



Internal Quality Review Information Technology Department 2019

RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

Peer Review Group Report

Information Technology Department 2019

DOCUMENT CONTROL SHEET

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1 Context for the Review

This report presents the findings of a quality review of the IT Department at the Royal College of Surgeons in Ireland (RCSI), which was undertaken in November 2019.

The Royal College of Surgeons in Ireland (RCSI) was established by Royal Charter in 1784 to set and support professional standards for surgical training and practice in Ireland. RCSI has evolved considerably in the intervening years and is now both a university and a postgraduate training body in surgery and related specialties. This dual role brings many advantages to the institution, not least of which is the ability to offer education and training at all career levels (i.e. undergraduate, postgraduate & professional) in medicine, surgery and related disciplines. In fact, it is the only surgical or medical Royal College in these islands to have university status. RCSI currently is the largest medical school in Ireland and awards medical degrees in Ireland, Bahrain and Malaysia. RCSI also provides undergraduate degree programmes in Pharmacy and Physiotherapy in Ireland, undergraduate Nursing degree programmes in Bahrain and masters (taught & by research) and doctoral programmes variously in Ireland, Bahrain, China, Dubai and Malaysia. RCSI became a Recognised College of the National University of Ireland (NUI) in 1978. Following an institutional review commissioned jointly by the Higher Education Authority and the National Qualifications Authority of Ireland, RCSI independent degree awarding powers were activated by ministerial order in 2010 pursuant to the terms of The Royal College of Surgeons in Ireland (Charters Amendment) Act 2003. The Qualifications and Quality Assurance (Education and Training) Act 2012 established RCSI as a Designated Awarding Body. In 2019 RCSI received authorization to use the description 'university' and to style itself accordingly, pursuant to the provisions of the Qualifications and Quality Assurance (Education and Training) Amendment Act 2019. RCSI is an independent, not-for-profit health sciences institution with charitable status in Ireland. The institution operates a primarily self-funding model, with State funding accounting for less than 20% of total income. The model is based on the education of a substantial cohort of international students alongside Irish/EU students.

1.1 Purpose of the Review

The self-assessment exercise is a process by which a Unit reflects on its mission and objectives, and analyses critically the activities it engages in to achieve these objectives. It provides for an evaluation of the Unit's performance of its functions, its services and its administration. In line with the RCSI strategic plan 'Growth and Excellence' it provides assurance to the College of the quality of the Unit's operations and facilitates a developmental process to effect improvement. The fundamental objectives of the review process are to:

- Review the quality of the student experience, and of teaching and learning opportunities.
- Review research activity, including; management of research activity, assessing the research performance with regard to: research productivity, research income, and recruiting and supporting doctoral students.
- Identify, encourage and disseminate good practice and to identify challenges and how to address these.
- Provide an opportunity for Units to test the effectiveness of their systems and procedures for monitoring and enhancing quality and standards.
- Inform RCSI's strategic planning process.
- Provide robust evidence for external accreditation bodies.

- Provide an external benchmark on practice and curriculum.
- Provide public information on the RCSI's capacity to assure the quality and standards of its awards. RCSI's implementation of its quality procedures enables it to demonstrate how it discharges its responsibilities for assuring the quality and standards of its awards, as required by the Universities Act 1997 and the Qualifications and Quality Assurance (Education and Training) Act 2012.

1.2 The Review Process

The key stages in the internal review process are:

1. Establishment of a Self-assessment Committee.
2. Preparation of a Self-assessment Report (SAR) and supporting documentation.
3. Site visit by a peer review group (PRG) that includes external experts both national and international.
4. Preparation of a PRG report that is made public.
5. Development of a Quality Improvement Plan (QIP) for implementation of the review report's recommendations (that is made public).
6. Follow-up to appraise progress against the QIP.

1.3 Membership of the Peer Review Group

Elizabeth Noonan, Director of Quality Enhancement, University College Cork

Caitriona Campbell, Head of Staff Learning and Development, Royal College of Surgeons in Ireland

Callaghan Commons, Student Reviewer, Dublin City University

Terry Groome, Senior Experienced Tech Sector, CEO/COO

Tony O'Regan, Consultant, Transformation & Change Programme/Project Management

The PRG were also joined by Mark Collins, who acted as Technical Writer/Rapporteur for the review.

1.4 Terms of Reference for the Peer Review Group

- Evaluate critically the SAR and the supporting documentation
- Verify how well the aims and objectives of the Unit are being fulfilled, having regard to the available resources, and comment on the appropriateness of the Unit's mission, objectives and strategic plan
- Comment on how well the Unit fits with the strategic plans for the College as a whole
- Evaluate the Unit's strengths, weaknesses, opportunities and challenges as outlined in the SAR
- Discuss any perceived strengths and weaknesses not identified in the SAR
- Assess the suitability of the working environment(s)
- Comment on any recommendations proposed by the Unit in the SAR

- Make appropriate recommendations for improvement, with due consideration of resource implications

1.5 Overview of the Self-Assessment process

This was the first Quality Review for the IT Department and to enable the self-assessment process. A Steering Group, led by the Chief Information Officer and comprising members of the management team was established. This group worked with other members of the Team to develop the Self-Assessment Report (SAR).

The peer review group received the SAR, made available over the institution's VLE, which was concise, informative and very well written. Within the documentation the centrality of Digital Strategy was outlined in terms of its relevance to digitalisation of higher education and more particularly for RCSI as a multi-campus institution with ambitious plans for a new health education curriculum model. Information on the RCSI, in terms of key facts and figures as well as the position of the Unit within the organisation was provided. An organisational structure with a clear delineation of areas of responsibility and roles was provided; this allowed the PRG from the outset to understand the shape and operational structure of the IT Department. The SAR was supplemented by Appendices outlining policies, procedures and project management protocols. Overall, the SAR presented a Unit which had a strategic clarity about its organisational position and its potential to contribute to the future strategic direction and development of RCSI.

The SAR overall was descriptive and provided a significant body of information on project and operational planning including the range of service performance and project governance mechanisms in place. There was less overt evidence of the evaluation of the Unit's understanding of the varied and distinct needs of different staff cohorts within the SAR. Overall, the limited evidence of the outcomes of the self-assessment process limited the opportunity for the PRG to discern, from the SAR, the Unit's insights on its current strengths and areas for development. An institutional benchmarking exercise had been conducted with a private HEI in Ireland, and the rationale for the choice of institution and basis of benchmarking was highly focused. In the course of the site visit, the PRG took the opportunity to explore thoroughly the current operations, strengths and opportunities for the IT Department through its meeting with Senior Management, staff, students, and third-party vendors.

2 Intro and Context of Unit

This was the first Quality Review of the IT Department and a new Chief Technology Officer, the current Head of Department, had been appointed in 2017. Since appointment, considerable advancement of a Digital Strategy has been undertaken, intensively over a period of three months, to set out a five-year roadmap for RCSI. The strategy had been developed based on international benchmarking of higher education institutions in North America, Canada and the UK, as well as global IT companies. Consultation across the RCSI campuses had been undertaken engaging academics, researchers, professionals and students as well as external stakeholders. The Digital Strategy (2017) had been followed by the development of a College Strategy (2018). Integration and alignment of both strategies is enabled on an ongoing basis through the SMT of the institution, of which the Chief Technology Officer is a member. The digital transformation agenda and associated projects are planned and agreed, including associated finances, through the SMT. The strategic development of the IT Department from a technical function responsible for hands-on management of IT hardware and software to a function also engaged in supporting the digital transformation of the College is an ongoing process. During the course of the site visit, the PRG explored the implications of this dual function in terms of the impacts for the operation, management, planning and processes of the department.

The implications of supporting a multi-campus institution, in Dublin, Bahrain and Dubai and teaching hospital in Beaumont, Dublin requires alignment of remote sites and the main campus within a broad IT strategy. The IT Department has a presence on-site in Beaumont once a week to ensure support for clinical education. The IT Department also supports the institution's development of TEL: both blended developments for postgraduate offerings and well as full course development. The projects within the IT Department portfolio are re-visited on a six-monthly basis using a criterion based framework. Facilitating student learning as a continuous process through digital technology is an important touchstone for the work of the IT Department to enable: lifelong learning, the Transforming Health Education Programme (THEP) initiative and the maintenance of an effective lifelong College and student relationship.

2.1 Commendations

- The IT Team are clearly a highly motivated, capable and tightknit team which is multi-disciplinary and supports a wide range of applications delivering a highly valued service across RCSI which is appreciated by their colleagues.
- In reviewing the headcount and budgets available to the IT Team it was evident that while these are modest versus comparators, a lot has been achieved with these resources.

2.2 Recommendations

- The IT Department should reconsider its functional name with a view to ensuring that it captures its widening role as the key enabler of RCSI's strategic transformation and implementation of a Digital Strategy for a distinctive and personalised student learning experience; a title that puts increased emphasis on the analytics and insights offered through the technology the team develops and supports would speak more to its central role in driving a College wide transformation.
- In line with the above recommendation the PRG would also suggest that the title of the Unit head should be reviewed – this is currently Chief Technology Officer and the review group were of the opinion that a more appropriate title would be Chief Information Officer, Management of Resources.

3 Planning Organisation and Management

3.1 Planning

The PRG note that the RCSI Senior Management Team (SMT) expressed their full support for the IT Digital Strategy and recognise it as a key enabler to deliver the RCSI Strategy Plan 2018-2022. This plan is focused on delivering transformative education, research success and increase the contribution by RCSI to wider society. We also note that the SMT were pleased with the progress of the Digital Strategy.

The PRG note that having the IT Digital Strategy in place in 2017 prior to College's overall strategy plan helped to ensure alignment of objectives and enhanced buy in from the SMT. Maintaining this alignment is challenging for organisations particularly with the speed of change in the digital environment.

The PRG also note that the administrative and faculty staff are aware of the RCSI Strategy Plan but less aware that the IT Team have prepared an overall digital strategy and are delivering an overall digital transformation.

Project Connect is a flagship opportunity for RCSI to showcase what the new digitally enhanced student learning experience will be for the student from entry to the building to final exit. This will be RCSI's first opportunity to build the physical student experience from the ground up not through retrofit. This is the experience delivered by RCSI's peer group in the top1%.

3.2 Commendations

- The process of engaging stakeholders at SMT level is well established. It ensures that alignment with the overall College strategy is maintained and ensures that budget approvals are accelerated.

3.3 Recommendations

- There needs to be a clear articulation of the strategy for Technology Enhanced Learning (TEL), to promote wider understanding and effective engagement of staff, beyond the cohort of early adopters. An appraisal of the most appropriate infrastructure and staff configuration for the delivery of the strategy should be part of this work. The benefits of these steps will enable the conversion of localised good practice in the development of TEL projects to be shared more widely and to inform the development of a clear roadmap document. TEL should have an owner, an architecture and a costed roadmap.
- Due to the speed of change in digital technologies and the impact of this change on a college we recommend that the RCSI benchmark their digital capability in terms of the enhanced student experience against their peers in the top 1%. This should be done mid delivery of the IT Digital Strategy.
- The IT Department should reconsider its functional name with a view to ensuring that it captures its widening role as the key enabler of RCSI's strategic transformation and implementation of a Digital Strategy for a distinctive and personalised student learning experience.
- The IT leadership should have an active role in the overall planning and delivery of the digitally enhanced learning opportunity available through Project Connect.

3.4 Organisation

3.4.1 Staffing

The PRG note that the IT Team are highly qualified and experienced and enjoy support from the end user community within the College. The mix of the team is 50% contractors and 50% full time employees supported by an outsourced external support provider for helpdesk activities. They have delivered many complex pieces of technology to the end user community hitting timeline and budget targets.

The use of contractors in the team mix is typical of an organisation during delivery of new technology which is funded through capital investment. Contract staff are hired for specific application and project implementation skills and their cost are covered for the duration of project delivery and covered through the capital expenditure budget. Once the project is completed the contract staff member moves on from RCSI to their next project. The PRG note that the user community expressed their need for more ongoing support of new applications post the go-live date; and that the people who had worked on the project had moved on and the quality of support had changed. We note that this is a symptom of budget availability and assignment of costs.

The IT Team are delivering an aggressive program of work in line with the targets set out in the RCSI Strategy 2018-2022. As each new piece of technology is delivered it places greater burden on the ongoing support team and pressure on operational expenditure budgets.

3.5 Commendations

- A highly motivated, capable and tightknit team which is multi-disciplinary and supports a wide range of applications delivering a highly valued service to colleagues across RCSI which is appreciated.
- With modest budgets and staffing levels, a lot has been achieved.
- Induction of new staff appears to be a warm and welcoming process, with staff being integrated quickly and enabled to make early contributions to the work of the team. Opportunities for upskilling are available in the first year and managers are supportive of career progression.
- A notable feature of the IT Team is that the working environment is dynamic and offers many opportunities for experiential learning, through stretch projects as well as learning through on the job assignments. The relatively small size of the IT Team means that there are a range of opportunities to get involved in new skill-building projects for staff at all levels.

3.6 Recommendations

- The operational processes need to be enhanced through cross-skilling so that expertise is shared more widely and the reliance on knowledgeable and often busy individuals is reduced.
- The IT Department should reflect critically on its stated key objective to ensure that it also encompasses the provision of support and service for business as usual (BAU) and that this is communicated clearly across all stakeholder groups.
- IT Department needs to ensure that BAU support team is in place for all infrastructure applications and services so that defects and minor enhancements can be implemented in a timely manner within agreed SLAs.

- As part of a mid-term review of the overall digital strategy, operational expenditure funding for ongoing BAU support of new applications should be reviewed.

3.6.1 Staff Development

The PRG note the positive working atmosphere described by all RCSI staff and their expressed support is part of the ethos of the RCSI. This same positive culture was evident in the IT Team and were proud to be part of a group that was delivering transformative change. They praised the current method of project delivery which involves stakeholder engagement at every stage of the project with improved working relationships.

The IT Team organisation is continually assessed and organisational changes are made in line with the growth of applications supported. When the need for a new role is identified, a business case is developed, and the role is advertised internally and externally. Staff working in contract roles can apply for permanent positions through this process.

All staff are encouraged to undertake development courses annually. These are agreed in Personal Development Plans. This further development covers management courses, ITIL training and specific technology learning.

3.7 Commendations

- The working environment is dynamic and offers many opportunities for experiential learning, through stretch projects as well as learning on the job assignments.
- The overall ethos of the department is strongly focused on the development of staff, through a vibrant PDP process and commitment from senior management to encourage and support staff in ongoing upskilling and development of their knowledge.
- This supportive and developmental environment has led to a notable low staff turnover which is remarkable in the current buoyant employment market.
- The overall commitment, enthusiasm and palpable satisfaction of the staff was evident and appeared to be linked clearly to a strong sense of purpose which reflected the overall RCSI strategic purpose.

3.8 Management

The IT Department's SAR outlines their key objective as "enabling RCSI through technology to become a global leader in healthcare education". This aligns with the three pillars of the RCSI Strategy to deliver a transformative learning experience, lead impactful research and support healthcare and societal well-being in Ireland.

Management of the IT digital strategy derives from the RCSI Strategy 2018-2022 down to a series of incremental and parallel IT digital projects to be delivered. There is a robust process in place to ensure budget approvals from the SMT prior to the start of a project and to report back progress as the project progresses. There is stakeholder engagement at an early stage and sponsors from the College community at senior level are acquired early. Without a sponsor, a project will not proceed, and projects have been cancelled where sponsor engagement was lacking.

The PRG note that positive feedback was received from project participants on the project management methodology used for all IT projects. Multiple contributors cited the handover process as either 'weak' or inadequate. There seemed to be some confusion about where the IT

Department's ownership of the project ended and where the user community's ownership began. The PRG suggests that clarity on responsibilities could be enhanced if business SME's sign-off on the Post Implementation deliverables of OLA, SOP and training was in place. In the IT Department's SAR, one of the key recommendations was to encourage user take up/adoption of the new technology delivered. Equally there was some confusion about whose responsibility it is to train the wider user groups in the use of the new technology and applications; both as part of project delivery and post go live through BAU.

The IT Department's SAR recommends that the IT Department should have a separate training budget.

3.9 Commendations

- A robust process for project initiation and management in place.
- Senior stakeholder engagement is strong.

3.10 Recommendations

- The project initiation document should define the project in the language of outcomes/benefits; and clearly outline the outcomes that will be delivered by the project.
- The outcomes/benefits should be signed off by the project sponsor and a benefits realisation plan should be prepared. This will act as a surety of the investment and define for the users what changes they need to make and the overall efforts required to fully deliver the returns expected from the project investment.

4 FUNCTIONS, ACTIVITIES AND PROCESSES

4.1 Digital Strategy and IT Change Implementation

4.1.1 Change Management Process Overview

Two industry approaches to project delivery used by the IT Department are:

1. Agile Model.
2. Waterfall Model.

4.1.2 Agile Model

The Agile model is used for internal developments when end users and developers can dedicate continual time to the project and work closely together.

RCSI was awarded the prestigious Global PMI Award for Project Excellence for the National Emergency Programme. The award recognises complex projects that deliver superior performance of project management practices, superior organisational results and positive impacts on society.

4.1.3 The Waterfall Model

The Waterfall model is used predominately when requesting a change to be developed by a vendor for a fixed cost.

4.2 Key Change Management Processes

The IT Department is managing these processes and are utilising processes that are best practice in industry. The IT Team was formed with resources who have experience and qualifications from the IT industry. They are encouraged to keep abreast of new thinking in the industry in relation to IT process management. It is evident that the IT Department aim to use processes that are best practice and fit for purpose in RCSI. It was noted by the PRG that a small number of silo IT projects do not fall under the IT Department's remit but may require support in the selection of technology or vendor. PRG noted the SAR's recommendations regarding User Acceptance Testing (UAT) and suggest that business user roles are agreed with the business and adequate UAT facilities are provided to business testers.

4.3 Commendations

- The early steps to establish a framework for stakeholder engagement as part of the project management lifecycle, such as SMT co-sponsors are to be commended. This ensures that academic and business function leaders are fully engaged in the delivery of individual components of the Digital Strategy.
- The projects undertaken to support TEL programmes with the Institute of Leadership, the IT Department was illustrative of excellent collaboration based on the effective project definitions, resource allocation and implementation.
- It was also noted that the project reporting is comprehensive and robust and is capable of being disseminated by business or IT staff at all levels.

4.4 Recommendations

- The business case of all projects should be defined in terms of tangible and intangible business outcomes and benefits. These should be tracked through a benefits realisation process following project completion. This should be managed by the business sponsor function and reported to SMT.
- There should be a review of project governance structures to ensure that appropriate representation from sponsor, senior business representatives, business analysts, project manager, and any vendors is put in place for all projects.

- There needs to be an education process for all project participants to ensure greater understanding of what their active roles will be in the delivery of transformation projects. This should include their role from signed-off detailed business requirements definition through to assisting with revised processes and procedures for the impacted business units.
- Ensure that all instances of customer (staff/students) interaction are sensitive to the requirement to explain and engage using plain English language.
- It is recommended that project management approaches should ensure that adequate attention is given to the change management aspects in particular the transition from “project to BAU” following the go-live phase.

4.4.1 Service Management Processes

As part of Service Management, the IT Department have implemented several industry standard processes based on ITIL (Information Technology Infrastructure Library); a set of detailed practices for IT service management that focuses on aligning IT services with the needs of business best practices as might be reflected in the following list;

1. Change Management (including service introduction).
2. Incident Management.
3. Service Request Management.
4. SLA Management.
5. Continuous Service Improvement.
6. Service Management Governance.

4.4.1.1 Change Management (including service introduction)

A Change Advisory Board (“CAB”) meets on a weekly basis to review and approve/decline changes. It was unclear to PRG that business users were fully engaged in the CAB structure and processes as the concept of School and Business Unit ownership of systems and services is not present in RCSI. The PRG was informed of several instances where IT changes came as a surprise to end users of the impacted systems and also that major changes including system upgrades were scheduled at times that coincided with peak activity periods such as the start of a new academic year or just prior to exams. This was widely mentioned during PRG interviews and should be taken into account by the IT Department when aiming to release new projects and significant changes. CAB should consider operating a Change Freeze calendar to enable appropriate scheduling of changes. The SAR highlighted the requirement for a robust asset management system, which would better inform schools, business units and the IT Department of the impact of any proposed changes as well as basic asset tracking.

4.4.1.2 Incident Management

Incident management controls any interruption to services reported by users or from the monitoring systems. PRG noted a low level of Priority 1 & 2 (P1, P2) incidents in any month reviewed. There were some incidents reported as P2 that were in fact a lower priority but were not reclassified correctly. This had the effect of distorting reported statistics and should be rectified in a timely manner once investigation has determined the correct priority. Given the significant increase in IT infrastructure as part of the Digital Strategy, it was not surprising that the PRG noted the level of systems stability varied in 2018 but has since returned to agreed SLA up to the date of the last shared report, April 2019. A small number of incidents may involve sensitive personal information that requires rapid action and an escalation process to ensure remedial actions are carried out in a timely manner.

4.4.1.3 Service Request Management

Service requests make up approx. 45%-50% of all calls raised with the IT Service Desk. These include system access management requests. The SAR recommendation to implement a process to manage account automation should prove to have both process and cost efficiencies for RCSI given the volume of such requests. PRG noted consistent user feedback that the on-site Service Desk Team were very helpful and efficient. Less favourable mention was made of off-site Helpdesk resources. The change of vendor in 2019 has had mixed reviews from users with some suggestions that the off-site staff have insufficient knowledge of the academic, business and physical structures of RCSI. While training was provided to the new staff, it was suggested that additional training is required to close the apparent knowledge gaps.

4.4.1.4 SLA Management

RCSI have SLAs with a number of service providers. All of these are reported each month. Where there are SLA failures, these are reviewed, and action plans agreed. PRG reviewed one key system contract and it only has an SLA for response time but no resolution time for issues accepted by the vendor as genuine faults to the system. This may be partly because of RCSI customisation of the software and the product. When reliant on third parties for service delivery, strong management of the service delivery is imperative. In relation to Student Information Management System provider in particular, we would encourage the team to review whether there is an opportunity to renegotiate the contract to ensure the College is getting the level of service it needs in relation to the Student Information Management System application support and enhancements. The vendor relationship should be reviewed given the significant level of dissatisfaction expressed by the users.

4.4.1.5 Continuous Service Improvement

This process is driven by a number of areas which include customer feedback, ticket analysis and trending, process reviews and service reviews. PRG heard of positive feedback from staff and students in this regard. However, the quantity of Helpdesk customer satisfaction surveys (CSAT) is low as a percentage of total requests and additional surveys may be useful. Students suggested greater use of social media channels such as Instagram to run regular single question surveys as longer surveys were not favourably received.

4.4.1.6 Service Management Governance

Weekly service reviews

Monthly governance reviews

Quarterly business reviews

All of these processes are tracked via a ticketing system and a set of governance reviews and meetings that are documented in a set of service reports and action logs. The vendor SLA issue mentioned above (SLA Management) should be a matter of high priority review. It was also noted by the PRG that the sample set of the relevant key vendor review meeting minutes were not captured with the appropriate level of detail to be of use to business or IT stakeholders. Helpdesk vendor reviews also require serious consideration of the issues raised under Service Request Management (see above).

4.5 Commendations

- Service Management SLAs meeting target for key P1/P2 incidents as well as service requests up to April 2019.

4.6 Recommendations

- The change delivery of strategy needs to be aligned with the culture, needs and operational rhythms of an academic institution taking account of the educational business cycle. This should be reflected in the form of a Change Freeze calendar, which should be developed and published frequently across the institution.

- An Asset Management system should be procured to enable a comprehensive register of hardware, software, services, users and service owners to be recorded and maintained across the estate. Such a system can be used to manage the currency of hardware and software on the estate, linked to Helpdesk and CAB systems.
- The IT Department should reflect critically on its stated key objective to ensure that it also encompasses the provision of support and service for BAU and that this is communicated clearly across all stakeholder groups.
- The rapid expansion of the IT Team requires that the operational processes need to be enhanced through cross-skilling, so that expertise is shared more widely and the reliance on knowledgeable and often busy individuals is reduced.
- The lifecycle of vendor relationships from selection, through implementation and ongoing monitoring and review, needs to be reassessed as a matter of urgency to ensure that the delivery of services meets the College's needs.
- The College could improve the interface and integration of third-party service providers, through the provision of an Induction Resources to build their knowledge of what RCSI is, and what RCSI does.
- An appropriate flagging system for rapid escalation and action in response to sensitive and time-critical incidents needs to be put in place.
- Implement a process to manage account automation.
- Procurement of consumables for IT devices e.g. paper and toner should be reviewed.

4.6.1 IT Security process

RCSI IT Security Services processes encompass a number of areas:

1. RCSI IT Security polices and processes.
2. Network Security.
3. Client and Endpoint security.
4. Threat Monitoring and Remediation.
5. Office 365.
6. Patching.
7. Data protection and encryption.

These services are supported by a number of expert vendors and well-defined processes. The PRG noted that robust systems and processes are in place to protect the increasing number of access channels used by staff and students. Both the SAR and PRG recognised that a dedicated IT Security Specialist was not in place but understand that two IT staff are focussed on the area. The increasing importance and complexity of IT Security suggests the appropriateness of staffing for this function needs to be reviewed. PRG heard of a significant number, possibly over 10%, of Apple devices that were not supplied by the IT Department and are unsupported. RCSI applications e.g. email, running on Apple or other BYODs (Bring Your Own Device) do not have any additional security encryption and this aspect should be reviewed by the IT Department.

4.7 Commendations

- IT Security processes are well defined using industry standards.

- Consolidation of the security platform allows RCSI to react to threats quickly and effectively.
- 24/7 outsourced security operations centre provides security information and event management (SIEM) technology, targeted threat intelligence, vulnerability identification, management and critical incident response.
- Client and endpoint security installed on all RCSI supplied devices. RCSI Windows devices have strong encryption in place. Office 365 security features utilised to protect RCSI and users from threats.
- Scheduled network penetration testing by third party.
- Pro-active patching and vulnerability remediation.

4.8 Recommendations

- The absence of a Security Officer is of concern and should be the subject of a needs assessment to determine the most appropriate resourcing solution.
- Support and use of Apple devices should be reviewed.
- Encryption standards for Apple and BYODs accessing sensitive RCSI information should be reviewed.

4.9 Application Management

Application Management is responsible for managing applications throughout their lifecycle. The Application Management Team was a newly formed team in April 2019, joining the team members who previously undertook these roles. The objective of the team is to enable a focus to be given to these processes. It is planned that each process will be reviewed gradually, and a consistent and best practice approach is developed for each process.

RCSI Application Management – Key Processes

<p>1. Application Support</p>	<p>2. Change Management & Service Improvements</p>	<p>3. Transition Project to Applications Support Team</p>
<p>1. Requests Fulfilment 2. Access Management 2. Problem Solving 3. Incident Management 4. Controls 5. Application Training</p>	<p>1. Manage Change List for Applications 2. Small Change Projects 3. Improvement processes 4. Emerging trends and issues 5. OLA reviews 5. Application Support Team Metrics & Reviews</p>	<p>1. Transition Prep 2. Transition Handover</p> <p>4. IT Organisation Support</p> <p>As required</p>

PRG noted the drive for new application development as part of the Digital Strategy and see a need for constant application management to ensure best fit for current and emerging requirements. The latter applies to core systems as well as those recently implemented. The HR Department is operating a core mission-critical system that is not supported by the IT Department and PRG do not consider it meets best practice for business functions to be managing such IT systems.

4.10 Commendations

- Existing application support process are being reviewed with a view to developing best practice processes.

- Application support operational readiness for new projects is coordinated effectively between Project Management and Application Support.
- The working environment is dynamic and offers many opportunities for experiential learning, through stretch projects as well as learning on the job assignments.

4.11 Recommendations

- Given the delivery of approximately 50% of the projects that form part of the Digital Strategy, the IT challenge is to ensure that a BAU support team is in place for all infrastructure applications and services, so that defects and minor enhancements can be implemented in a timely manner within agreed SLAs.
- The systems that have been implemented need to be continuously reviewed and enhanced in order to ensure they progress and mature to deliver additional benefits.

5 MANAGEMENT OF RESOURCES

5.1 Resource allocation and hiring

Currently there are total of 30 resources in the IT Department, 24 permanent employees and six contract resources. This excludes the service desk resources, as these resources are outsourced through a managed service company. From the 30 core resources, the allocations are currently as follows:

Digital strategy	43%
Significant Projects	15%
Business As Usual (support)	42%

Resource allocations are continuously reviewed. As resources are freed up from Projects/Support tasks, they are reallocated elsewhere. Where resources need to be moved between streams (e.g. support, infrastructure or projects), the options are first discussed with the identified resource (training, upskilling and duration of the change are discussed). The options are then proposed to the IT management team at weekly meetings. The best possible fit for the resource is selected. The decision is then discussed and agreed. PRG noted the transparent recruitment process includes internal and external advertising of new permanent positions and agency usage for contract positions. The use of capital expenditure for contract hires utilised for projects and significant deliveries was noted as an efficient use of RCSI resources. Several contract staff have subsequently applied for permanent positions in the IT Department, which is a positive sign of the culture and working environment in the Department. The strong portfolio of projects delivered and in the pipeline require ongoing evaluation of the composition of the team with particular emphasis on four areas:

1. Change Management to prepare, support, and help individuals, teams, and the institution in making organisational change.
2. IT Security.
3. IT business partnerships with School and Departments, which mirrors the HR Partner model to develop communications, so that the high-level IT needs can be identified, understood and addressed.
4. Dedicated Business Analysts to assist the business users throughout the project lifecycle.

5.2 Commendations

- A highly motivated, capable and tight knit team, which is multi-disciplinary and supports a wide range of applications delivering a highly valued service to colleagues across RCSI, which is appreciated across the institution.
- Induction of new staff appeared to be a warm and welcoming process, with staff being integrated quickly and enabled to make early contributions to the work of the team. Opportunities for upskilling are available in the first year and managers are supportive of career progression.

5.3 Recommendations

- Review the current organisational structure and roles within to ensure that overall it is fit for purpose in terms of ensuring the requisite capability for effective Change Management, IT Security, IT Business Partnerships and Business Analysis.
- To enhance engagement with the digital strategy across the College the PRG suggests that the IT Department consider aligning senior staff with particular Schools and Departments similar to the Business Partner model in use in HR. This could take the format of quarterly meetings with Heads

of Departments/Heads of Schools where all IT related issues pertaining to that Unit could be discussed with the same person from the IT Department. This would build depth of understanding of the unique needs of each area and allow the IT partner to filter concerns back to the relevant areas of IT – application support, helpdesk, projects etc.

5.3.1 Personal Development Plans (“PDPs”)

Staff performance is reviewed on a regular basis in an informal manner. However, permanent staff go through a formal performance review every six months, where required stakeholder feedback is taken into account. During the PDP review, career progression and future projects are also discussed and noted. IT staff members have an opportunity to provide feedback to their management team in a formal forum. During the review if training needs are identified, they will be recorded and planned.

5.4 Commendations

- The overall ethos of the IT Department is strongly focused on the development of staff, through a vibrant PDP process and a commitment from Senior Management to encourage and support staff in ongoing upskilling and development of their knowledge.
- This supportive and developmental environment has led to a notably low staff turnover which is remarkable in the current buoyant employment market

5.4.1 Vendor reviews and new technology reviews

Vendor contracts are fixed up to three years. This is to ensure RCSI receives a competitive price on licensing and maintenance. During the three years of contractual agreement, the vendors’ performance is reviewed quarterly and annually to ensure their performance is aligned with SLAs. Towards the end of the third year, the IT Department evaluates the services/solution provided and if the existing vendor is still a suitable solution for RCSI (and provides a competitive pricing) then RCSI will continue to extend the contract for another three years. In this scenario, the vendor is also compared with other providers in the market and relevant stakeholders are notified regarding the available options. Where possible, prices and SLA model are revised to secure the best value for RCSI. As part of vendor contractual agreements, the IT Department ensures that all vendors provide year-on-year upgrades. This is to ensure RCSI avails of the latest releases and product improvements. . The PRG noted that some aspects of the vendor relationship lifecycle could be enhanced, to ensure that: vendor selection includes input from the business; implementation is not perceived as an IT-driven process without business SME’s input (not SMT), suggesting a lack of representation or communication through governance meetings and reviews of suitability should be linked to both IT performance and meeting the business benefits outlined in the Benefits Realisation Plan.

5.5 Recommendations

- The lifecycle of the vendor relationship from selection, through implementation and ongoing monitoring and review, needs to be reassessed as a matter of urgency to ensure that the delivery of services meets the College’s needs.

5.5.1 Effective use of resources

Human assets: Effective use of human resources is key to IT delivery and budget management and is described in detail in section 4.

Software Assets: As part of software asset management, the IT Department continuously reviews the providers (managed by the IT Department) as well as software quality and SLA management. All vendors (software) are reviewed in relation to other available options in the market. Where possible the IT Department also reviews the software usage across the College and works closely with the

relevant stakeholders and Finance team on the centralisation of licences and maintenance management. This is done to ensure RCSI can avail of better pricing with providers, improved support model, as well as control of licence rollouts, to avoid wastage. The IT Department also takes part in the review and investment of all software procurement across College, to ensure stakeholders are supported and the solution selected can adopt the RCSI architectural standards.

Campus Hardware: All hardware assets are continuously reviewed, maintained and patched as required to ensure they are supported by the providers. As key infrastructural hardware come close to their end of life, the IT Department initiates product reviews and vendor evaluation to ensure equipment is replaced on time to ensure continuity of service.

Staff Hardware: The IT Department supply staff hardware to all employees in RCSI. Equipment supplied by the IT Department are continuously patched and upgraded as required. Out of life equipment is recycled through a selected vendor. All staff equipment has 3-5 years life expectancy.

5.6 Recommendations

- An Asset Management system should be procured to enable a comprehensive register of hardware, software, services, users and service owners to be recorded and maintained across the estate. Such a system can be used to manage the currency of hardware and software on the estate, linked to helpdesk and CAB systems.

5.6.1 Physical Facilities

5.6.1.1 Office space and Meeting Rooms

The IT Department consists of an open-plan office on the first floor of 121 St Stephen's Green (SSG), a separate office for the CTO, a small meeting room and IT store, and the temporary use of a second building at Proud's Lane, which includes an open-plan office, a large meeting room and a small meeting room. The latter office will no longer be available when Project Connect commences as this building is earmarked to be demolished as part of that development and a new housing solution will be required for the Team. An IT reception desk is also located at SSG and there are mini desks used by the helpdesk. This is the point where ID cards are produced, and staff/students can drop in devices for repair.

The central location of the IT Department is good, as there is a lot of traffic to the IT reception. Additionally, as the IT Department is involved in projects with departments across RCSI, being in a location closest to most departments is very beneficial.

PRG noted the lack of space to house all of the IT staff in one location but witnessed first-hand the need for appropriate accommodation for different functions within the IT Department. The lack of dedicated space for UAT was also highlighted, which may contribute to some lack of user engagement resulting in difficulties with implementation.

5.7 Recommendations

- The design of the future physical workspace of the IT Team should be undertaken in consultation with all staff to ensure that it caters to the diverse needs of staff roles and working practices and should include the provision of quiet space - a feature of the Proud's Lane working environment that is particularly valued by the developers and designers.

5.7.1.1 Recording studio

A small recording studio was set up in Proud's Lane by the IT Department. This room is used to record video and audio used in the development of online and blended courses (developed in conjunction with other departments across RCSI).

5.8 Recommendation

- PRG agree with the SAR recommendation that a suitable professional recording room is created to fulfil RCSI video recording requirements as the building which houses the studio is due to be demolished in 2020.

5.8.1 Improvement plans

Within the IT Department all issues, risks and improvements required are discussed and highlighted at IT management's weekly meeting and details are shared for discussion with IT staff during the IT Team monthly meeting. All members of IT staff are also encouraged to approach their line manager or CTO as required if they identify any risks, issues and improvements. Any recorded risks, issues or improvements will have a set of agreed actions associated with it and will be tracked by the management team on weekly basis. The weekly review occurs until issues are fully closed.

6 SERVICE USERS AND FEEDBACK

6.1 Staff and Student Feedback

The IT Department uses a variety of structured approaches to gain feedback on the quality of services provided to staff and students and to provide information on the services available and to ensure continued improvement of the service provided. These include:

6.1.1 Help Desk Customer Satisfaction (CSAT) Surveys

CSAT surveys are sent automatically to users from every service desk ticket that is closed. The survey is sent out via email when the ticket is closed. Users are requested to provide a star rating (1-5) and can give written feedback if they so wish. The results and feedback are reviewed on a monthly basis in the service governance meetings. Monthly ticket reports are reviewed to identify the top 10 call loggers. Where staff raised over three cases that are repeat issues in one month, the cases are reviewed to understand if there is an underlying issue. Case escalations are dealt with via the RCSI IT Service Delivery Manager and the IT Managed Service Provider Service Delivery Manager. These are cases escalated by the end user or cases identified as being open longer than the agreed SLA time. User feedback across the institution was gathered through an all staff survey was in 2018. This was an in-depth CSAT survey relating to IT services.

6.1.2 Managed Services Service Level Agreements

Contact response/resolution SLAs: This measures the number of contacts (email/phone call/drop-in) calls that are responded to and resolved within the agreed SLA.

System availability SLA: This measures the performance of systems against an availability SLA. A CSAT SLA is being introduced in 2019.

6.2 Student engagement and feedback methods

A three-way approach to student engagement and feedback is in operation, participation through the Student Affairs Committee, Annual Student Survey and Student Stakeholder contribution to IT projects.

Student Affairs Committee: The IT Department participates as an active member of the Student Affairs Committee, alongside the Student Union and other RCSI service teams. This committee provides an opportunity to share feedback between the members, and in particular to seek information, suggest change, and for the IT Department to keep the student body up to date on Department.

An annual Student Survey is implemented to seek student feedback on IT. This provides the ability for all students to rate IT on a few key topics such as:

- IT Facilities and services were satisfactory.
- Moodle was adequate for my requirements.
- The RCSI website was adequate for my requirements.

Students are invited to contribute to IT projects when they have been identified as stakeholders for the projects. Examples of this are:

- Student App: Student App project was established based on feedback and requirements received from the Students' Union. Students' Union members were involved in all phases of the App ranging from solution requirements, solution design, solution testing and go-live preparation. The PGR were impressed by how positively the students spoke about the dedication and work of the IT Department and how receptive they are to student feedback.

- THEP (RCSI's Transforming Healthcare Education Programme): To incorporate student feedback into the THEP programme, a number of focus groups were held with a groups of students in relation to IT.

6.3 Project Users and Feedback

All projects are based on explicit project requirements documents, and governed through steering committees. Each project has a business co-sponsor, who is also a member of the SMT and this structure is required before projects proceed. The objective of this is to ensure business teams form active part of the project, and to ensure the successful implementation of the project for the business team. Governance structures are implemented to ensure all levels of feedback required for the project can be achieved.

6.4 Promotion of IT

Details of all team members and their roles are published on home.rcsi.com. Updates on IT projects are also published on this website and all IT policies are published on Staff.rcsi.ie. Critical news is issued to all end users via email e.g. change of service provider, Go Live of RIMMS project.

Within the organisation a CEO Newsletter is used to promote key milestone updates to staff on a monthly basis. As part of internal communications, RCSI uses a "Grand Rounds" approach which provides opportunities to showcase particular initiatives and services. In April 2019, IT had the opportunity to present at RCSI Grand Rounds, where the Department's purpose, organisation and achievements were outlined to the staff of RCSI to provide an overview of how the IT Department adds value to the College.

In discussions with stakeholders, users and students in the course of the site visit, the PRG were assured of the IT Department's commitment to seeking and using feedback for the development and enhancement of services. The PRG formed the view that existing approaches could be easily augmented by making available a list of services provided by the IT Department to ensure better communication of its work to end users. It would also encourage ongoing reflection on the varied needs of end users for IT services and the value of variation in communication channels to reach different audiences, for example the use of social media to reach the student cohort.

6.5 Commendations

- The good relationship with the Student's Union, the responsiveness of the IT Department to student issues and the translation of a student centred approach into transformative projects to enhance the student learning experience, such as the Student App and early TEL projects.

6.6 Recommendations

- Develop a comprehensive communications and engagement approach, building on the success of the Grand Rounds, to promote understanding of the Digital Strategy priorities and roadmap for implementation and the enhanced capabilities available to the College.
- Develop a regular communication process for engagement with Schools and Departments so that the high-level IT needs can be identified, understood and addressed.
- Explore with the Student's Union new and creative ways of capturing student feedback and needs.

7 Ongoing Quality Enhancement

The efforts taken by the IT Team to enhance the quality of deliverables and processes can be aligned to the PDCA cycle (Plan, Do, Check, Act).

Plan	Do	Check	Act
Agreement of a strategy plan to ensure optimal digital transformation for the College.	Current processes reviewed and future processes designed to identify plan of change needed.	Design documents are reviewed continually to confirm validity of plan, and enhance any solution.	If changes identified in the design document, opportunities available to resolve the issue.
Formal plans for all projects, changes and improvements.	For in-house development with business teams that have high availability – Agile implementation approach used.	Formal testing undertaken by IT Team, and then by users. This enables any issues to be identified before implementation.	Issues identified in testing are resolved and checked again.
Testing is planned.	For external development, and inhouse development with business teams that have limited availability – Waterfall implementation approach is used. Full documentation is produced.	Reviews held which identify areas for improvements for future projects (e.g. post project reviews, service reviews).	
Change Advisory Board process in place to review and approve all planned change.	Code developed in development environments, with check in controls and other best practices.		

The PGR found from the available documentary evidence and discussions with stakeholders in the course of the site visit, that it was evident the IT Department had an overall great commitment to the quality enhancement process and ensuring the continuous improvement of the Department. The methodologies for project initiation, management and metrics were clear and coupled with obvious staff commitment and enthusiasm for their roles spoke to a quality ethos permeating the work of the Department. It was also noted by the PRG, that given the relatively modest budgets and staffing configuration, detailed in earlier sections, the impact of effective leadership of the IT Department and the intrinsic quality of the staff were an important contributor to the success of the IT Department to date.

The process of self-assessment undertaken by the IT Department had included a SWOT exercise, which could provide a positive basis for the development of the QIP following this Review. In discussion it was noted that not all staff within the IT Department had seen the SAR, or had been fully aware of the Internal Quality Review. Given the numbers of staff within the team who are in post one year or less there is a valuable opportunity as part of the quality enhancement process to engage this cohort of staff in the development of the QIP.

At the outset of the review site visit, the IT Department's broad goals for the review process were discussed and these centred on the overall goal of transforming and establishing the IT Department as a value-added service contributing to the RCSI's transformation agenda, as well as ensuring the effectiveness and availability of a robust IT infrastructure in a modern educational environment. The PRG encourages the IT Department to continue to strengthen its structures for engagement with and feedback from users in the ongoing management, development and delivery of its services in order to consolidate further its organisational impact and effectiveness.

8 IT Department Site-Visit Schedule 18 – 21 November 2019

Evening prior to site visit: Monday 18 November 2019

Dur. mins	Time	Meeting Theme	Attendees	Venue
30	16.00 – 16.30	Welcome & Introduction for PRG Director of Quality and Quality Reviews Manager	PRG Director of Quality Quality Reviews Manager	Robert Smith Room
90	16.30 – 18.45	Private planning meeting for members of the Peer Review Group	PRG	Robert Smith Room
	19.00 – 21.00	Dinner	PRG, QEO	

Day 1: Tuesday 19 November 2019

Dur.	Time	Meeting No.	Meeting Theme	Attendees	Venue
30	0845 – 09.15		Review of preparatory work	PRG	President's Meeting Room
40	09.15 – 09.55	M1	Meeting with Head of IT Theme/focus: Current strategy, challenges and future direction	PRG, Head of IT	President's Meeting Room
50	10.00 – 10.50	M2	Meeting with IT Senior Management Team and SAR Co-ordinating Committee Theme/focus: Current strategy, challenges and future direction. Governance, management, quality, resources, staff and facilities.	PRG; IT SMT (see list of attendees)	President's Meeting Room

20	10.55 – 11.15		Tea / coffee. Private meeting time for PRG		President's Meeting Room
45	11.20 – 12.05	M3	Meeting with members of staff from IT Department Theme/focus: working environment, career development and opportunities, empowerment, team work, collaboration and support, reward and recognition	PRG; See list of attendees	President's Meeting Room
45	12.15 – 13.00	M4	Meeting with members of staff from IT Department Theme/focus: working environment, career development and opportunities, empowerment, team work, collaboration and support, reward and recognition	PRG; See list of attendees	President's Meeting Room
40	13.00 – 13.40		Lunch & private meeting time for PRG		President's Meeting Room
20	13.50 – 14.10	M5	Tour of Unit Facilities		121 SSG
45	14.15 – 15.00	M6	Meeting re Digital Strategy & Project Planning	PRG; See list of attendees	President's Meeting Room
45	15.10 – 15.55	M7	Meeting re Service Management, Infrastructure, Security	PRG; See list of attendees	President's Meeting Room
25	16.00 – 16.20		Tea/coffee Private meeting time for PRG		President's Meeting Room
50	16.20 – 17.10	M8	Meeting with student representatives (Option A)	PRG; See list of attendees	President's Meeting Room
50	17.10 – 18.00		Review of afternoon's meetings.		President's Meeting Room
	19.00 – 21.00		PRG Dinner if required	PRG	Hotel

Day 2: Wednesday 20 November 2019

Dur. mins	Time	Meeting No.	Meeting Theme	Attendees	Venue
20	08.40 – 09.00		Private meeting time for PRG	PRG	Sir Thomas Myles Room
45	09.00 – 09.45	M9	Meetings with members of RCSI SMT Theme/focus: Alignment with RCSI strategy, support, collaboration, future developments	PRG; See list of attendees	Sir Thomas Myles Room
45	09.55 – 10.40	M10	Meeting re Change Management – Off the Shelf Implementation	PRG; See list of attendees	Sir Thomas Myles Room
20	10.45 – 11.05		Tea / coffee. Private meeting time for PRG.	PRG	Sir Thomas Myles Room
45	11.10 – 11.55	M11	Meeting re project delivery – Custom Built	PRG; See list of attendees	Sir Thomas Myles Room
45	12.05 – 12.50	M12	Meeting re Technology Enhanced Learning	PRG; See list of attendees	Sir Thomas Myles Room
20	13.00 – 13.45	M13	Working lunch with student representatives (Option B)	PRG; See list of attendees	Sir Thomas Myles Room
25	13.50 – 14.15		Private meeting time for PRG	PRG	Sir Thomas Myles Room
45	14.15 – 15.00	M14	Meeting with staff as end users	PRG; See list of attendees	Sir Thomas Myles Room
45	15.10 – 15.55	M15	Meeting re Application Management	PRG; See list of attendees	Sir Thomas Myles Room
20	16.00 – 16.20		Tea / coffee. Private meeting time for PRG.	PRG	Sir Thomas Myles Room

40	16.20 – 17.00	M16	Meeting with Senior Members of Staff		Sir Thomas Myles Room
60	17.00 – 18.00		Private meeting time for PRG members to finalise draft commendations and recommendations	PRG	Sir Thomas Myles Room
	19.00		PRG Dinner and a chance to discuss key issues (if required)	PRG	Hotel

Day 3: Thursday 21 November 2019

	Time	Meeting Theme	Attendees	Venue
195	08.45 – 12.00	Private meeting time for PRG – discussion and finalisation of Commendations and Recommendations for all sections.		President's Meeting Room
	10.30	Tea / coffee.		President's Meeting Room
	08.45 – 12.00	Private meeting time for PRG – discussion and finalisation of Commendations and Recommendations for all sections.		President's Meeting Room
20	12.00 – 12.20	Private meeting with QEO		President's Meeting Room
15	12.25 – 12.40	Meeting with Head of Unit & QEO		President's Meeting Room
20	12.40 – 13.00	Exit presentation to all Unit Staff		VC Room
60	13.00 – 14.00	Light Lunch and Private meeting with QEO		President's Meeting Room
	14.00	Review ends.		