

## **A discussion paper on the role of user needs within project governance and delivery**

### **Why is there a need for this discussion paper?**

The purpose of this paper is to provide some insights into the topic of user needs, with the primary intention of providing a starting point for promoting productive debate on the subject. The content of the paper is not the result of extensive analysis on the subject, but rather a summation of the current situation, based on an understanding gained from a number of documents, conversations and committee actions associated with the subject. As such, the content is very much offered up to be challenged and enhanced, in order to arrive at a consensus view of both the current situation and potential actions required to enhance the commitment to user needs in the future.

### **Who are the user communities?**

The UIS primarily delivers IT services to two distinct user communities within the University – administrators and academics/researchers (students can be considered as a third group, but share some characteristics with both groups, in terms of their requirement for, and usage of UIS services.). Although each community has a critical role to play in sustaining the University's global reputation, typically, they each have distinct needs and characteristics in their requirements for IT services.

The University's administrative functions are heavily reliant upon IT services that are specifically designed to support well defined day-to-day operational roles and processes, for example HR, Payroll and Finance. These roles and processes are relatively static in nature, changing slowly and incrementally over time. The typical characteristic of such services are based upon high-frequency of use and a high level of familiarity and expertise with the associated information system. In some situations, expertise in the systems becomes the core-skill, rather than an understanding of the underlying processes and services themselves. Without access to these core information systems, delivery of the administration function becomes very difficult for any extended period of time.

The academic and research communities have a higher reliance on information systems that can be considered to be tools used to aid the ongoing delivery of fluid, wide ranging and rapidly changing subject areas. The nature of such information systems, means that usage may be infrequent, (in some cases, once per year), placing much higher emphasis on information systems that require minimal familiarity and are simple to use.

In an ideal world, the distinction between each of these communities would adhere to clear rules of demarcation. However, in reality, many of the information systems supported by UIS jointly service both communities, resulting in any number of hybrid user groups. Typically, such hybrid groups will be comprised of primary users (the majority) and secondary users (the minority). In such circumstances, the needs of the primary users tend to take priority, which can lead to feelings of dissatisfaction and alienation for the secondary users. Any future emphasis on user needs must give appropriate levels of consideration to all impacted user groups.

### **What are user needs?**

Though many of the principles and techniques associated with the analysis and delivery of user needs have been around for many years, their widespread adoption and prominence throughout the

IT service delivery community is relatively recent. An internet search of the term 'user needs' quickly establishes that there is no accepted 'standardised' definition and there is little evidence of a codified method for placing user needs front-and-centre of the IT Services delivery process<sup>1</sup>.

Irrespective of which definition of user needs is adopted, there are clear principles that should be followed when creating user needs statements for any given situation;

- a user need must describe a real-world problem for a representative group of users
- user needs must be described using language that defines the problem to be solved and not as a solution to the problem
- the problem must relate to the role undertaken by the user group
- it must demonstrate a clear understanding of why there is a need for a solution to the problem
- It must identify the specific circumstances that trigger the problem
- reference should be made to any constraints associated with the user need.

Within the context of the IT services delivery processes, it is important that user requirements are not mistaken for user needs. Requirements definition is dependent upon there being a clear understanding of the user needs and they describe the specific characteristics that are desirable when defining a solution to them.

### **Why are user needs important?**

A comprehensive and unambiguous statement of user needs not only provides justification for investment, it can also act as a readily accessible and testable reality check that helps to ensure more detailed delivery activity retains the correct focus. Within the current UIS services portfolio there are examples that can be used to illustrate the importance of user needs in facilitating successful service delivery outcomes.

Since its introduction the i-procurement solution has been the subject of consistently high levels of dissatisfaction, from a wide range of user groups. Almost without exception, people find the system complicated and confusing to use. Instead of making the procurement process quick and simple, the system is actually time consuming to use and makes the process disjointed and complex.

This is an example of how the solution selection process would appear to have taken a requirements driven approach, where the product was primarily evaluated for the degree of fit to a pre-defined set of functional requirements, and failed to give full consideration to the usability aspects of the system.

The X5 Research Grant Administration system serves two distinct user communities, Research Office administrators and academic researchers across the University, prompting two very different views of user satisfaction. The research community are infrequent users of the system and find it quite complicated to use. A common complaint from the research community is that each time they come to use the system, they have to spend valuable time re-learning how to do things, with little help provided by the system itself. Conversely, for the administrators, the system is a core part of their

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<sup>1</sup> Agile methods are often cited as user needs-centric approaches but, historically, such methods are predicated upon user engagement and involvement, not necessarily user needs.

day-to-day responsibilities and the high-frequency of usage enables them to develop a level of familiarity with the system that mitigates any inherent complexities.

This is an example of a situation where the needs of one group of users have taken precedence, at the expense of the needs of a second group of users.

Some recent projects have adopted a more Agile based approach, where user involvement and user needs have been a central part of the project delivery approach. By considering user needs first-and-foremost and seeking user representation at all stages of the project, the Room Booking and Graduate Application Form projects have each delivered solutions that are well regarded and highly valued. By fully understanding the needs of their respective user groups, each project has delivered a solution that people find easy to use and that provides a value-added experience to the users.

### **When are user needs considered and who is responsible for them?**

For any project concerned with delivering IT Services, a clear, unambiguous user needs statement is essential in providing an insight into what users of the service will value for any resulting solution. User needs should be defined before any project activity begins, forming an essential part of the initial concept and feasibility studies. Subsequently, they should be continually re-evaluated, at each stage of the project delivery life cycle, in order to ensure that the final deliverable will be responsive to such needs and results in a service that is valued by its users in real-life situations. For this reason, it is important that there is an appropriate level of user representation and validation throughout the end-to-end project delivery life cycle<sup>2</sup>, helping to ensure that detailed solution decisions remain consistent with the overall user needs.

Although having user representation throughout the project delivery lifecycle may be considered to be an overhead, the payback is a much higher probability of delivering services that are right-first-time. This delivers a range of benefits, for both UIS and the University;

- user benefits are delivered earlier, resulting in quicker return on investment
- a reduction in the amount of rework that needs to be done enables skilled resources to be directed to more productive activities
- the subsequent higher availability of skilled resources enables the demand backlog to be reduced more quickly
- improved morale for administrative, academic and UIS staff.

At a detailed level, responsibility for user needs can be dictated by the approach used to deliver an IT service (strategic, tactical, waterfall, agile, commercial software selection, etc.). In an effort to cut-through the complexity of mapping out each approach, the following sections outline major stages at which the definition, transfer and ownership of user needs takes place.

#### **Portfolio Governance**

Before any project activity is initiated, the portfolio governance process is required to triage the demand backlog and validate that a compelling investment proposition exists. Without such validation, any justification for allocating limited IT budgets is questionable.

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<sup>2</sup> From concept/feasibility through to post-deployment evaluation.

The route into the portfolio backlog is through the submission of a Work Request and this is the first opportunity to describe what is required by using user needs statements. Responsibility for defining the user needs may involve any, or all, of the following roles; the sponsor of the Work Request, UIS Relationship Manager, UIS Service Owner, UIS Service Manager.

### **Project Governance**

Following approval of a Work Request, it becomes the responsibility of the Project Sponsor and Project Manager to ensure that the stated user needs are fully considered throughout all stages of the project delivery process. The primary project control artefacts used by the Project Sponsor and Project Manager are the project brief, project business case and project initiation document<sup>3</sup> and these are currently undergoing a review to consider how they can be enhanced to incorporate explicit management of user needs.

### **Product Delivery or Selection**

The primary purpose of this stage is to deliver a solution that facilitates the stated user needs, in a way that offers true value and usability to its intended user groups, when used in real-life situations. Too often, real-life experience is distilled into a series of systematic requirements statements that, both individually and collectively, manage to lose all context to real-life usage scenarios. This can result in the delivery of services that satisfy the stated requirements but, somehow, fails to provide a valued user experience.

Anecdotally, this may be considered the stage at which any failure to consider user needs has been most prevalent, leading directly to the raised awareness of the subject and the subsequent formation of the User Needs Committee.

A potential factor influencing the failure to consistently meet user needs is the number and diversity of the roles involved in this stage. Such diversity presents opportunities for user needs to be interpreted from the perspective of each role, rather than from the intended users view. There is a tendency for these roles to unconsciously act as a proxy for the user, believing that they know what the user wants and the solution that is required.

Nominally, any typical UIS project may include most, if not all, of the following roles; user representative, service owner, service manager, project manager, business analyst, requirements analyst, technical designer, solution designer, application developer and database analyst. Each of these roles has some degree of responsibility for ensuring user needs are delivered and that any solution they are working towards is fully conformant to them.

Primarily, overall responsibility rests with the Project Sponsor and Project Manager, who must ensure that appropriate user representation, and visibility and full understanding of user needs, is maintained throughout the service delivery process.

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<sup>3</sup> This is not intended to be a categorical list and the stated examples may not be relevant to all types of project delivery.

## **Testing & Quality Assurance**

The primary responsibility of a testing stage is to ensure that any solution conforms to the stated requirements and is free from critical errors, prior to it becoming a production service. In most instances, testing staff are too far removed from user needs to have any meaningful role to play in validating their outcomes. For this reason, it may be considered that attempting to validate conformance to user needs at such a late stage, would demonstrate a severe lack of confidence that user needs have been correctly managed throughout all of the preceding stages.

QA does have a role to play in ensuring that any solution conforms to the stated user needs. User needs should be a major consideration of any quality criteria that are used to validate the user acceptance of any given solution. Conformance to the stated user needs is a measure of quality, in itself, and should be subjected to QA inspection and sign-off at all relevant checkpoints throughout the service delivery process.

## **Post Deployment**

No matter how thoroughly the user needs have been championed and tested throughout the service delivery process, the real measure of success can only come from 'real life' experience. After a defined 'snagging' period, the opinions of each of the impacted user group should be sought and a true user satisfaction rating allocated to the service. As this is likely to be some time after any project activity has completed, the Project Sponsor and Service Owner would be prime candidates to take responsibility for such activity.

## **How does UIS currently address user needs?**

Prior to the formation of UIS the majority of the University's shared IT services have been delivered by predominantly independent and autonomous development teams. Historically, each team evolved their own approaches to the end-to-end service delivery processes, largely influenced by the backgrounds, skills and experience of the individuals within each team. Such inconsistencies in approach has inevitably resulted in inconsistencies in the degree to which user needs have been considered when delivering IT service solutions. This, in turn, has resulted in a portfolio of IT services that have widely differing degrees of customer satisfaction associated with them.

Whilst there are a wide range of factors that have influenced how successfully each individual IT service has delivered a valued service to its respective user communities, the degree of emphasis placed on user needs can be seen as an important differentiator when considering their relative success or failure.

The UIS organisation has yet to fully complete the transformation into a unified IT service provider that uses consistently applied methods and approaches for all aspects of service delivery.

Consequently, across the UIS service delivery teams there are a number of approaches, tools and techniques in use that address the consideration of user needs in an 'informal' way. The deployment of these may vary, depending upon which project delivery approach is chosen (waterfall or agile), but the overall objectives are broadly similar.

Accepting that there is, as yet, no formalised UIS approach to user needs, there are genuine attempts made to understand and fulfil them, as part of the service delivery process. Some of the ways in which this is achieved is outlined in the following sections.

### **User Representation**

Stakeholder analysis aims to ensure that the real-life users are involved and that there is a sufficiently broad range of representation to provide a full understand of the needs of all user groups. The UIS project governance process uses the Project Brief, PID and Requirements Definition documents to achieve this.

### **Understanding of the Current State**

An important aspect of delivering user needs is gaining an understanding of the current state and the drivers for change. This is achieved by identifying any existing process issues, gaps in capability and any operational inefficiency these may cause. Information about the current state may be gathered through one-on-one interviews, workshops, questionnaires, job shadowing, and business documentation reviews. The findings from the analysis may be documented through the use of process flows, user stories, personas and use cases.

### **Future State and Delivery Options**

The future state is most often defined through the use of user requirements, either documented in a report or contained in a requirements backlog. An assessment of these requirements is used to propose one, or more, solution options that outline the most favourable ways of delivering a solution to the stated requirements (e.g. proprietary software, bespoke development, etc.). These options are reviewed with the user representatives in order to gain agreement on a preferred solution. Once a solution has been agreed, commitment can be sought to the necessary budget and resource utilisation required to deliver it.

## **What are the existing project governance frameworks?**

There are two main governance frameworks that need to be considered at this stage; the ISC Governance Framework and the UIS Project Governance Framework.

### **ISC Governance Framework**

The current ISC project governance framework dates from 2009<sup>4</sup> and clearly references its basis in the Prince2 project management method. The history of Prince2 has its origins in central government IT procurement and development projects. The method was developed in direct response to a consistent failure to deliver large, high-cost, high-profile government projects within their stated time and budget constraints. The main focus of the method is to facilitate senior-level command-and-control of complex projects, through the imposition of rigidly defined delivery stages. Each stage is governed by a formal stop-start checkpoint review process that assesses the continued viability of a project and delivers a go/no E go decision about the following stage. The heavy emphasis upon numerous highly detailed documents, together with the structure of the various roles and review bodies defined in the Prince2 method, are clearly influenced by the inherently

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<sup>4</sup> It has undergone some minor revisions in the intervening years, but the overall structure and focus has remained the same.

bureaucratic nature of large government departments. The method is highly focussed towards a sequential Waterfall approach to service delivery and its rigid structure creates difficulties when attempting to use the method for faster paced, experiential approaches, such as Agile. This has led to a recent extension to the Prince2 method, called Prince2 Agile, which aims to combine the flexibility and responsiveness of Agile with the rigidly defined framework of Prince2.

Whilst not rigidly adhering to Prince2, the ISC framework is clearly influenced by its core principles, processes and organisational constructs. The framework acknowledges the high levels of documentation and bureaucracy inherent in the Prince2 method, but simply advocates adopting a pragmatic approach to these, without ever being specific about which elements of the method provide true value.

The main body of the framework is heavily focussed towards outlining the various roles, boards and committees required to administer the project delivery process. Brief outlines of the main project delivery stages are included, but the framework falls short of defining the actual processes and deliverables expected within each stage.

Some mention is made of the importance of benefits to the governance process, but does not identify where, and how, benefits should be defined and monitored.

A very brief section on usability is included, almost as an adjunct to the framework, but fails to identify the project stages, roles and responsibilities involved in ensuring their successful delivery.

### **UIS Project Governance Framework**

The UIS Project Governance Framework is not a replacement for the ISC Governance Framework but operates within its overall scope. It comes into effect once the high-level investment decisions have been taken and project delivery work has been sanctioned.

The UIS framework contains a range of artefacts, each designed to facilitate specific delivery approaches. For projects adopting a Waterfall based delivery approach, and for the selection, procurement and implementation of proprietary solutions, these artefacts are largely based on Prince2 principles. For projects adopting an Agile based delivery approach, these artefacts are largely based on DSDM<sup>5</sup> principles.

Guidance is provided on which artefacts should be adopted by individual projects, based on a range of key project influencers (e.g. scale, budget, risk exposure, etc.).

### **How effective are the existing project governance frameworks?**

The ISC framework specifically states that its primary purpose is for use in governing large projects<sup>6</sup>. The expectation stated within the framework, is that smaller scale projects would adopt a 'scaled down' governance approach, but offers no guidance as to what form that may take. The framework significantly pre-dates the formation of the UIS and it is questionable how relevant it remains, given the broader scope of the UIS service delivery portfolio. Such a one-size-fits-all framework becomes

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<sup>5</sup> Dynamic Systems Development Method - Atern

<sup>6</sup> Referring to projects where the total cost of ownership over the development period, or the first three years, exceeds £2M.



increasingly difficult to support when it fails to account for a diverse range of influencing factors, for example;

- the adopted IT Services delivery method (waterfall, agile, hybrid)
- the required IT Services delivery approach (vendor purchase, in-house development, hybrid)
- whether a service is strategic or tactical
- the type of service being delivered (infrastructure, ERP transaction processing, user interface, etc.)
- the scale of the budget
- the degree of risk exposure.

Much of the ISC framework would appear to be predicated upon the formation of a central Project Office, under the control of a Project Governance Officer. The project office was expected to be responsible for defining and overseeing the tools, methods, standards and quality assurance aspects of all projects. The Project Office was also expected to perform a central role in the management of project boards and committees. Given that the proposed Project Office failed to be established, it is questionable as to how successful the framework has been in delivering its intended outcomes.

Despite the existence of the ISC framework, it is questionable as to how often it is actually referenced and used. Because the framework is not adopted as the de-facto standard for all projects, there is a degree of confusion about what is the actual process for project governance. Following a review of the ISC framework, as part of the formation of the CamSIS Improvement Project, the Academic Secretary considered it to be outdated and no longer fit-for-purpose.

From the specific viewpoint of user needs, neither of the current frameworks provides explicit references or guidance on the subject. As discussed earlier in this paper, the UIS framework is currently undergoing a review to consider how it can be enhanced to provide a formalised approach to the identification and management of user needs.

To-date, the UIS framework has been used to support the delivery of over 140 projects of varying size, complexity and delivery approach.

### **How is a project governance framework relevant to user needs?**

Traditionally, the success or failure of a project has been measured using three baseline criteria; time, cost and quality. Given the historical basis of project governance frameworks originating from the commercial sector, it should be no surprise that their primary objective is to support executive control of the two most commercially critical criteria, time and cost. The less definitively quantifiable nature of quality means it is seldom a core focus of project governance frameworks and is traditionally considered as more of a project management responsibility.

Accepting that most measures of satisfying user needs will be qualitative in nature, there may be an argument for stating that user needs are not relevant within the context of a traditional project governance framework. However, if it is considered that such frameworks should not only be concerned with controlling cost and time, but should be a central part of helping to ensure the achievement of successful project outcomes, then user needs become very relevant.



The ISC framework follows the traditional cost and time based model, making only brief reference to the need to consider the usability of delivered services. In order to make it more relevant to the current situation, the same level of importance needs to be placed on the delivery of successful user needs outcomes, as that given to the control of cost and time.

### **What does all of this mean?**

Although very brief in nature, this investigation into the subject of user needs has quickly identified a number of factors that have either a direct or indirect effect on the delivery of successful user needs outcomes. Consequently, it is unlikely that concentrating on one factor would achieve the desired result of raising the profile of user needs throughout the end-to-end service delivery process.

Some of the more immediately apparent factors that have an impact upon the delivery of successful user needs outcomes are;

- an IT service delivery culture that has evolved from a background of delivering technical excellence, and which will need a significant business change focus in order to raise the delivery of successful user outcomes to the same level of excellence
- an outdated and inflexible ISC governance framework that has failed to keep pace with the rapidly changing needs, methods and approaches required to support the delivery of a diverse portfolio of IT services
- an ISC governance framework that has a basis in an historical need to control the scope and budgets of large-scale IT projects, rather than a focus on supporting successful project outcomes, for all project types
- a general lack of appropriate levels of stakeholder analysis, resulting in a consistent failure to address the needs of all impacted user groups
- an inconsistent approach to establishing and maintaining appropriate engagement of key stakeholders throughout the end-to-end project delivery process
- a tendency to consider only the needs of a primary user group, rather than all user groups
- a consistent inability to demonstrate how user needs have been identified and managed through to successful delivery
- a lack of consistency in what/how/when detailed user needs analysis techniques are deployed (e.g. user stories, personas, etc.)
- an inconsistent approach to the understanding of how user needs are managed in different delivery methods (waterfall, agile, hybrid).

Whilst the factors listed above highlight a number of areas that need further development, it is clear that the desire to identify and manage user needs is becoming increasingly significant for the more recently initiated projects. The fact that this is being achieved without the direct guidance of formalised project governance controls, demonstrates that there is a general acceptance of the importance of user needs and a willingness to work towards the goal of delivering successful user outcomes for all projects.

### **What can be done to remedy the situation?**

It is recommended that consideration be given to initiating and resourcing a broader exercise, tasked with delivering flexible project governance frameworks and service delivery frameworks that are

user needs centric in their approach. The actual definition of such an initiative will need to be formally established, but the following objectives are suggested as a starting point;

- define the various types of IT Services delivery approaches to be included within the scope of the framework
- create a flexible project governance framework that establishes guidance for each of the IT Services delivery approaches defined within the scope
- agree key stakeholders (University and UIS) and define their roles and responsibilities within the framework
- define the governance processes
- develop supporting materials and tools
- develop and deliver communications and training
- transition the delivered governance processes and supporting materials into a cycle of review and continuous improvement.