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ICT Request Classification Model

Policy

ICT Projects will be classified using the ICT Request Classification Model as Major, Medium or Minor, with the classification determining the level of governance and documentation required.

Overview

We need to have some method for determining when a body of work qualifies as a project rather than being covered under normal operational processes.

The previously accepted definition of a project at USC was "*an ICT Project is considered to be a defined body of work with a budget of greater than $10,000 and/or requiring more than one week of staff effort from IT Services*".

The beauty of this definition is its simplicity, but it has some limitations. It does not take into account:

- a single piece of equipment may cost in excess of $10,000 and therefore its installation would automatically qualify as a project, no matter how trivial

- effort that may need to be expended by functional areas as well as IT Services;

- if there is a high level of risk involved then project management disciplines may be necessary whatever the budget or effort; and

- in some circumstances there may be merit in combining multiple smaller activities together to form a project.

We also need to be able to distinguish between those projects that require a minimal amount of management and documentation, and those that demand an extremely rigorous approach. In recognition of the fact that projects may fall somewhere between these two extremes, a three-tier model has been established with projects classified as Minor, Medium or Major. Example Requirements depending on project classification can be found at the end of this document.

The model presented here is supported by a spreadsheet, requiring the input of only a small number of parameters to determine the category that a particular body of work falls into (see: ICT Request Classification Model.xlsx).

The model is based on the premise that the most important factor in determining the appropriate category for a project is how extensive the visibility or level of involvement is across the University. Projects that require some involvement of people external to IT Services require more discipline than those that only require involvement of people internal to IT Services. Similarly, one which involves several teams within IT Services requires more discipline than one that requires the involvement of people from a single team within IT Services.

Other factors that are also considered are: technical complexity; risks associated with the vendor; costs; and the level of effort required to implement.

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Defining Scope and Consolidating Requirements

Before the model can be used to classify a body of work, the high-level scope of that work needs to be established.

In many cases this is relatively straightforward, as when an existing system is being replaced or upgraded. However, in other situations it may be appropriate to combine several logically related requests together, or to divide a single request into two or more discrete pieces of work.

In deciding whether consolidation or partition is appropriate, the overriding question should be **"does this make sense?"**. This question needs to be considered carefully and answered honestly to avoid "expedient" decisions designed to evade additional paperwork and commitment or attempting to "jump the queue" by artificially constructing projects from disparate pieces of work.

The following should be taken into consideration:

Synergy: Would grouping these activities together leverage economies of scale? Examples include enhancing efficiency by amalgamating several changes to the same area of code within a system, and increasing cost-effectiveness by outsourcing a larger body of work to external consultants rather than several smaller pieces of work. Another question that might be asked is "are these activities co-dependent or could they be implemented separately?".

Change Management: If business processes are being revised, do they affect the same groups of people and can any training be delivered as a unit? If so it may be better to consolidate to reduce the amount of disruption. If not, it may be better to treat the pieces of work separately.

Resources: Are there sufficient resources (ITS staff, Cost Centre staff, funding) to manage the individual pieces of work as operational activities? If not, then constituting them as a project may result in them being brought to the attention of the ICT Steering Committees for approval and prioritization, with additional resources being made available.

Testing: If the activities are consolidated, can Cost Centre staff cope with the required amount of testing and at the appropriate time? In some cases it may be easier to manage smaller chunks of testing required by a number of separate pieces of work, whereas in other cases a single period of extensive testing would be preferable.

Once the scope has been determined based on the above, the model can be applied to determine whether the work is a project and, if so, whether it is Minor, Medium or Major.

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Visibility or Involvement

This first parameter looks at the visibility and level of involvement of different areas within the University, both within IT Services and outside IT Services. Note that this refers to the visibility or level of involvement in <u>the project</u> rather than the system being delivered by the project. It determines the "tolerance level" which essentially means that we need to be progressively more cautious as the sphere of involvement expands.

1. Involvement of only a single team within IT Services.
    High tolerance levels; likely able to be handled by normal operational activities

2. Non-trivial involvement of other teams within IT Services.
    Slightly lower tolerance levels; could be operational or project

3. <u>Significant</u> involvement (eg extensive testing) of one external business area.
    Low tolerance levels. As this requires coordination of activities between IT Services and an external group it automatically becomes a project.

4. Non-trivial involvement of more than one external business area / Enterprise-wide.
    Very low tolerance levels. Almost certainly a Major project

It is true to say that most work performed in IT Services will involve more than one team to some extent. For example, if some equipment is replaced by the Infrastructure group, the CIS team may need to verify that applications are back online. The value 2 should only be assigned where there is "non-trivial" involvement, say > 0.5 day's effort by other teams.

Similarly, an external business area may need to be aware that a change is taking place and may need to verify that an application is back online after the change (eg replacement power supply installed on server). This would not be classified as "involvement" (leading to a value of 3), whereas running an extensive regression test due to the implementation of a new version of the application system may be.

The following comments are provided to assist in determining this value:

Almost all IT Services activities are visible to or potentially affect external users.

The point of this variable is to identify the scope of people who are actually involved in non-trivial activities during the implementation, rather than users or potential users of the system.

Examples and Guidelines:

1. A single piece of communications equipment is to be replaced. Although this equipment is critical to the correct functioning of several systems, the users will be unaware of the change. Other IT Services groups will only be involved to perform minimum testing activities (half a day or less).

2. A system is to be upgraded to a new version but there are only cosmetic changes that business users will be aware of. One or two key users from different areas will be involved in testing, but this will be relatively straightforward and will not require significant planning. More than one IT Services team will be involved in delivering various aspects of the solution.

3. Upgrade/replacement or implementation of a new system that will require **extensive user involvement** from **one** business area in one or more of:

a) defining detailed specifications

b) significant amount of testing activity (involving use cases etc)

c) considerable re-training due to change of product or user-interface (change management)

4. Upgrade/replacement or implementation of a **key Enterprise System** (eg HR/Payroll, Finance, GroupWise, Blackboard) that will require **extensive user involvement** (as defined above) **from a number of business areas.**

Notes:

a) If an upgrade to an Enterprise-wide system will only require a small number of users to be re-trained due to an interface change in one part of the product, consideration should be given to classifying it as a 3 rather than 4.

b) The business impact or criticality of the system may also be taken into account in determining the appropriate value if you are unsure which of two values to assign. It may be prudent to err on the cautious side (higher number) for a system like PeopleSoft, whereas Mediasite requires less rigour and the lower value might suffice.

Technical Complexity

Four areas of technical complexity are defined below:
- The team / vendor has not installed the product or performed the task before
- The product / release is untested (USC is first site or first High Ed site)
- Significant effort to rollback (or impossible)
- Technically complex solution.

The possible values for this parameter depend on how many of these apply:
1. Meets none of the above criteria
2. Only one or two of the above criteria applies
3. Three or four of the above criteria apply

The following comments are provided to assist in determining this value:
- *Is this a new product or a new version of the product not previously installed by the vendor?*
- *Has this version of the product previously been successfully installed at another university?*
- *If there are problems at Go-live, can the old system be re-instated within 2 hrs?*
- *Is there a high degree of technical complexity with the solution itself? A technically complex solution might involve a combination of databases, multiple interfaces to other systems, or unusual networking requirements.*

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Vendor Risks

Have we had previous experience with the vendor, and what has been the outcome?

Values are:
1. Good vendor relationship and previous good results
2. No previous relationship with vendor or mixed previous results
3. Poor relationship or poor previous results

The following comments are provided to assist in determining this value:
- *These questions relate to <u>other</u> projects rather than experiences to date for the current project*

External Cost

In the previous model the value of $10K was used to determine whether a body of work was a project or not. With the addition of these other variables, higher values are considered appropriate. Even a $50K budget would not necessarily result in classification as a project if the risk and visibility were low.

Values are:
1. Less than $20K
2. Between $20K and $50K
3. More than $50K

The following comments are provided to assist in determining this value:
- *Include all vendor costs (Hardware, Software, Consultancy Services and Travel)*
- *Do not include IT Services or functional area payroll costs as these will be accounted for under Effort*

Effort

In the previous model, 5-days IT Services effort was used as the threshold between project work and operational work. Once again, now that we are taking other factors into account <u>and we are including functional area as well as IT Services effort</u>, it is appropriate to look at different amounts of effort.

Values are:
1. Less than 20 days
2. Between 20 days and 60 days
3. More than 60 days

The following comments are provided to assist in determining this value:
- *Include project resource effort only. For example, include analysis, implementation, testing and the effort required to develop and deliver training, but do not include end-user training attendance in these figures .*

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Determining the Result

Once we have determined the values associated with each of the above factors, we can ascertain whether the work constitutes a project or normal operational activity and, if a project, whether it is Minor, Medium or Major. Consider the visibility factor separately and add up the scores of the remaining four factors, giving a value between 4 and 12.

Score (from Technical Complexity, Vendor Risks, Cost and Effort)	Single IT Services Team (Visibility = 1)	Multiple IT Services Teams (Visibility = 2)	External involvement: Single bus. unit (Visibility = 3)	External involvement Multiple bus. unit (Visibility = 4)
4 or 5	Operational	Operational	Minor Project	Medium Project
6 or 7	Operational	Minor Project	Medium Project	Major Project
8 or 9	Operational	Minor Project	Medium Project	Major Project
10 to 12	Minor Project	Medium Project	Major Project	Major Project

The model is flexible in that it can be fine-tuned over time, for example by changing the dollar amounts for the Cost parameter. It would also be possible to attach different weightings to the parameters if deemed necessary.

Example Requirements

The table below provides a few examples of how required levels of rigour and documentation differ according to the project classification.

	Steering Committee	Business Case	Project Stages / Decision Points	Documentation
Minor Project	No formal SC or SC chaired and staffed entirely within IT Services	No need for formal Business Case to be developed	Project will proceed to completion once started	Minimal documentation. Single document contains all required planning information.
Medium Project	Formal SC probably chaired by a CC manager	Business Case developed to justify project initiation	At least one point at which SC formally approves project proceeding to the next stage	Moderate level of documentation, including Project Initiation Document and regular reports
Major Project	Formal SC probably chaired by direct report to VC (DVC/PVC/CFO)	Business Case developed and revised at various stages	Probably multiple points at which approval has to be given to proceed.	Project Initiation Document formally approved. Regular Highlight/Exception reporting. Separate Plans developed for Communications, Risk Management, Quality, etc.