Gold Unit 1 ITQ:IPU Improving Productivity Using IT

Relevant LINKS

BACK TO ITQ UNITS **[1]**

Handbook home page **[2]**

Overview

The candidate can plan and review their use of pre-defined or commonly used IT tools for work activities that are at times non-routine or unfamiliar. As a result of reviewing their work, they will be able to devise solutions using IT tools in order to improve work productivity. Any aspect that is unfamiliar will require support and advice from other people.

A work activity will typically be 'non-routine or unfamiliar' because the task or context is likely to require some preparation, clarification or research to separate the components and to identify what factors need to be considered. For example, time available, audience needs, accessibility of source, types of content, message and meaning, before an approach can be planned; and the techniques required will involve a number of steps and at times be non-routine or unfamiliar.

Example of context – this unit can underpin other units. For example, if learners are working on a DTP poster and a presentation to pitch the poster to a local company, how do they know what applications to use? How do they know how much time it will take? How will they organise their files and understand how to solve problems that arise? All of these are part of this unit so as long as they start planning using IT tools from the beginning, they will be gathering information to use for the IPU unit. This unit should be the start, middle and end of the course as it is related to all other units.

Activities supporting the assessment of this award **[3]**

Example of work at this level **[4]**

Assessor's guide to interpreting the criteria

General Information

QCF general description for Level 2 qualifications

- Achievement at QCF level 2 (EQF Level 3) reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.
- Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems. Interpret relevant information and ideas. Be aware of the types of information that are relevant to the area of study or work.
- Complete well-defined, generally routine tasks and address straightforward problems. Select and use relevant skills and procedures. Identify, gather and use relevant information to inform actions. Identify how effective actions have been.

- Take responsibility for completing tasks and procedures subject to direction or guidance as needed.

Requirements

- Standards must be confirmed by a trained Gold Level Assessor or higher.
- Assessors must at a minimum record assessment judgements as entries in the on-line mark book on the INGOTs.org certification site.
- Routine evidence of work used for judging assessment outcomes in the candidates' records of their day to day work will be available from their e-portfolios and on-line work. Assessors should ensure that relevant web pages are available to their Account Manager on request by supply of the URL.
- When the candidate provides evidence of matching all the criteria to the specification subject to the guidance below, the assessor can request the award using the link on the certification site. The Account Manager will request a random sample of evidence from candidates' work that verifies the assessor's judgement.
- When the Account Manager is satisfied that the evidence is sufficient to safely make an award, the candidate's success will be confirmed and the unit certificate will be printable from the web site.
- This unit should take an average level 2 learner 40 hours of work to complete.

Assessment Method

Assessors can score each of the criteria N, L, S or H. N indicates no evidence. L indicates some capability but some help still required. S indicates that the candidate can match the criterion to its required specification. H indicates performance that goes beyond the expected in at least some aspects. Candidates are required to achieve at least a S on all the criteria to achieve the full award.

Expansion of the assessment criteria

1. Candidates will plan select and use appropriate IT systems and software to meet needs

The overall focus for evidence gathering on this section is to show some level of competence from the learner's on their choices. This will reinforce some of the exam based learning. For example, a question on the exam might be, “what is the overall purpose of using IT in a company or school”. Students should be aware of the strengths and weaknesses of IT. Is it always the best solution? If so, why. Is it convenience, speed, flexibility, etc. Answering these questions will e important steps to completing this unit and improving other units of work.

1.1 I can describe the purpose of using IT in my work

Candidates should be able to describe the purpose of their work and why using IT adds value to it in some way or ways.

Evidence: will be provided directly from the presentation of work in web pages that has clear purpose and describes the purpose of the work.

Additional information and guidance
Candidates might describe the audience at which they are targeting their work and any aspects of the work that makes it particularly suitable for the audience e.g. "I used a word processing package to produce a series of documents for a local charity to use. To make the documents more attractive and personal to the company, I used a graphics package to make their custom logo. This graphic could be used on multiple documents, including web pages, as I made it a specific file format that can be scaled, exported and imported easily. I also created a spreadsheet so that they could better track their finances and incomes/expenses. Finally, I used a presentation package to show the charity my ideas and explain why I made the documents and logos the way that I did."
Alternatively, "I used a public web page to collaborate with my friends in producing an information page about the local environment because it enabled us to work together effectively. It also made it easy for other people to contribute and made the results easy to link to other similar sites". They should be able to describe the key characteristics of writing formally to present part of a portfolio as opposed to the style used for chat and instant messaging of friends. The candidate will show evidence of understanding relevance in relation to purpose. Information that is irrelevant to a task will not support its purpose and inaccurate or biased information could be against the purpose. The main difference between Silver and Gold is that in Gold, description needs to be explicit, whereas in Silver it is enough to identify purpose e.g. from a list of options or other supporting structures. Their documented writings, blogs and/or files should contain descriptions in keeping with the guidance here.

1.2 I can describe the methods, skills and resources needed to complete my tasks successfully
Candidates should be able to systematically analyse a task and match needs to resources. They should be able to describe the methods, skills and resources they need in some detail.

Evidence: will be provided directly from the presentation of work in web pages that has clear purpose and describes the methods skills and resources relevant to successful completion.

Additional information and guidance
For example, as a method of presenting information to a general audience, using web pages is often a better choice than desktop presentation software. In a web page, the information is permanently and immediately available to the intended wide audience and this information can be linked to related information in other pages. These web pages can also be web page resources such as cloud based office files. They might need skills related to e.g. preparing images for use on-line so they are suitable sizes and load quickly on low bandwidth connections. They can describe issues related to copyright which are Personal Learning and Thinking Skills (PLTS) and accessibility if they intend others to use the information they prepare. The resources needed could include time, software, hardware or new learning and expertise. Again evidence of description will differentiate from Level 1.

Every successful project, especially using potentially complex and expensive aspects such as IT, needs to be properly planned and resourced. It is no good getting ready to deliver something to a customer and then discovering that a widget that makes it all work in the learner's environment is missing in the clients. Equally, it is good to set out some sort of method before you begin. You don’t always need to be linear and follow a set route. In some cases, this may not be effective. The method might require you to downgrade a project. For example, many civil service based organisations still use very old and unsupported versions of web browsers such as IE 6, or they might use a very specific version of office software which is no longer possible to purchase. If you start out your product with modern designs and scripting elements, before checking what web access tools they have, you will waste a lot of time designing something that you think is great, but simply will not work. In this instance, the method should be to research what is practical before moving on to what is possible. The method here would be to gather all of the details about the client’s system, then work on what can be designed given these limitations. Similarly, you may be living in a city or town with excellent Internet connectivity speeds. If you don’t check with a customer what their own

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access speeds are like, then you will have problems delivering a media rich solution that will not work on a slow Internet.

In terms of describing the skills, a great many IT solutions fall down because of the huge amount of change they entail. It is great introducing a new system, but if the staff are not very confident users of IT, you will have to build in huge amounts of time and money for training, and this may still not be enough. In most instances, where possible, it is good to work on the idea of KISS [5]. The more basic and workable your solution is, the better. There are obviously exceptions and if you are designing something for sophisticated users, then you will need to make it fit that need and skill set.

The resources you use need to be described in as much detail as makes it understandable to someone reading your work that does not have your skilled knowledge of IT. If something seems to be obvious to you, it might not be obvious to someone else, so it is always good to check with different people that it all makes sense as you go along. Did you survey possible users and find out how much they understand the resources, could you do this to have a clearer guide. As with the skills, implementing resources which are complex and time-consuming, mainly because you think they are good, may not be the best solution and therefore may not lead to your required success.

On that note, it is not a direct requirement of this criterion, but you do need to address the aspect of success. How do you know it was successful. If there are 10 users and 5 of them say it is OK, is that a success? Set yourself some measures. In terms of the examination, many IT projects use SMART [6] methods on projects. Use these and work towards them on your project in terms of method, skills and resources to ensure overall success.

1.3 I can plan how to carry out tasks using IT to achieve the required purpose and outcome

Candidates should be able to provide clear and structured plans for tasks and at least one project of 20 or more hours.
Evidence: A documented plan that supports a project presented in a digital format e.g. a web page, document file or IT planning software.

Additional information and guidance
Candidates should have planned a project of some complexity scoping the information flow. For example, designing a structure for an e-portfolio with a title page linking to subjects of interest, listing the information sources needed for input, the software tools they will use for processing information to include in their portfolio and the intended audience for their finished product. They should provide evidence that they have considered costs and where relevant the file formats generated by the tools in order to make information widely accessible. Will their work force other people to have to buy software in order to access it? Planning should consider such issues to avoid problems later on when the project has been completed (PLTS)
Plans should typically be based on an aim, some specific objectives and/or SMART (Specific Measurable, Attainable, Relevant and Time-limited) targets. Candidates should realise the importance of objectives and targets that can be rationally evaluated rather than vague statements of aim. An example in the context of a work portfolio might be to provide 3 screen sized pages for 3 subjects by 31st July. Resources required are 20 hours of time and access to the Drupal Content Management System. Plans should include concise descriptions of the methods and actions needed for success and these can relate directly to the range of assessment criteria in this section.

The main focus here is on the planning of the IT task or project, though obviously it also has to address the ending part here and achieve some outcomes or stated purposes. You could use some tool in order to aide their planning. This could be something basic like the Google Keep application:

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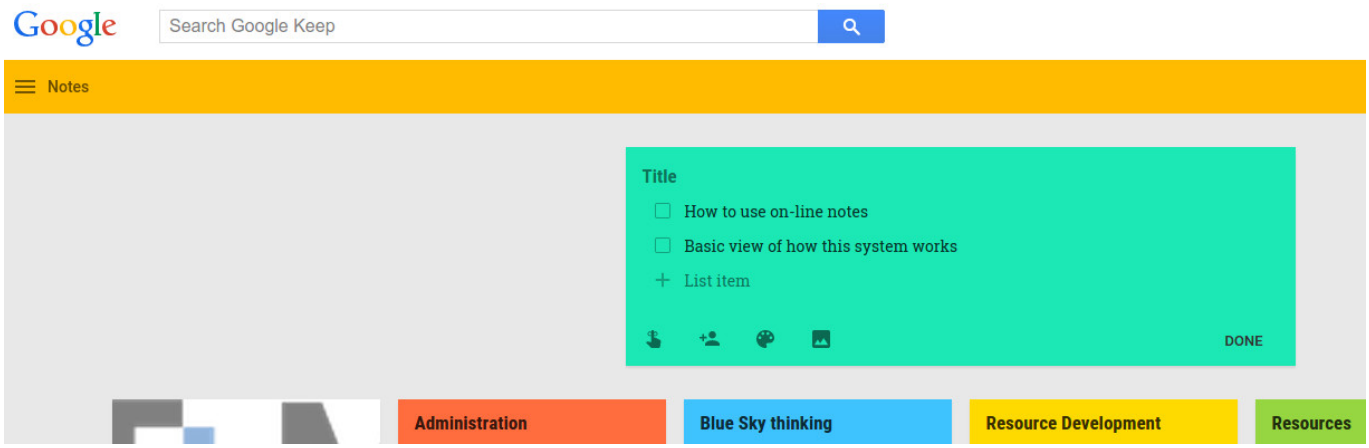
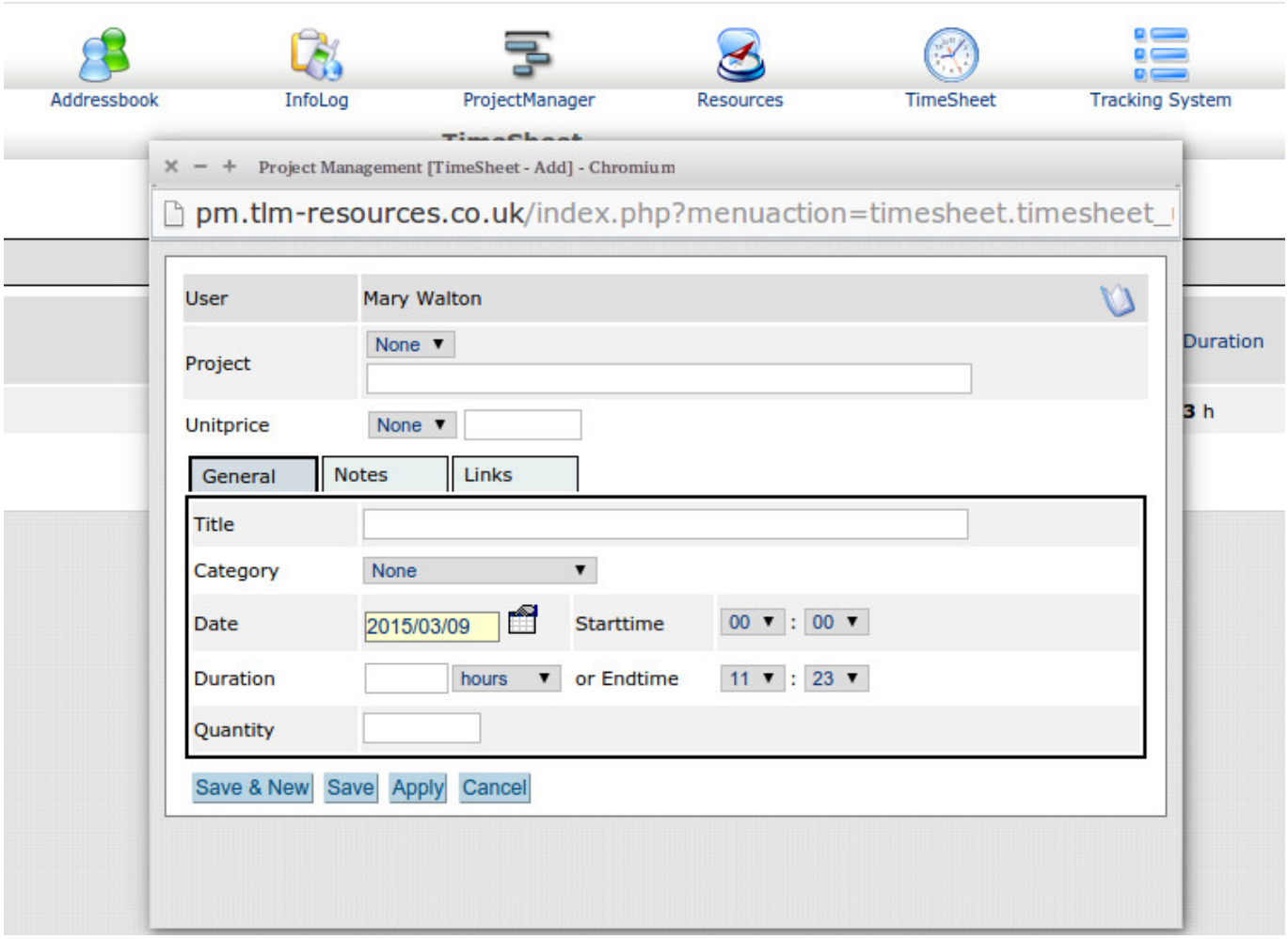


The learners can colour code the different planning elements. Otherwise, you could set up some cloud based CRM system which has some time planning elements built in, such as eGroupware or similar.



The above is a system set up for TLM users with some pre-set login for users. The system has timesheets and project tools which can output graphs and reports.

It would be useful to set out some of the desired outcomes as targets. This will help reduce wasting time on things which seem quite good, but don't achieve anything that was set out in the initial plans. The same goes for the purpose. If the purpose is to make a more efficient system, then some of the outcomes should be quantitative, i.e. it will create a new document from a template in under 20 seconds. If it is more related to qualitative targets, then it could be something like 80% of the work force agreed that it was easier to use and the colour scheme was more relaxing.

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1.4 I can describe factors that might affect the task

Candidates should be able to describe a range of factors that could affect the way they carry out their tasks.

Evidence: Evidence from content of their web pages describing these factors and considerations in their planning

Additional information and guidance

Have they considered the time the task is likely to take, any copyright issues in obtaining suitable resources, cost of resources and any e-safety and/or relevant security considerations? This is not intended to be an exhaustive list. The factors considered simply have to be credible and useful in the planning process. Again, being able to describe the factors and relate them to the task is a Level 2 characteristic.

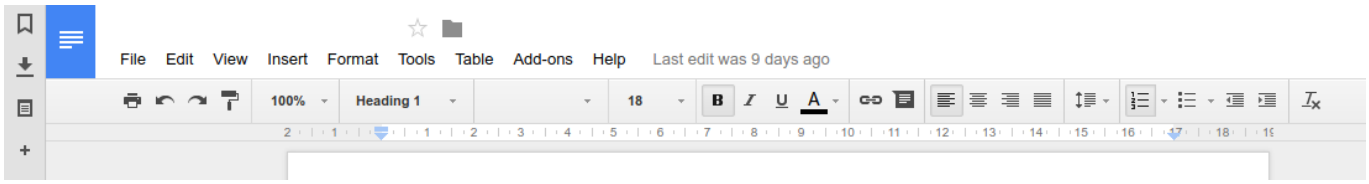
1.5 I can select and use IT systems and software applications to complete planned tasks and produce effective results

Candidates should have sufficient breadth of experience to make an informed choice about the IT systems and software to use.

Evidence: Evidence from content of their web pages and day to day working files indicating effective results and appropriately selected supporting resources.

Additional information and guidance

Candidates should show evidence of making appropriate choices between different applications or systems in order to complete a project of some complexity. For example they might choose a vector drawing program to originate diagrams rather than use a raster (bitmap) graphics program because of the greater flexibility in handling and scaling shapes. They might choose open source applications for lower cost or ethical reasons. They might choose web based systems for ease of linking to other information sources or sharing resources with others. A legitimate reason for choosing a particular system could be that it is the only one available, but candidates should be encouraged to question why this is the case given the growing list of freely accessible tools and resources on-line. A user guide describing the strengths and weaknesses of two different applications might be useful, for example, comparing different office software applications.
The following is a cloud based package and a desktop based one. You can see the additional options with the desk based package, but are all the features necessary for the task?



cloud based

desktop based

1.6 I can describe how the purpose and outcomes have been met by the chosen IT systems and tools

Candidates should describe how the tools and systems they chose have been successful in supporting their project outcome as part of an evaluation.

Evidence: Evidence from documented evaluations

Additional information and guidance
They can also point out weaknesses in the tools and alternatives that they might have adopted with hindsight taking account of feedback from their peers and others. Assessors can give specific headings and general guidance to make it clear that an evaluation must target specific outcomes and their strengths and weaknesses and not just result in general opinions such as "I think I was successful". Descriptions should reflect Level 2 functional skills in English and the ability to describe how... is the key difference between Level 1 and Level 2 work. Note that the evaluation could be written or verbal but if verbal should be recorded e.g. as a podcast or video.

1.7 I can describe any legal or local guidelines or constraints that apply to the task or activity

Candidates should demonstrate that they can describe the legal and local guidelines and constraints that apply to the activity. These should be relatively straightforward summaries of say the acceptable use policy and copyright as a minimum.
Evidence: Evidence from documented descriptions

Additional information and guidance
Candidates should demonstrate that they abide by any local acceptable use policy and that they can describe the policy in general terms. They should make a declaration that they license their work for free use and that it is their own work and any sources of information are referenced to their owner. They should not use copyright tools or information without first gaining permission (or have it provided directly in the license). Any further local constraints can be included in this work but some description of the AUP and copyright should be present. There is no need to have a detailed understanding of very complex terms and conditions. At this stage an overview of the main purpose and key requirements is sufficient, but it is a describe element so there is a need for at least a paragraph of their own writing.

2. Candidates will review and adapt the ongoing use of IT tools and systems to make sure that activities are successful

A successful project is not the end of a project by any means, and it will require on-going support and maintenance. The overall focus for this section is describing what approach will be used to keep a system working as effectively and efficiently as possible and also to continue the on-going evaluation and fine tuning of the system as required.

If the solution is using some open source system, such as building a VLE for a local primary school, these tend to be regularly updated and patched for security and bug fixes. Some of these can probably be ignored and may fix very minor irritations, but some could be quite serious security problems or bugs that make the work slightly more difficult and really should be fixed. Many systems, such as operating systems or applications have major release updates. In terms of operating systems, there is the end of life for Windows X and the introduction of Windows Y. What impact does this have on an organisation. Did you build your solution for them on Windows X and they are now moving to Windows Y. Will your solution still work? Some open source systems have regular updates and smaller releases. Many systems have major updates and changes every 6 months. Some of these are easy to do, but some require a lot of planning and challenging updates. How do you build this into a system you have designed?

2.1 I can review the on-going use of IT tools and techniques and change the approach as needed

Candidates should be able to provide evidence of reviewing their work with specific focus on the IT tools and techniques they have used. They should describe at least three occasions where they have changed techniques, tools or approach as a result of evaluating their work in a project or projects.
Evidence: Written recorded evidence in web pages or day to day document files describing their work

Additional information and guidance
One way to approach this would be for the candidate to maintain a Blog as a diary supporting their work. They can use the TLM learner site for this purpose or their own resources as long as evidence is accessible to the Account Manager for moderation and verification. Putting together their portfolio or providing a digital resource or service to the community are suitable activities that can be reviewed and documented in a Blog.

2.2 I can describe whether the IT tools selected were appropriate for the task and purpose

Evaluation should include a description of the IT tools and their fitness for purpose. This can be organised as an analysis of strengths and weaknesses.
Evidence: Evidence from documented description conforming to the criterion and guidance

Additional information and guidance
Candidates should be able to make clear judgements about the IT tools available to them supported by evidence. They should consider not only the "brand" but the functionality and cost including indirect costs such as dealing with viruses, upgrades and administering licenses. File formats generated by applications should be considered in relation to lock-in [7] to a particular product that could reduce future choice. Assessors should provide guidance to get candidates to refer to specifics rather than general statements such as "I think the tools were appropriate" without justification. Listing strengths and weaknesses will help avoid bland generalisations.
For example, using a word processing tool the candidates could say that a clear strength of the application was that they could customise the interface so that only the icons they use most are visible. That way, it is easy to find the ones they want and not be confused and distracted by ones they never use. A weakness might be that the applications are generally made by American companies and the spelling default to US English. If the user is not aware of this and does not set this to UK English their auto-correction of spelling will be adding words that are incorrect. Similarly, a cloud based word processor is good because it can be accessed anywhere, but a weakness is that it does not have all of the formatting tools of a desktop based version and some of the formatting added by a desktop application are lost when uploaded to the cloud based system.

The characteristic of Gold Level 2 as opposed to Silver Level 1 is the ability to describe specific aspects of the tools used and to make rational judgements about their properties. For example, the tool did or did not provide the facility to save a document in an open file format, the tools are expensive so only available to me in the place of work, the tools required some time to learn/were easy to learn. Some operations were slow and limited the speed I could work, I only used a very small number of the available features.

2.3 I can assess the strengths and weaknesses in my final work
Candidates should provide evidence that they have analysed end products of their work and stated associated strengths and weaknesses taking into account feedback and views of other people.

Evidence: Evidence from documented descriptions conforming to the criterion and guidance

Additional information and guidance
Strengths and weaknesses should relate to some of the following: format, layout, accuracy, structure, style, quality, clarity for audience. Getting candidates into the habit of using the strengths and weaknesses method and making an overall comment of judgement about the success of their work is recommended. They should get peers/intended audience to help them review and assess their outcomes.

This is always a hard criterion, regardless of how experienced the person is, since no-one really likes to say what they were good or bad at. It is a very important aspect of the process however. It helps to use specific areas to focus on. For example, using quantitative and qualitative measures helps. If these are determined as part of the planning in 1.3, then it makes it more straight-forward.

A quantitative measure is, as the name implies, based on a quantity. If your design is making a new

template for an office application, how quickly can it load, how quickly can it be created or saved. A quantitative measure might be in collecting data. The existing paper based system, for example, collected a total of 100 questionnaires and each one took 30 minutes to fill out, my web based solution collected 1,000 questionnaires and each one took 20 minutes. Both of these examples make it easy to measure strengths and weaknesses. For example, I expected my template to be ready to use and be completed by the user in 15 minutes, but it took 25 minutes. That gives a concrete problem to look at. Why is it taking so much longer than expected. What is the weakness here. Equally, it took 3 minutes less than I thought, so that is a strength that can be discussed. What made it work so much faster than expected.

A qualitative measure relates, again in the name, to the quality. This is a harder one as it is **subjective**. What I think of as a good quality operating system may not agree with what you think. However, it should still be possible to assess or measure some aspects of this quality. If you are designing a website, then most people, you hope, would find it attractive and appealing to use (a quality). If you carry out a survey once it is running and 80% say they don't like how it looks, then this is a weakness in the design that needs to be changed. Equally, if you have designed a database for a local company to assist in their customer relationships, a strength might be that users report that they are so much happier entering data as the design looks so good that they deal with customers more quickly. The customers will therefore recommend the company to friends and family. This is clearly a strength in the quality of your design. This can then be assessed. What made people so much happier to use the system? What aspect of the design was so strong to give this feeling?

2.4 I **can describe ways to make further improvements to my work**
Candidates should use the evidence from their evaluations to inform ways in which future work can be improved.

Evidence: Evidence from documented descriptions conforming to the criterion and guidance

Additional information and guidance
Analysis of strengths and weaknesses as the work progresses forms the foundation for this assessment. Include examples from correcting mistakes and errors, improving connectivity or interoperability by adopting open standards, learning new technologies, adopting more efficient or effective methods such as preparing graphics for display so that they look reasonable and download quickly. Where conflicts arise e.g. one aspect causes both positive and negative effects, candidates should be encouraged to discuss these and not simply take an accepted view on face value. There is a lot of disagreement about the relative merits of particular tools and methods. At this stage the main emphasis is on making judgements and at least attempting to justify them even if the candidate's level of knowledge is a limiting factor. One possible issue might be that what the candidate finds easy to use on a software application is very difficult for an end-user/client. Therefore, an alternative will need to be found and tested as it is the client's needs that are being catered for.

2.5 I can review outcomes to make sure they match requirements and are fit for purpose

Based on describing strengths and weaknesses of outcomes in relation to their planned intentions, candidates should comment on how well they meet the requirements defined in their plans.
Evidence: Evidence from third party feedback, analysis of strengths and weaknesses and any other relevant documented descriptions conforming to the criterion and guidance

Additional information and guidance
Candidates should show evidence that they can evaluate completed projects by documenting them appropriately, establishing clear links between planning, execution, and evaluation. The evaluation should start with the original aims or intentions, analyse strengths and weaknesses by comparing outcomes to planned intentions. The review should include the views of peers and/or the intended audience for their work. Assessors can provide guidance in the form of headings and ensure that review of outcomes provides the basis of describing ways for making improvements but candidates should provide descriptions of their judgements in their documentation accessible to the Account Manager.

This criterion is a reflective one where the students can write about their experience in relation to the design and its outcomes. They will have set some basic targets and objectives when they started the project or IT implementation, and now they can look at how close they were to meeting them. They do not have to meet everything perfectly and there is more learning in finding problems and planning to fix them at as later date than getting it right first time. The other key term here is “fit for purpose”. This term is much used in the popular press these days and students should be familiar with the meaning. In their own project, could they say that it was a competent job that solved a number of clear problems. If the target audience can’t really use it as planned, it is not fit for the purpose for which it was designed. The outcomes will tie in to this as something like a template for gathering data will need to gather the data expected. If it does not do this, or gathers data that is not useful, then this could be an example of being not fit for purpose.

3. Candidates will develop and test solutions to improve the on-going use of IT tools and systems

The overall focus of these criteria is about making IT work for you. The TLM motto is “work smarter, not harder” and much of what we do is based on using IT solutions to improve efficiency and productivity. Students should be exposed to numerous systems and applications and be encouraged to explore alternatives to the way they do things. Even if most people use a particular application, it may not make it the best tool available. Increasingly, companies are using cloud based technologies. Having large and powerful personal computers to process small word processed documents is far from ideal and many people now use phones to achieve the jobs they previously carried out on PCs.

The key here is to test and evaluate different systems and applications, as well as methods, in order to be able to offer more improvements to project designs. Something as simple as learning how to type by site can improve productivity and efficiency ten fold, but it is not something promoted in ICT or Computing curricula.

3.1 I can review the benefits and drawbacks of IT tools and systems used in terms of productivity and efficiency

The candidate should be able to identify how IT tools might make achieving ICT based solutions more efficient to increase productivity for themselves and others.

Evidence: Evidence of review through documentation of evaluation in web pages and/or day to day files.

Additional information and guidance

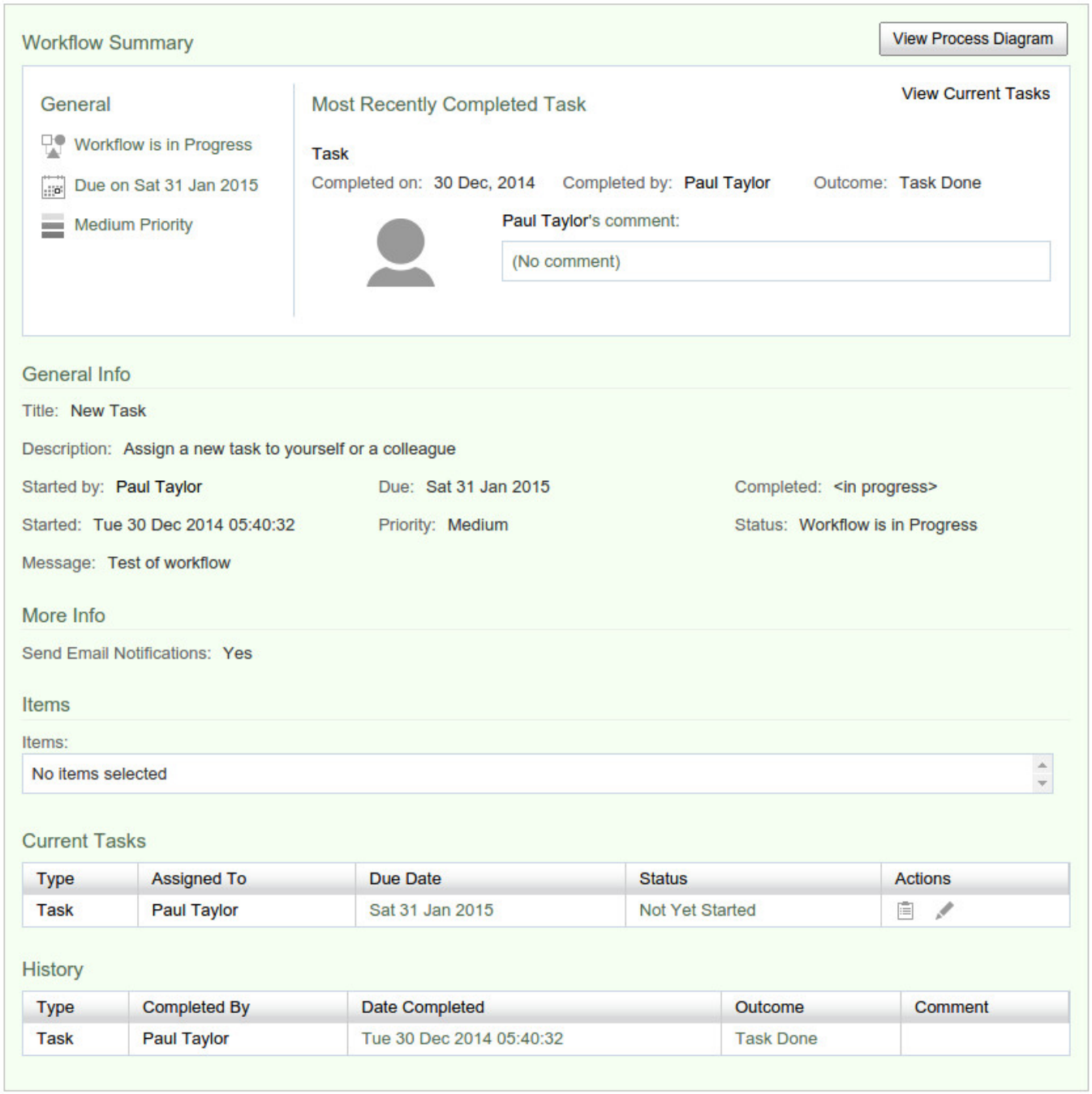
For example, sending e-mail can be more efficient than talking to someone when all that is required is a specific piece of information. Discussing the details of how to use a new software tool by e-mail or text messaging is likely to be a lot less efficient than a spoken conversation and so review should include discriminating use of ICT. Other factors such as the lack of expression and remoteness of technology can lead to "flame wars" that would reduce efficiency.

Information entered directly into a web page can be much more efficient than making a word processed file and attaching it to the page. Firstly there is no need for word processing software, secondly the information is immediately available to users without having to download a file and having software for opening and viewing it. Social networking can be very powerful, but it can also be a major distraction to the focus required for efficient working.

They might have discussed this in forums or verbally to form their views and so assessors might provide a witness statement to acknowledge this.

What are the benefits of the solutions you propose? What kinds of measures can you use to back up your claims. If your project is to create a template for a small local company to make them generate letters to customers more efficiently, have you looked at all possibilities. If the document requires several people to look at it before it is released, this means the document is printed and passed

around, or emailed back and forth. This takes time and effort and is inefficient. How much better would it be to use a cloud based collaborative system so that all these people can work on the document and sign it off collectively. Some systems even have built in workflow systems with different sign off rights such as Alfresco.



The above image is from Alfresco [8], an open source CMS (Content Management System) which allows groups to collaborate on documents and for different people to make changes and send it back or pass it forward. The whole process is tracked so that everyone can see how the document progressed and any hold ups.

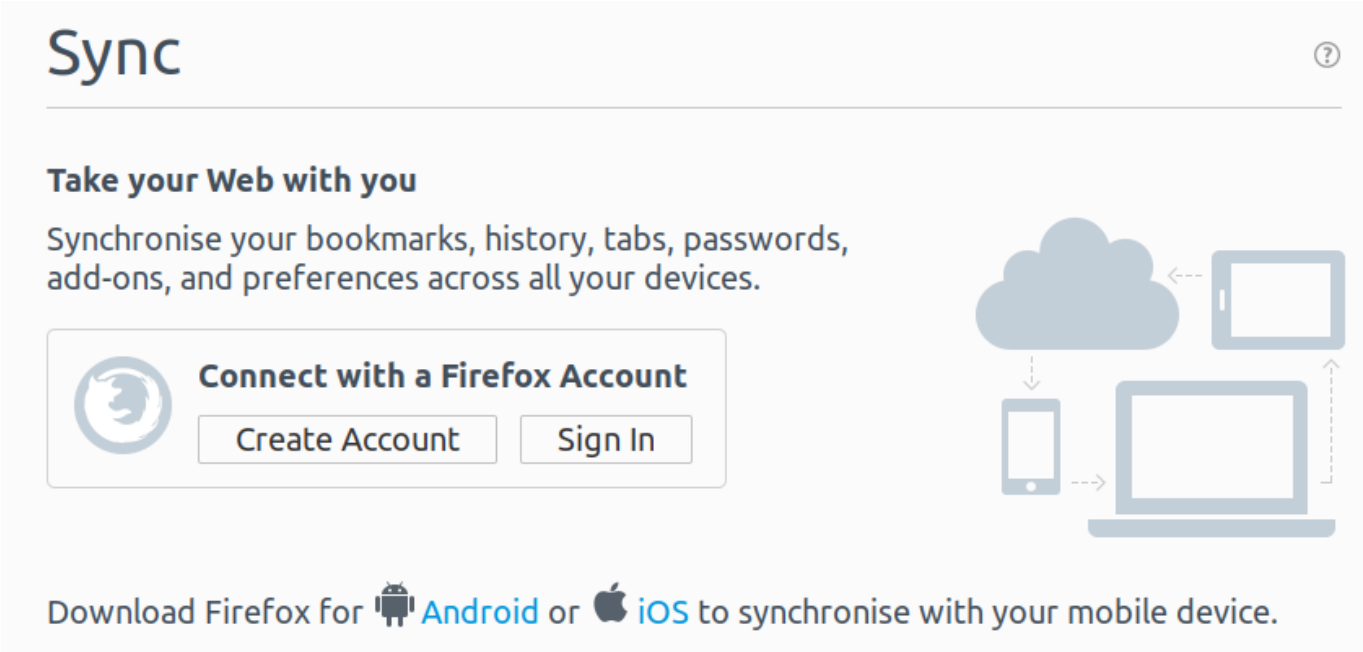
In some cases, it may be legitimate to say that IT does not help the process and causes too many distractions. If IT is used poorly, it is as bad as any other methods.

3.2 I can describe ways to improve productivity and efficiency

The candidate should provide evidence that they can describe examples of working methods that

improve efficiency.
Evidence: Evidence of descriptions through documentation in web pages and/or day to day files.

Additional information and guidance
Examples might be to use a typing tutor to improve keyboard efficiency, use of keyboard short cuts, recording a macro to automate a process or getting a web browser to save often used details like name and address. They might describe how they organise their folders so the most often needed files are most readily available or change user interface characteristics. They might use bookmarking for files - note for machines with multiple users, bookmarking web sites are a clear advantage. They might use on-line collaborative tools instead of desktop tools or they might use shared resources such as open clip art and Wikipedia on the "Give a brick get a house" principle. Many browsers now have the ability to synchronise browsing and other settings across computers and devices which increases efficiency.



3.3 I can develop solutions to improve my own productivity in using IT
The candidate should have adopted some of their own practical solutions for personal productivity as a result of exploring the ways that ICT can be used to communicate, collaborate and share ideas.

Evidence: Evidence through documentation in web pages and/or day to day files of them changing the way they work in response to feedback, evaluation and review.

Additional information and guidance
They should have some clearly improved ways of working from regular use of keyboard short cuts, bookmarking useful sites, greater use of web pages instead of word processors to present and organise information. This should be witnessed by the assessor and/or supported by portfolio evidence. Candidates should be encouraged to discuss productivity with peers and share ideas about the most effective techniques, favourite short-cuts and working methods.

3.4 I can test solutions to check that they work as intended
The candidate should routinely check their work to make sure they actually produce the outcome intended as their work progresses.

Evidence: Evidence through documented evaluation.

Additional information and guidance
There should be few instances of bad formatting, spelling errors, or other obvious errors that could be eliminated by simple checks. Encourage groups to check and assess each others' work and to receive feedback graciously when others find errors. Fix errors directly or find out how to.

One final aspect of any IT work it to check that it does what it is supposed to. The best way for this is probably to devise a test plan and carry out the tests as methodically as possible. Building a basic table to store results also helps think about how to solve possible problems, as well as make the information easier to access, for example:

Number	Description	Expected Outcome	Actual Outcome	Actions to Take
1	**Shortcut key to paste highlighted words**	**Pastes the words with shortcut keys**	**Same as expected**	**No further action**
2	**Short-cut to reformats a section**	**Reformat a selected section**	**Reformatted other parts**	**Need more precision in selecting what needs to be formatted**

Moderation/verification

The assessor should keep a record of assessment judgements made for each candidate and make notes of any significant issues for any candidate. They must be prepared to enter into dialog with their Account Manager and provide their assessment records to the Account Manager through the on-line mark book. They should be prepared to provide evidence as a basis for their judgements through reference to candidate e-portfolios and through signed witness statements associated with the criteria matching marks in the on-line markbook. Before authorizing certification, the Account Manager must be satisfied that the assessors judgements are sound.

Language English

Links
[1] http://theingots.org/community/ITQ_unit_development
[2] http://theingots.org/community/handbook2
[3] http://www.theingots.org/community/ITQcourse1
[4] https://theingots.org/community/sites/default/files/uploads/user4/PupilFNC7.pdf
[5] https://en.wikipedia.org/wiki/KISS_principle
[6] https://en.wikipedia.org/wiki/SMART_criteria
[7] https://en.wikipedia.org/wiki/Vendor_lock-in
[8] http://www.alfresco.com/products/community/download