from design to the construction team?				4.1
AP4/2	Are the designed information formats aiding the communication process as the project moves into the construction phase?				4.1
AP4/3	Is the contract documentation serving a useful purpose in the execution of the project?				4.1
AP4/4	Is the documentation generated on the project being used or merely being provided to cover the sender?				4.1
AP4/5	Has the use of life cycle codes meant that everyone understands the currency and status of issued documents?				4.1

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AP4/6	Are the information systems used on the project providing rapid access to information by those who need to use it?				4.1
AP4/7	Has single point data entry been a feature of the project or is data constantly being reentered as the project progresses?				4.1
AP5:	Effective Project Risk Management				
AP5/1	Has the risk register been reviewed to see if it is up to date?				5.1
AP5/2	Are the strategies developed for mitigating or dealing with the risks working properly?				5.1
AP5/3	Has the risk profile changed and have new risks been identified?				5.1
AP5/4	Are risk and benefit framework agreements operating satisfactorily?				5.2
AP5/5	Have new risk and benefit framework agreements been considered for the construction phase of the project?				5.2
AP5/6	Are milestone targets for any risk and benefit framework agreements being achieved?				5.2
AP6:	Effective Innovation and Continuous Improvement				
AP6/1	Has the continuous improvement process worked effectively through the detailed design stage?				6.1
AP6/2	Have methods been established and programmes defined for the implementation of improvements?				6.1
AP6/3	Is feedback on the progress and performance of improvements being captured and regularly reviewed?				6.1
AP6/4	Are improvements being tested against the project objectives to ensure targets are being achieved?				6.1

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AP6/5	Are individuals being regularly appraised to check achievement of personal improvement targets?				6.1
AP6/6	Are innovative approaches being adopted during the construction phase of the project?				6.2
AP6/7	Are construction contractors and equipment vendors being brought into the innovation and continuous improvement process?				6.2
AP6/8	Have supply chain partners seen reward for innovative ideas and have intellectual property rights been protected?				6.2
AP6/9	Is a challenge culture still operating within the project team?				6.2
AP6/10	Are ideas continuing to be captured and reviewed?				6.2
AP7:	Effective Project Execution				
AP7/1	Is the project under control in terms of cost, time, resources and changes?				7.1
AP7/2	Is the project programme being used to monitor and control progress?				7.1
AP7/3	Is the regular forecasting process still in place to enable ongoing control of project events and costs?				7.1
AP7/4	Are resources being made available in line with the resourcing plan?				7.1
AP7/5	Is the reporting system on progress still working effectively?				7.1
AP7/6	Are changes being properly managed through the change control procedure?				7.1
AP7/7	Has the detailed design process been effective?				7.2
AP7/8	Has the output of the design process been properly communicated and handed over to the construction team?				7.2
AP7/9	Does the design output adequately reflect the design intent laid down in the project definition?				7.2

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AP7/10	Have all the design documents been issued to the construction team?				7.2
AP7/11	Are mechanisms in place to ensure there is good feedback to the design team during construction?				7.2
AP7/12	Has the design review process been effective in capturing learning during design?				7.2
AP7/13	Has the constructability programme been completed during the design phase?				7.3
AP7/14	Have members of the construction team been involved in key design decision making?				7.3
AP7/15	Has the standards policy defined at the project outset been maintained during the detailed design stage?				7.4
AP7/16	Are the commissioning and handover requirements clear to the construction team?				7.5
AP7/17	Are the information requirements of the operating team being met during the construction phase?				7.5
AP8:	Effective Performance Measurement				
AP8/1	Have the key deliverables for the detailed design stage been achieved and is the performance matching the best?				8.1
AP8/2	Based on performance measurement up to this point, has an action plan for improvement been drawn up?				8.1
AP8/3	Has design effectiveness on the project been measured and benchmarked?				8.1
AP8/4	Has data been gathered on the project on key indicator measures of performance?				8.1
AP8/5	Have supply chain partner relationships been benchmarked?				8.1
AP8/6	Have key performance indicators for procurement been defined and has actual performance been measured?				8.2

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AP8/7	Is there a process for actioning improvements in procurement identified during the benchmarking process?							8.2
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ACTIVE ASSESSMENT CHECK LIST : REVIEW No. 4									
Project:				Date	9 :				
Review	No. 4 of 5	1						1	
ACTIVE 1	PRINCIPLE	SCO	ORE:					See VEP	
		1	2	3	4	5	N/A	VEF	
AP1:	Effective Project Concept and Definition								
AP1/1	Has the project process been followed during the project?							1.1	
AP1/2	Has the scope of the project envisaged at the outset been achieved?							1.2	
AP1/3	Has the project execution strategy been effectively applied?							1.2	
AP1/4	Have all the activities on the project programme been completed to physical completion of the asset?							1.3	
AP1/5	Has a formal system for implementing value improvements been applied during project execution?							1.4	
AP1/6	Has safety performance during construction been maintained?							1.5	
AP1/7	Is the SHE dossier complete and ready for handover to the operating team?							1.5	
AP1/8	Have communications and information availability been effectively handled during the construction phase?							1.6	
AP1/9	Has the procurement strategy been effective in achieving completion of the plant?							1.7	
AP2:	Effective Project Team Management								
AP2/1	Has the project team worked effectively together through the construction phase?							2.1	
AP2/2	Have the critical success factors set for the team been achieved?							2.1	



AP2/3	Are the roles and responsibilities within the team still clear and defined?				2.1
AP2/4	Has the project oragnisation been effective in delivering a mechanically complete plant?				2.1
AP2/5	Are performance appraisals of team members still being completed?				2.1
AP2/6	As the project is completed have those leaving the team been effectively debriefed?				2.1
AP2/7	Has the contribution of team members to the achievement of project milestones been adequately rewarded and acknowledged?				2.1
AP2/8	Has the working environment and supporting systems been conducive to effective performance by the team?				2.1
AP2/9	Has the achievement of project goals been aided by a challenging approach within the team?				2.1
AP2/10	Have team communications during the construction phase been good?				2.1
AP2/11	Has the team been effectively led through this phase of the project?				2.1
AP2/12	Have the targets set for the team at the outset been achieved?				2.1
AP3:	Effective Supply Chain Relationships				
AP3/1	Have the business practices between supply chain parties been audited to ensure ethical standards are being maintained?				3.1
AP3/2	Is any alliance or partnership on the project working effectively and are disputes being satisfactorily resolved?				3.1
AP3/3	Are roles and responsibilities within the supply chain still clear on the project?				3.1
AP3/4	Is contract documentation required for handover to operations available and complete?				3.1

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AP3/5	Have the contracts been effective in apportioning the risks and benefits of the project between the parties on an equitable basis?				3.1
AP3/6	Has there been a high level of contract disputes on the project?				3.3
AP3/7	Have the dispute resolution procedures been effective in resolving contract disputes?				3.3
AP4:	Effective Information Management and Communications				
AP4/1	Has the use of information systems been effective in improving the communications with the site?				4.1
AP4/2	Has the information management strategy been effectively delivered during the construction phase of the project?				4.1
AP4/3	Have the information needs of the construction sub contractors and suppliers been effectively addressed?				4.1
AP4/4	Is the form in which information has been communicated been satisfactory?				4.1
AP4/5	Has the circulation of documentation been controlled and wasteful printing of duplicate or non-essential documentation been avoided?				4.1
AP4/6	Are the information requirements for the handover phase clear?				4.1
AP4/7	Is the contract documentation required for handover to operations available and complete?				4.1
AP4/8	Has the use of life cycle information codes helped the construction team?				4.1
AP5:	Effective Project Risk Management				
AP5/1	Have the objectives of the risk management programme been achieved?				5.1
AP5/2	Have the anticipated risks been managed such that the impact on the project outcome has been minimised?				5.1

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AP5/3	Has risk awareness within the supply chain been a help in early identification of risks?				5.1
AP5/4	Has the risk register continued to be reviewed to take account of changes in the risk profile?				5.1
AP5/5	Have the risk management action plans been fully implemented?				5.1
AP5/6	Have the objective of any risk and benefit framework agreements been achieved?				5.2
AP5/7	Are participants in agreement and satisfied with the outcome of the risk and benefit framework agreements?				5.2
AP5/8	Have the targets for key success criteria in the risk and benefit framework agreements been achieved?				5.2
AP6:	Effective Innovation and Continuous Improvement				
AP6/1	Has the process of continuous improvement been applied through all the stages of the project?				6.1
AP6/2	Have improvements implemented during the project resulted in improved project performance?				6.1
AP6/3	Has feedback from improvements been recorded and used as a basis for further improvement?				6.1
AP6/4	Have improvement targets been achieved?				6.1
AP6/5	Have improvements on the project set a new benchmark of performance?				6.1
AP6/6	Has learning from improvements on the project been recorded and shared outside the current project?				6.1
AP6/7	Has the project team reviewed what went well, what didn't go well and why?				6.1
AP6/8	Have supply chain partners been fully involved and committed to the improvement and innovation process?				6.2

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AP6/9	Have individuals and companies been fairly rewarded for new ideas and improvements which have benefited the project?				6.2
AP6/10	Where agreed necessary, has confidentiality been maintained on the project?				6.2
AP6/11	Has the challenge culture led to performance improvement or merely disrupted the project programme and led to inefficiency?				6.2
AP6/12	Have novel ideas which were not adopted on the project been captured and recorded for the future?				6.2
AP6/13	Has the process for reviewing ideas and improvements and capturing lessons learnt operated effectively?				6.2
AP7:	Effective Project Execution				
AP7/1	Has the project programme continued to be used to control project progress?				7.1
AP7/2	Are project reporting procedures still effective in communicating project progress and stimulating corrective action?				7.1
AP7/3	Is the change management procedure still effective in limiting scope growth?				7.1
AP7/4	Has there been a good level of design support available during the construction phase?				7.2
AP7/5	Has the construction input during definition and design resulted in improved construction performance?				7.3
AP7/6	Have the key standards set at the project outset been maintained during the construction phase?				7.4
AP7/7	Have parts of the plant or systems supplied by separate vendors been successfully integrated during the construction phase?				7.4
AP7/8	Has the use of vendor standard designs speeded up the procurement and installation process?				7.4
AP7/9	Has the handover process from construction to commissioning been well handled?				7.5

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AP7/10	Has the construction programme reflected the requirements of the commissioning team and matched required handover timings?				7.5
AP7/11	Have regular meetings been held during construction with the commissioning team to ensure a smooth handover?				7.5
AP7/12	Have commissioning systems been defined for the plant and a phased start up programme developed?				7.5
AP7/13	Have inspections and pre-commissioning checks been defined and wasteful repetition and duplication eliminated?				7.5
AP7/14	Has a defined process of handover including qualified and final handover procedures been put in place?				7.5
AP8:	Effective Performance Measurement				
AP8/1	Has the measurement of performance during project execution resulted improvements in what has been achieved?				8.1
AP8/2	Has any benchmarking indicated superior project performance compared with in-house or industry-wide projects of a similar type?				8.1
AP8/3	Has supply chain benchmarking resulted in better relationships within the project team?				8.1
AP8/4	Have the action plans resulting from measurement and benchmarking been useful in driving change and improvement?				8.1
AP8/5	Has the performance of the procurement process improved over the life of the project?				8.2

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	ACTIVE ASSESSMENT CHECK LI	ST:	REV	'IEW	No.	5		
Project	:			Date	e:			
Review	No. 5of 5	1						T
ACTIVI	E PRINCIPLE	SC	ORE	;				See
		1	2	3	4	5	N/A	VEP
AP1:	Effective Project Concept and Definition							
AP1/1	Is the project owner satisfied that the project objectives have been met?							1.1
AP1/2	Has a project review been completed?							1.1
AP1/3	Has the project process been followed through all the project stages?							1.1
AP1/4	Is the project programme complete?							1.3
AP1/5	Have the value improving measures identified in definition delivered the expected benefit?							1.4
AP1/6	Has the plant satisfied all the SHE targets for the project?							1.5
AP1/7	Have all Environmental Reviews been completed?							1.5
AP1/8	Was the information handover from the project team to the operating team effective?							1.6
AP1/9	Has the procurement policy adopted for the project been successful?							1.7
AP2:	Effective Project Team Management							
AP2/1	Have the critical success factors for the project team been achieved?							2.1
AP2/2	Were the roles and responsibilities clear throughout the project?							2.1
AP2/3	Has a regular and effective system of appraisal and performance assessment been applied to individuals working on the project?							2.1
AP2/4	Have peer reviews been used on the project and has the feedback been useful?							2.1



AP2/5	Has team effectiveness been maintained throughout the project?				2.1
AP2/6	Was the team effectively debriefed at the end of the project?				2.1
AP2/7	Have the lessons learned during the project been effectively captured and shared with other projects?				2.1
AP2/8	Have individuals been suitably rewarded and recognised for the contribution they made to the project?				2.1
AP2/9	With hindsight, has the project team organisation been effective in achieving the project objectives?				2.1
AP2/10	Has the leadership of the project been maintained through the handover stage to the operating team?				2.1
AP2/11	Have the project team targets all been achieved?				2.1
AP3:					
11100	Effective Supply Chain Relationships				
AP3/1	Have high business ethical standards been maintained throughout the project?				3.1
	Have high business ethical standards been				3.1
AP3/1	Have high business ethical standards been maintained throughout the project? Have all statutory and mandatory requirements				
AP3/1 AP3/2	Have high business ethical standards been maintained throughout the project? Have all statutory and mandatory requirements on the project been met? Has any alliance or partnership been successful on the project as perceived by all the parties				3.1
AP3/1 AP3/2 AP3/3	Have high business ethical standards been maintained throughout the project? Have all statutory and mandatory requirements on the project been met? Has any alliance or partnership been successful on the project as perceived by all the parties involved? Has the operation of the alliance resulted in benefits for the project owner and gainshare for				3.1
AP3/1 AP3/2 AP3/3 AP3/4	Have high business ethical standards been maintained throughout the project? Have all statutory and mandatory requirements on the project been met? Has any alliance or partnership been successful on the project as perceived by all the parties involved? Has the operation of the alliance resulted in benefits for the project owner and gainshare for the other participants? Have working relationships in the supply chain				3.1 3.1 3.1

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					,
AP3/8	Did the selection of the type of contract result in the most effective project outcome?				3.1
AP3/9	Have payments to vendors been made promptly within the contract terms?				3.1
AP3/10	Has the supply chain performance on this project enabled longer term ongoing relationships to be developed with key vendors?				3.1
AP3/11	Did the supplier selection process result in the best vendor being awarded the contract?				3.2
AP3/12	Were the contract dispute resolution procedures effective in maintaining good relationships with satisfactory results for all parties?				3.3
AP4:	Effective Supply Chain Relationships				
AP4/1	Has the implementation of the information management strategy resulted in benefit to the project?				4.1
AP4/2	Has information passed seamlessly across the boundaries of each phase of the project without the need for re-entry of data?				4.1
AP4/3	Has the single entry of data policy resulted in less errors due to mistakes?				4.1
AP4/4	Has all the contract documentation been handed over?				4.1
AP4/5	Are the information requirements from the project team for the ongoing operation of the plant clear?				4.1
AP4/6	Has all the essential design and SHE data necessary for operations been handed over from the project to the operating team?				4.1
AP4/7	Now the project is complete, is it still possible to access ongoing plant and project information quickly?				4.1
AP4/8	Have the life cycle information codes been useful in determining which information should be retained at the end of the project?				4.1

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AP5:	Effective Project Risk Management				
AP5/1	Has the risk management process applied to the project been successful in mitigating and managing the risks to the benefit of the project?				5.1
AP5/2	Has risk awareness been successful throughout the project supply chain?				5.1
AP5/3	Were the number of unknown risks minimised by the application of the risk management process?				5.1
AP5/4	Was it necessary to invoke contingency plans to deal with known risks that actually occurred?				5.1
AP5/5	Was a review carried out at the end of the project to capture learning on dealing with risks to future projects?				5.1
AP5/6	Have any risk and benefit framework agreements delivered benefits to the participants and were they in line with performance?				5.2
AP5/7	Has a review of the learning from any risk and benefit framework agreements been held with the participants?				5.2
AP5/8	Have the relationships formed within risk and benefit framework agreements been supportive and aligned?				5.2
AP6:	Effective Innovation and Continuous Improvement				
AP6/1	Has the application of a strategy of continuous improvement resulted in enhanced project performance?				6.1
AP6/2	How do improvements compare with benchmarks within the industry?				6.1
AP6/3	Have improvement targets been achieved and delivered benefit?				6.1
AP6/4	Have individuals been recognised and rewarded for performance improvements?				6.1

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AP6/5	Has a formal project close out review to assess lessons learned from the improvement process been held?				6.1
AP6/6	Have the lessons learned been widely shared with other projects and others who can benefit from the experience?				6.1
AP6/7	Has the involvement of the supply chain in the improvement and innovation process benefited the project?				6.2
AP6/8	Has the rewarding of new ideas and protection of intellectual property been effectively handled during the project?				6.2
AP6/9	Have the contractual arrangements been successful in encouraging a challenge culture and enabling innovation to flourish?				6.2
AP6/10	Have new ideas and innovations been implemented without disruption to the project process?				6.2
AP7:	Effective Project Execution				
AP7: AP7/1	Effective Project Execution Was the project successfully controlled through all its phases for time, cost, resources, scope and performance?				7.1
	Was the project successfully controlled through all its phases for time, cost, resources,				7.1
AP7/1	Was the project successfully controlled through all its phases for time, cost, resources, scope and performance? Are the outcomes of the project in line with the				
AP7/1 AP7/2	Was the project successfully controlled through all its phases for time, cost, resources, scope and performance? Are the outcomes of the project in line with the forecasts from the project control systems? Has the project reporting procedures been timely and accurate in highlighting key project				7.1
AP7/2 AP7/3	Was the project successfully controlled through all its phases for time, cost, resources, scope and performance? Are the outcomes of the project in line with the forecasts from the project control systems? Has the project reporting procedures been timely and accurate in highlighting key project information? Has there been a high level of changes during				7.1 7.1
AP7/2 AP7/3 AP7/4	Was the project successfully controlled through all its phases for time, cost, resources, scope and performance? Are the outcomes of the project in line with the forecasts from the project control systems? Has the project reporting procedures been timely and accurate in highlighting key project information? Has there been a high level of changes during plant start up? Have changes been well managed throughout				7.1 7.1 7.1

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AP7/8	Have innovations and improvements built into the design paid off in terms of improved operating performance?				7.2
AP7/9	Have the design, construction and commissioning teams been well integrated?				7.2
AP7/10	Are mechanisms in place to feed back operating experience to the design team to improve performance in the future?				7.2
AP7/11	Has the learning from constructability reviews been captured for future projects?				7.3
AP7/12	Were the standards set for the project appropriate for the needs of the operating plant or has it been under/over designed?				7.4
AP7/13	Were all the defined standards requirements met by the project?				7.4
AP7/14	Has the use of functional specifications and vendor standard designs produced a better plant?				7.4
AP7/15	Was the plant handed over from construction to the commissioning team in a smooth and successful way?				7.5
AP7/16	Was any subsequent hand over from commissioning to the ongoing operating team successful?				7.5
AP7/17	Was all the required information available at handover from construction?				7.5
AP7/18	Have all the outstanding snags identified at handover been cleared?				7.5
AP8:	Effective Performance Measurement				
AP8/1	Has overall project performance been benchmarked against the industry norms?				8.1
AP8/2	Is the benchmarked project performance as good as the best?				8.1
AP8/3	Are actions to improve future projects being put in hand?				8.1

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AP8/4	Have project supply chain performance been benchmarked?				8.1
AP8/5	Is supply chain performance at least as good as the industry best?				8.1
AP8/6	Are actions being taken to improve supply chain performance in the future?				8.1
AP8/7	Have the Key Performance Indicators for the procurement process been benchmarked?				8.2
AP8/8	Is procurement process performance at least as good as the industry best?				8.2
AP8/9	Has an action plan been defined for improving procurement process performance?				8.2

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