QUALITAZ

PROJECT QUALITY IMPROVEMENT GUIDE



PROJECT SPECIFIC GUIDE

A quality improvement guide for CEOs ... even if you don't have time.

By the end of this guide you will have an 8-step simple process that (when implemented) would immediately improve quality within your company, and that you would transfer to your next construction project.

If you are facing any of the following challenges then read on until the end…this guide is for you;

a. Your company is operating on verbal protocols and procedures, more than documented ones, and this is leading to inefficiencies and confusion.

b. You are facing difficultly in substantiating claims and/or variations, producing accurate reports and obtaining valid information. This is obviously another face of inefficiency.

c. You are finding it difficult to assess project performance, in relation to the deliverables, due to un-reliable and inconsistent data?

d. You are witnessing a communication breakdown within your team, and employees are inconsistent in their approach. Is this resulting in you micro-managing the staff, and diverting your attention from your own critical tasks?

On the other hand, if your company runs a fully effective quality system, have full records, zero defects, and no claims, then congratulations, but this guide is not really for you. It is great news and a big achievement… we know it was not easy.

However, we know that most companies out there are facing challenges of one or more from the previously mentioned. If your company is one of those have no worries. In the coming pages, we are going to show you a simple approach of how to reverse this, and gain immediate control of your organisation quality and culture.



The “We don’t have time” myth

Before jumping into the 8-steps, let us first address an issue that is subtly persistent in most workplaces. There is a common phrase, often heard in most industries, when faced with having to proactively allocate time and resources to plan and rollout company protocols and procedures for better control over the works. The infamous phrase of “we don’t have time!”.

With 18 years’ of experience working with Project teams, we have heard this phrase a countless number of times, and on each and every project we worked on.

So what is “we don’t have time” all about? and why do we know that it a myth?

Simply put, “we don’t have time” is a reactionary response, usually given by management and staff alike, working under pressure (and who isn’t?), often to mask over the fear of one or many of the following misconceptions or beliefs: -

1. the task is too cumbersome and time consuming,
2. they believe the task is a waste of time, due to their lack of knowledge about what is involved as required input or what is the desired outcome,
3. they feel that their work load is already excessive and they have no capacity to take on new work – even though the excessive workload is usually a direct result of the inefficient company working procedures. People busy on tasks… but no one knows what each other is actually doing!
4. they do not want to change the way things have always been done,
5. they do not understand how this work will improve performance of the business and their role,
6. they do not have the knowledge on how to perform the tasks required for change,
7. they feel they will be monitored and evaluated if the system is too transparent.

So, what do we have time for?

If we do not have time for these activities, then what do we have the time for? How is our time spent under the current work conditions?

- We do find the time and resources to spend on rectifying defective work after production or even installation.
- We do find the time to write letters, in response to claims related to poor quality, performance, and/or work.
- We do find the time and extra funds, to spend on hiring lawyers and contract personnel to advise us on our contractual position, after delays and errors in our work and performance has been raised by the client.

Our most valuable piece of advice we can give you – choose to change this mindset today!

Shift the thinking within your organisation, and stop this “myth” in its tracks. Do not accept this phrase anymore within your organisation, and guide your company towards a sustainable and quality-oriented performance going forward.

Now let us walk you through a simple and practical process to reclaim the quality and performance within your organisation.



The 8-step process to improved quality

With the following 8 steps implemented, you will see instant results and improvement within your organisation, in a matter of few weeks.

Before going into the first step, let's look at a recurring scenario that is encountered regularly within the construction industry.

It is often the case that Construction projects can take several years from tender all the way through to inception. At a certain point the project is awarded, and more often than not, it takes companies by surprise of some sort. The client right after award requires the contractor to mobilise their team on site, within the following month or even week! At this stage the team is usually not fully assembled and may be working on other projects – to be transferred at a later date.

Following this, there is a rush to mobilise, which leads to problems right from the start with project efficiently and organisation of the project team members. The results of this, we all know by now; – project deliverables not being met and programme delays, before you even start.

All of this can be prevented, by following a standard formula. So, let's get started, and look at the first step of our formula which you can take on your next construction project.



Step 1
Who knows the details?

As you might imagine, the first step is the gateway to a successful transformation process and therefore the most important and critical. We know that the next might sound too obvious, but please bear with us. For your team to achieve the desired results and to be able to meet the Project requirements, they must first understand the actual requirements for the project.

Yes we too know that this seems too obvious to be mentioned, doesn't it! – However, repeatedly when we start working with our Clients' project teams, we soon discover that this critical step has been overlooked. The Project team members turn out to have limited knowledge about the details of the project and the technical requirements, and more often, only have limited information related to their role/disciple, usually verbally passed over by their direct manager or even colleagues.

Understanding the contract requirements

There are 4 main types of documentation for your project team to learn about and understand, these are: -

1. Contract documents
2. Project specifications
3. Plans, drawings and details
4. Quality Requirements



1. Contract documents

This is the signed contract document, upon award of the project.

The document includes a full scope of work, stating what is included in the contract for the project; nature of the project, construction type, number of levels, number of buildings, size, type, location, building use etc.

Other useful information gained from the contract are: working hours, working during holidays, rules and regulations, site policies, site storage requirements etc. All of these points ensure that proper planning and programming can be proactively managed at the start of the project

You may be under the impression that this document is the sole responsibility of the Contract and Commercial team, or the Project Director and Project Planner. Critical information is contained which all project team members need to be aware of, and have access to.

The contract states the inclusions; it also states what is excluded. For example, the Contractors' scope of works might be to build a hospital, which excludes packages for Mechanical, Electrical and Plumbing services; this may be under the scope of a different Contractor.

The exclusion section on the other hand indirectly indicates, who are the interfacing parties, that your team need to liaise with.

Let's illustrate this point, using water utilities, as a simple example.

As a contractor you may be responsible for installing the pipework to house the services. The main connection point to the district utilities is generally excluded from your scope of works, as this is with the water utility authorities. The final inspection, however, may be the responsibility of your organisation to complete, (along with the associated administration duties of registering and planning etc).

There are a number of Municipality permits and NOCs that need to be applied for, in respect of the work.

Each of these has their own procedure and timescales involved, in administration work and application process, in line with the authority requirements.

Considering the actual planning of the task, along with the anticipated timescales there is a lot of work involved and to be understood, prior to even starting the project

If this information is defined at the start of the project your team will be prepared and can start to plan their activities – in a proactive way – which will save time and any delays later.

Case study

We came across a similar situation on a hospital build, where for 3 years during the construction phase, one of the critical NOCs needed, was from the Municipality Health Authority; approval for the kitchen layout. This requirement wasn't established from the start of the project and had been overlooked. Eventually it was applied for, shortly before the final building handover. The applying of this particular NOC is not an overnight task and can take many months to years, to complete.

By forgetting this NOC resulted in the Municipality inspectors inspecting the installed work and rejecting the installation of 2 major kitchens, because they did not meet with the local regulations and requirements; (even though it may comply with general international standards).

This oversight resulted in millions of dirhams and time lost. Both kitchens had to be completely stripped, redesigned and re-installed. A costly mistake, but yet one that could have been avoided.



2. Specifications

The second set of documents your team needs to review, are the specification documents. These specify the exact requirements for each material and product being supplied and installed, along with providing, in some instances, the installation methods to be used. This includes the building tolerances, general finishes and cosmetic requirements. These details are stated in the form of referenced British, American and other local codes and regulations, but more often than not, the exact requirements are typed into the specification document.

Specifications also specify the standard of quality which will be accepted by the client, for the installed work stages and the finishes.

In addition, these document contain the requirements for additional service level agreement contracts, extra materials and spare parts that need to be supplied or can be charged as “extra” under the contract. These small and innocent remarks in the specification can open a myriad of issues if undiscovered until a later date.

The specification documents can be recognized for CSI standard referencing series format. (Construction Specifications Institute). Contained within each of the main sections are subsection specifications. For example, under the main section of Masonry, there may be subsections to cover blockwork, traditional brickwork, fixings, setting out etc.

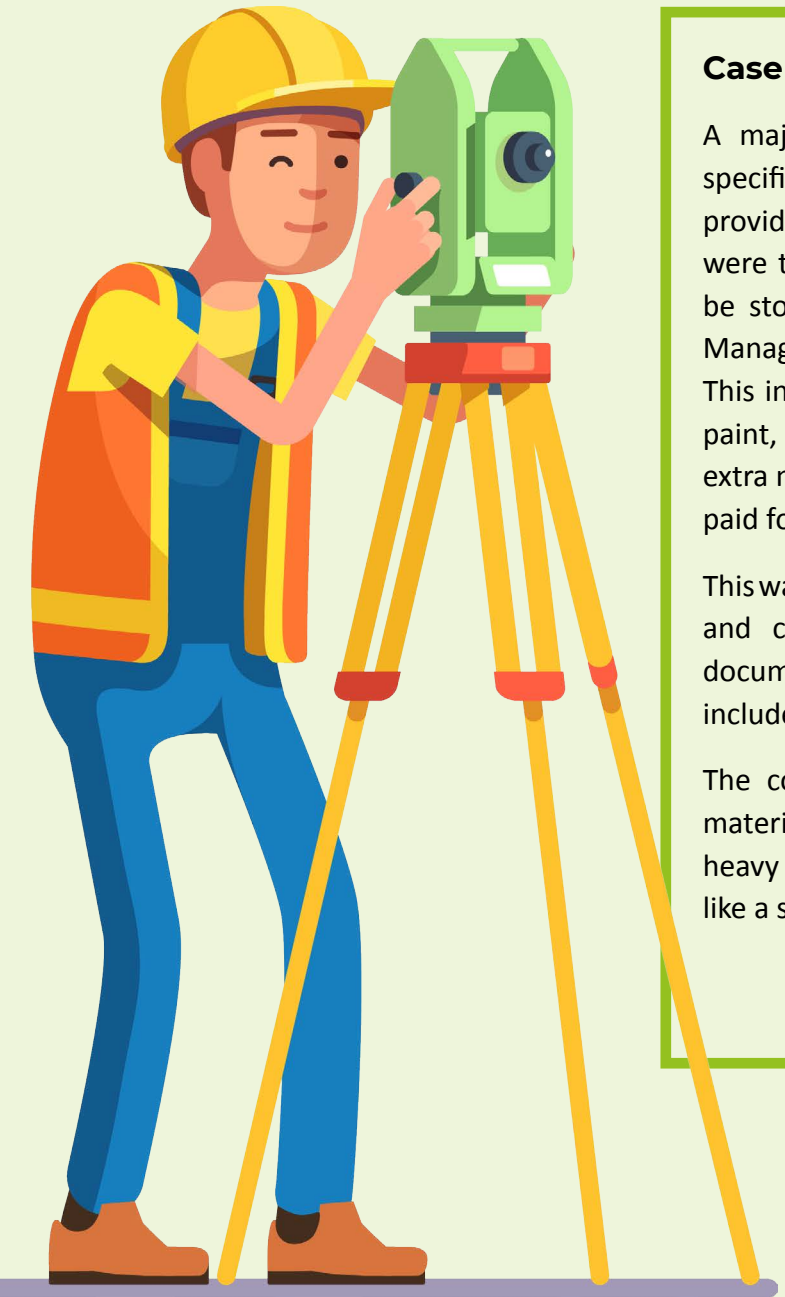
The Project specifications usually start with a General Requirements specification. This should be read in conjunction with all of the other specifications and covers details of the project particulars, existing site conditions, language to be utilised and other general requirements for the overall project objective.

CSI Referencing Specification Example

01 General Requirements
02 Existing conditions
03 Concrete
04 Masonry
05 Metals
06 Wood, plastics and composites
07 Thermal/moisture protection
08 Openings
09 Finishes
10 Specialities
11 Equipment
12 Furnishings
13 Special construction
14 Conveying equipment
Etc.

This collection of specifications acts as a working “Handbook” for the project team. All members of the team need to be familiar with the content. This prevents costly errors during procurement and also defects from occurring due to non-conformances in the installed work.

During the early stage of review of these documents any information that you team find to be outdated, or where materials are not available specifically in the UAE, or building technology/ standards have changed and have not been reflected in the Specification documents can be rasied by using a Request for information (RFIs) to your client. Although these may seem “small” details, they can often amount to a sizeable variations to the contract.



Case study

A major contractor did not realize under their specifications, there was a requirement for providing spare parts and extra materials. These were to provided at the end of the project and to be stored in the hospital stores for the Facilities Management team to use, to maintain the building. This included ceiling tiles, extra motors, floor tiles, paint, lights etc. The Contractor believed that the extra materials which they had to provide would be paid for, by the client, after Building completion.

This was incorrect. The extra materials were included and covered under the individual specification documents and were considered to have been included in the overall contract requirements.

The cost for supplying quantities of these extra materials ran into millions of AED, as they were heavy duty parts and materials for what seemed like a small “oversight” .

Other highlighted specifications to read

Health and Safety

This specification contains specific requirements in relation to provision of offices, welfare facilities, onsite health and safety requirements etc. which may be additional to the requirements from the UAE standard codes and practices.

Case study

For one particular site we worked on, there was a rule under the Project Health and Safety policy that workers lunches must be contained in metal tiffin boxes, with specific metal water containers, (rather than plastic bags or other containers).

This may sound like a small detail, but when you multiply this figure by 10,000 labour, on a large project, the cost of this soon escalates. This type of detail again should be identified during the tender pricing stage; however, the information might not always be available at that stage.



Project closeout

This specification contains details of how the project is to be handed over, and the timescales for submitting the closeout information, such as, Operation and Maintenance manuals, As Built drawings, final inspections and NOCs etc.

Many of these activities can take several months to complete with your Project team and subcontractors (where required) and may need to be delivered several months prior to the completion of the building. It can be costly, if these deliverables not identified at an early stage.

Case study

Contractor during construction believed that the Operation and Maintenance manuals could be issued after the practical completion date for the project, and during the defect liability period.

However the requirement stated in the contract specifications was for the manuals to be issued 60 days, prior to practical completion for initial approval. This oversight resulted in heavy penalties to the Contractor, through payment of liquidated damages (daily fines), for the additional year it took them to assemble and receive approval of all of the manuals with their subcontractors.

Submittal procedure

Submittal procedure specification specifies how you are to document the project requirements and demonstrate compliance with documentation for each product, material, submittal, inspection and other verification channels. This includes how to submit a new material for approval and what type of documents are to be issued for the client, during the submittal process.

It also includes details for technical and drawing submittals etc. How this information should be presented and submitted. What is the process for approval and what associated records and documentation need to be supplied at the time of the submittal?

So lets jump now to the 3rd type of contract documents:-

3. Plans, drawings and details

As you know, these important details are accompanied with the contract documents. If it is a design and build contract, these will have to be developed, however generally all of these drawings need to be studied by the project team, to understand the site layout, the build requirements, any variations from the original tender drawings, and the construction methods to be utilised, along with the design etc.

Again any variations or errors should be issued by RFI to the client in due time. Our last type of contract document is for :-

4. Quality Requirements

Although Quality requirements, has its own individual specification, it is also part of all of the other 3 contract requirements; Contract document, plans and drawings, Specification documents. It is one of the most important specifications.

Each element of the project process, whether it is a submittal, paperwork to be raised, or an inspection to be performed, it is governed and controlled by a Quality requirement.

The requirement could range from verification and approval of an activity by the Quality Department and/or the Clients Quality Department, or the planned way an activity has to be done for the project to ensure it complies with the standards required.

It also sets out the quality system that you need to follow for the project. This may be your own company quality system, or it might be a combination of both your clients' and your own system – making some small adaptations.

Careful assessment and understanding of these requirements by all parties is essential, before any work starts, and we are not referring to only the quality team, but for the whole project team.

Having discussions with the Project teams on many sites, it is very common to hear members of the team commenting that Quality "is the sole responsibility of the Quality team", to identify and raise any quality issues on the work, and that the construction team are not responsible.

This is similar to the "we don't have time" myth.

To illustrate this particular way of thinking would be likened to visiting a restaurant and ordering burger and chips. The chef then serves a burger which is burnt, tastes bad, and the fries are missing – hoping that the waitress will tell him what is wrong with the food, and how to improve it, before it is served to the customer!...

Everyone has a responsibility for quality in their organisation, not only the Quality department.

Cheat sheet for teaching your team the requirements

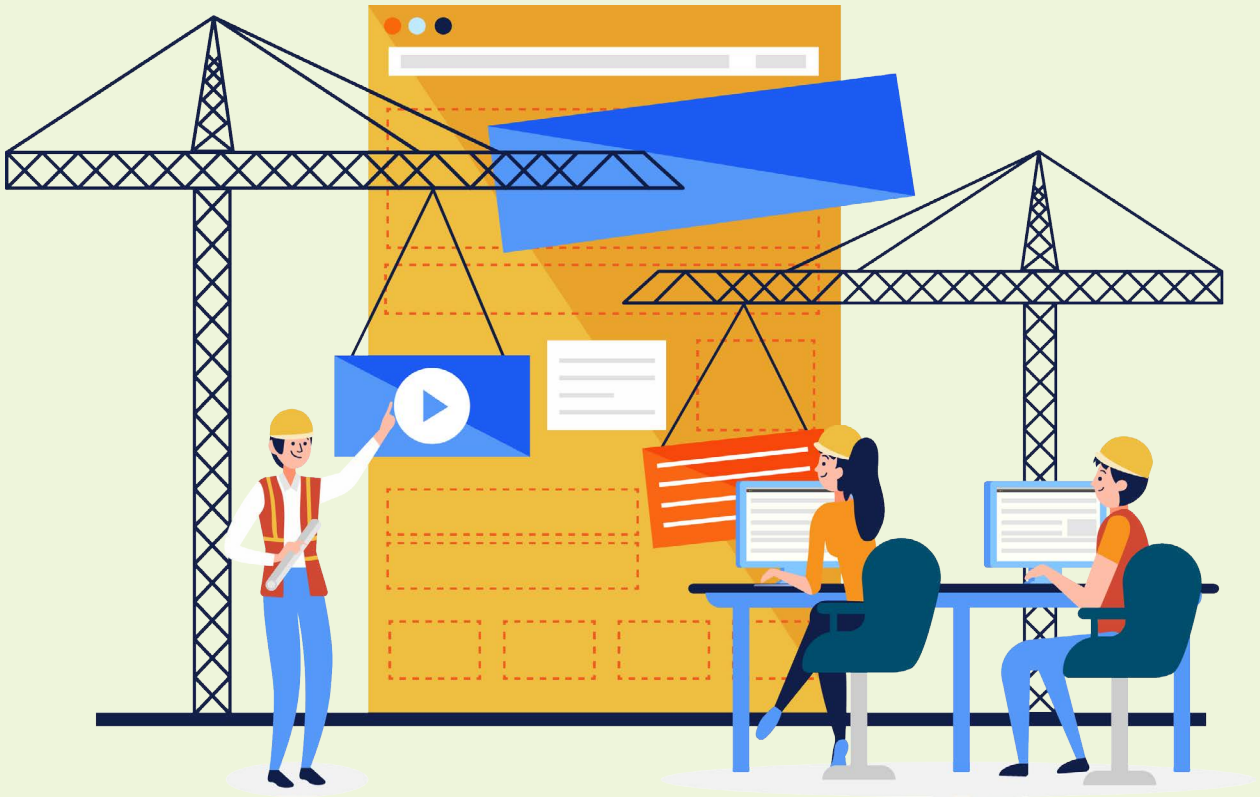
We have covered all 4 of the main Contract documents and the detail and importance of each one. This "handbook" of project information is crucial to the efficient operation of the site and project; yet most of the time the project team members are not aware that these documents even exist, or where to find them, if they have knowledge of their existence.

How do you make sure the project team read these documents and use the information?

To navigate this, we recommend that your project arranges a Project induction for all team members. This Project specific induction is in the form of a quick reference guide, to induct the team through the 4 types of project contract documents, and will highlight the main points that they should consider, how to use the documents and details, along with providing any particulars of the site.

Preparation prevents programme delays and financial implications arising, at a later date, for defets and other matters that could have been avoided, had the information being known at an earlier time. Your team will also understand how to quickly gain knowledge of project requirements for all future projects.

We have been amazed at the feedback from our Clients' team members when we have arranged Project Inductions. They usually comment that this is the first time they have ever received this kind of guidance and information on a project, and had they known this before it could have saved a lot of time and prevented a lot of issues."



Step 2
Are you compliant?

Having completed the understanding phase of step 1 we move to the next step. Understanding what procedures and processes you currently have in place to meet the step 1 requirements, and which elements are missing from your current company (quality) system, which may prevent you from conforming with the project requirements.

We call this a Quality gap analysis. An analysis between what you have and what you need to fulfil requirements. You can perform this analysis at any time or part of the process within your company or on a project. It is good practice however, to analyse this, prior to the start of the project so that you can plan and fix any issues head of the construction activities starting.

If the project has not yet started, this analysis will be more of a desktop exercise. While the project is underway it can only then be done through interaction with the project team members.

How to do a Quality Gap Analysis

This analysis can be actioned by any personnel with an understanding of your organisation and the project, or alternatively it can be by performed by your Quality team.

A specific time and date will be set to carry out the review and a notification will be sent to all parties involved.

Your chosen representative will incorporate all of your facilities -Head office, factory (if you have one) and active sites, to determine that you have the appropriate organisational structure and framework in place to be able to administer the project requirements. The basis of these discussions needs to be the Project contract documents and the Company Quality System.

During the analysis the representative will take a sample of the work procedures and systems being used (as it is not possible to carry out an audit on every person in the organisation and every work practice) by holding 1:1 meetings, with selected personnel, at different levels of the organisation and through a cross section of departments. The aim is to understand fully each of the various functions and operational control procedures, and locate where there are any gaps and inconsistencies.

The participants should take the auditor through the process, step by step, and demonstrate supporting records to validate the information being provided.

Depending on the size of your organisation this review should take between 3-5 days to complete.

Staff (depending on where you are carrying out the audit) need to be made aware that this gap analysis is not a test or method to "catch them out", but is an open dialogue to allow an opportunity to find out what is working and what is not working in the organisation, and where these are causing inefficiency and a risk to the company and/or the project. It also that communication channels are properly established to ensure information flow.



Step 3
Reporting on the findings

Having completed the analysis, a report needs to be prepared covering the findings, in detail. This should start with an outline of the scope of the analysis and the parties involved. The range of the sample taken needs to be clearly stated in the report as the review is not based on every aspect of the project and company, or every person employed; this needs to be clearly understood by the reader.

Clearly state where each of the gaps exist and the findings and define who the responsibility entity/ department is for each such as HSE, quality, commercial etc. Try to split these into categories, such as:

1. Documentation issues,
2. Process gaps,
3. Safety gaps
4. Product gaps
5. Knowledge gaps etc.

When compiling observations and findings, it is a good idea to use a "traffic light" system; red, amber and green colour coding to define what are the priority items. This is especially useful if there are a lot of gaps and issues found. It helps you to prioritize which tasks should be treated as high priority. For example issues in Red are considered high risk to the company or the product if not fixed immediately.

Finally prepare a Recommendations plan for Improvement, based on the results of the report. This should clearly define what actions are to be taken to resolve these issues.

You now have an action plan to follow! A clear way forward so that you tackle each identifiable issue. This formula may not be easy, but it's simple to follow and enables you to make immediate and rapid changes.

Step 4
Share the findings

At this stage, there is no point having the information if members of the team and company are not aware of the issues which have been highlighted. Time for the reviewer to meet with your Senior management team and each affected department, to discuss in detail the report and the findings.These meetings need to be recorded via Meeting Minutes. The Recommendation Improvement Plan should also be discussed and any feedback or valid suggestions from the employees should be incorporated.



Step 5
Set your quality improvement plan in motion.

For your improvement plan to work each part of the plan needs to be delegated out to the relevant department heads and personnel to close out. This is essential the work is done by those responsible for it. This also ensures that not only do you get the process right, but the employees feel and are involved in the process and improvement of the organisation.

This step usually involves the writing of new processes and procedures, to breach the gaps and "writing out" any of the issues from the old procedures, that are no longer serving your organisation and can be used during discussions with employees on their performance, if necessary.

This step takes the longest time in the process to complete so often procrastination, excuses and delays can set in at this stage. It is imperative that you make sure, a clear target and deadline is set, for each of the actions to be resolved by the various parties and that those staff are made accountable to deliver them at the required time.

Meetings are necessary during this phase to refine and discuss the process steps. You don't want to write a blanket process and then find later that it is not workable.



Step 6
Training and Knowledge Phase

To cement everything together, it is essential that you organise training and knowledge sharing, with your team. You can deliver these in several mediums; through workshops, focus groups, tool box talks and training sessions, (depending on the size of your team and the changes made). This information needs to be formally transferred to your employees.

Be sure to keep a formal record of any training sessions, workshops and tool box talks held, and who were the recipients of this training. The employee training record can be used later for development review meetings, employee performance and to ensure that employees skills are developed within the organisation and that they hold the relevant job competencies.



Step 7
Implementation phase

You now have under Step 5 the new procedures written and agreed. Under Step 6 your employees are aware of the requirements and have been trained in how to use them. Now it is time to start running with the new processes and to record and maintain the records, from the activities performed. This is the implementation phase.

This trialling phase is used to ensure that not only your team are using the new processes correctly; that the processes are also working. At this stage you might need to make some small changes and adjustments to suit the output, if necessary. Always keep the relevant departments aware of any changes made. This can be done simply through an internal communication or a tool box talk, held at a lunch break. This is a good way to communicate, if short on time for small changes.



Step 8
How well are we doing?

One month later…. Your team has already been running with the new processes. Periodic reviews are necessary to ensure that your quality system is still working efficiently and is being maintained by the team and there is no complacency setting in or misunderstanding of the processes.

At this stage we recommend that you return to Step 2 and re-evaluate this through Quality analysis (audit). Reviewing the processes and the results, to assess if they are still working and are being implemented effectively or if they require some further adjustment. Are there any non-compliances that need to be dealt with?

Always remember that your Quality system is "live" and is not fixed in stone. Make sure that your system moves with your business. If it is not working efficiently change it. If it is too long, shorten it.

You do not need to have 1,000's of procedures, if only a handful will cover your main activities and business functions.

Continue to test the procedures. Ensure that all parties are using and recording the information in the correct way.

By following these 8 steps you are guaranteed to improve the way your business operates and its efficiency on its projects.

Lets finish up with a quick summary of the main points: -

Step 1 - Understand requirements
Step 2 – Analyse organisation
Step 3 – Report on findings
Step 4 - Discuss findings
Step 5 - Prepare an Action Plan
Step 6 - Train the team
Step 7 – Implement the new procedures
Step 8 – Review of the new system
This now concludes our 8 step to improved quality for your next construction project (and your organisation).

We hope you found the information in this guide useful and we wish you a successful implementation in your organisation. If you would like to discuss any of the topics contained in this guide, please do visit our website at www.qualitaz.com.

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