# Digital Planning:

## Business Initiative Intake and Resource Planning Standard Operating Procedure

March 2020

V1.000

# Revision History

| v# | CHANGES | DATE | NOTES |
|---|---|---|---|
| V0.99 | Reviewed by Queen's Digital Project Planning Group | 2019-06-14 | |
| V0.100 | Reviewed by Queen's Digital Project Planning Group | 2020-03-11 | |
| V1.000 | Published version | 2020-04-14 | |

# Contents

# About This Document

The purpose of this standard operating procedure (SOP) is to act as a guide to:

- effectively and efficiently manage the intake into IT Services or other IT service providers of new and emerging business needs as IT opportunities;
- ensure consistent requirements definitions;
- bring IT opportunity visibility, create transparency and increase synergies;
- develop high-level options and secure funding based on estimated costs;
- enable clear, transparent prioritization of initiatives through an approved governance process; and
- forecast demand for IT investment and allocate IT Services or other shared services resources to scheduled IT opportunities.

The focus of this SOP is primarily on the intake of New Business Needs (Table 1).

*Table 1 - Types of Business Intake*

| INTAKE TRIGGER | CLIENT ENGAGEMENT | PROCESS DESCRIPTION |
|---|---|---|
| Service Incident | Service incidents are reported to the IT Support Centre via phone, email, web form or in person. | A break/fix issue that needs to be resolved and is handled (recorded/actioned) through a ticket (documentation of the event) that is used to coordinate actions across workflows. |
| Service Request | Service requests are handled through the IT Support Centre and in future will be automated through the online Service Catalogue. | A request for an existing service that IT Services or other shared service provider offers to clients. Service requests are fulfilled after the appropriate tasks and approvals have been accomplished. Service requests may be fulfilled by the user selecting predefined items made available through the online service catalogue (future). |
| Continuous Service Improvement (Service Roadmap) | Service Owners work collaboratively with stakeholders to identify service improvement priorities on existing platforms. | Service Roadmaps are used to plan and prioritize service improvements in collaboration with stakeholders. Improvements are implemented through a series of goal-based releases that implement new service features. |
| New Business Needs (Initiative Intake Form) | The Business Relationship Management team collaborates with stakeholders to identify strategies and new business initiatives. | This process provides a standard, responsive, transparent and effective means to move a business need from an idea proposed by a Business Champion, through to a prioritized and chartered (authorization to proceed) initiative and is outlined in this SOP. |

# Executive Summary

**Purpose**:  The Business Initiative Intake and Resource Planning processes documented in this standard operating procedure (SOP) enable IT Services or other shared services to act on the emerging business needs of Queen's faculties, departments and shared services in a standard, transparent and effective manner. This results in IT opportunities moving efficiently through a set of review steps and decision-making checkpoints to become funded, scheduled, chartered IT projects, authorized to proceed to Project Execution (Figure 1).

*Figure 1- Focus of the Business Initiative Intake & Resource Planning SOP*
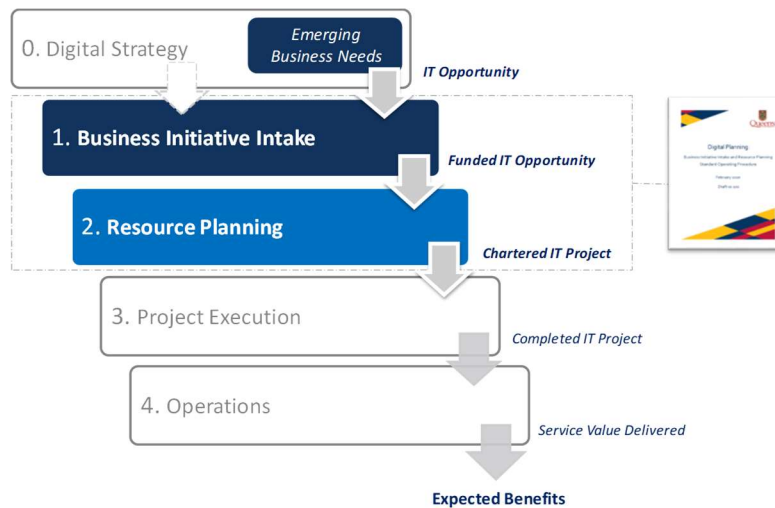


**Methodology**:  The Business Initiative Intake process includes specific review steps and decision-making checkpoints to identify, validate and fund IT opportunities. The process is generally initiated when a Requestor identifies an IT opportunity and engages with IT Services Business Relationship Management (BRM) resources to develop an IT opportunity intake. BRM reviews the documented IT opportunity intake form with the identified Business Champion who then decides to either (a) investigate, (b) put on hold, or (c) decline to commit further effort to the IT opportunity.

*Figure 2 - Business Initiative Intake Process Review Steps and Decision-Making Checkpoints*
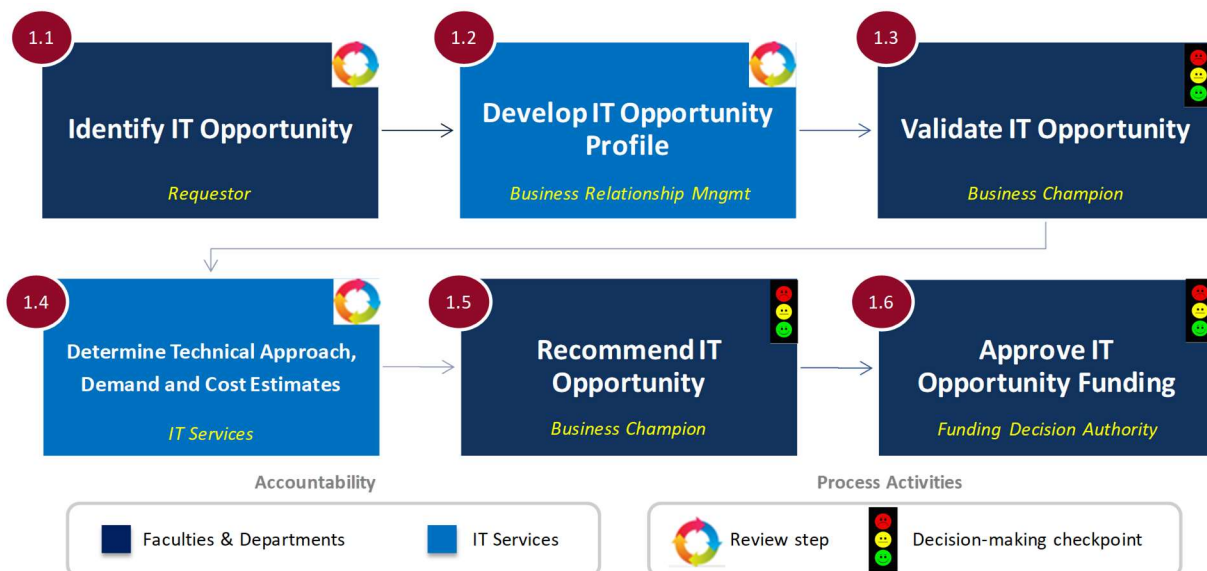
A decision by the Business Champion to investigate the IT opportunity engages IT Services resources and other shared services as required to assess and provide an initial technical approach, potential solution option(s) and high-level costing and effort estimates for the IT opportunity.  Based on those results, the Business Champion decides to (a) recommend the IT opportunity for funding to the appropriate level of approval, or (b) to turn it back for revision to address any concerns.

IT opportunities are categorized in one of the five following governance domains, each governed by their respective steering committee: Teaching and Learning, Research Support, Human Resources and Financial Administration, Student Lifecycle Administration and Support, and finally Digital Platforms.

**Governance**:  The decision by the Business Champion to submit the IT opportunity for funding results in the IT opportunity being routed to one of three levels of approval: Local (Faculty/Department/Shared Services), Strategic (domain-specific and cross-domain) or Executive.  This routing is based on the classification of the IT opportunity by the Business Champion using effort, cost, and risk factors.

The funding decision authority for IT opportunities requiring funding from the Digital Planning fund lies with the Queen's Digital Planning Committee (QDPC).

IT opportunities are routed to Executive-level decision authority for funding approval through the Senior Leadership team (SLT) (>$2.5 million) or Board of Trustees (>$5.0 million).

**Resource Planning**:  An approved IT opportunity by the appropriate governing body triggers the initiation of the Resource Planning Process (Figure 3), which includes specific review steps and decision-making checkpoints to schedule the funded IT opportunities. This scheduling is based on resource availability, dependencies and priorities established by governance bodies.

*Figure 3 - Resource Planning Process Review Steps and Decision-Making Checkpoints*
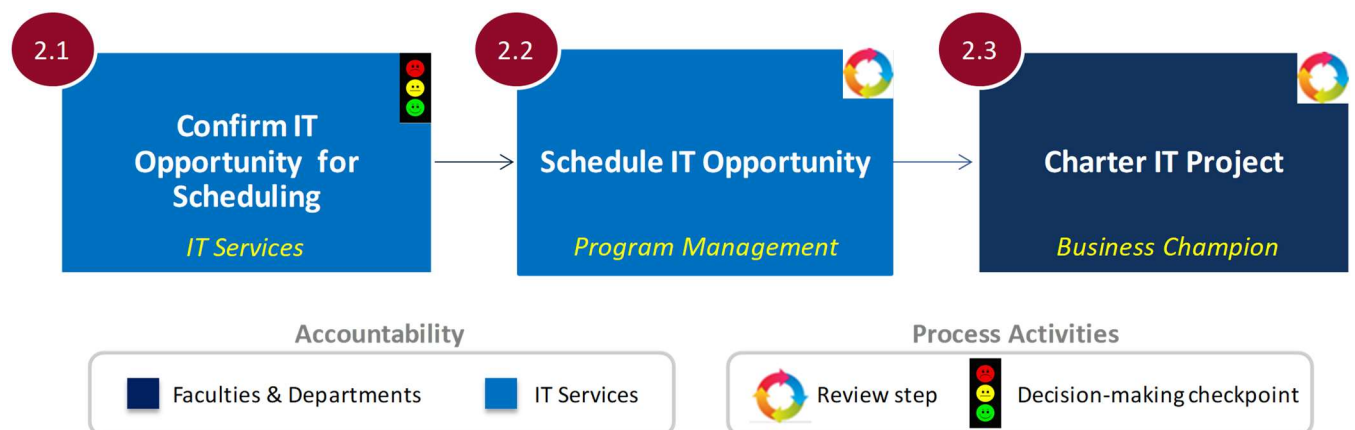


The proposed schedule for the IT opportunity is routed through BRM to the Business Champion for their final agreement. In the case of a dispute, BRM strives to reach a suitable resolution with the Business Champion. Escalation is possible, when necessary. The scheduled IT opportunity is subsequently authorized to proceed to project execution through the creation of an IT project charter led by IT Services and signed off by the Business Champion.

# 1 Business Initiative Intake Process

Through its Business Relationship Management (BRM) function, IT Services actively liaises with stakeholders across Queen's faculties, departments and shared services to seek out and pursue new and emerging business needs resulting in IT opportunities that require IT Services support and/or system design review and risk assessment. There are several process activities and decision-making checkpoints that are undertaken along the way as described in this section of the SOP. Figure 5 depicts the process flow for these activities. It can be found at step 1.7.

## 1.1 IDENTIFY IT OPPORTUNITY

As part of their annual planning activity, Queen's faculties, departments and shared services provide IT Services with a list of business needs resulting in IT opportunities. This input to the continuous Business Initiative Intake process is elicited by BRM, who also work diligently throughout the year to liaise with IT Services stakeholders to:

 * Understand their needs and goals;
 * Inform their strategic planning;
 * Assist them in determining their potential IT opportunities;
 * Identify technology needs that span multiple areas of the university; and
 * Recognize IT related risks.

Queen's faculties, departments and shared services demand for IT Services to provide technology guidance and support their understanding of IT opportunities is the basis for eliciting clear stakeholder requirements and identifying common goals. Therefore, BRM's priority is to understand stakeholders' business requirements and desired IT investment outcomes.

> The output of this ongoing process activity is the identification and information about business-related needs for IT systems, services and support, and desired IT investment outcomes.

## 1.2 DEVELOP IT OPPORTUNITY INTAKE FORM

BRM works with faculty, department and shared services to profile their business initiatives and related IT opportunities using the Initiative Intake Form[1]. This form is completed in collaboration with the Requestor(s) and the Business Champion for an initiative. BRM validates the information captured is complete and works with the Requestor to fill in any gaps. The intake form is then reviewed for accuracy by relevant stakeholders to confirm it contains all necessary information to suitably inform IT Services of the need, rationale, scope, objectives and requirements for new or modified IT systems, services and support.

IT Services may request that additional input be prepared as necessary to sufficiently understand IT opportunities and integration requirements. All proposed IT opportunities, and related integration requirements, are referenced and tracked by BRM throughout their life cycle on the Initiatives Master List [2]for transparency and managing performance.

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[1] See Appendix B – Initiative Intake Form
[2] See Appendix B – Initiatives Master List

> The output of this process activity is the draft IT opportunity intake form captured in a standardized format and tracked on the updated Initiatives Master List for transparency.

## 1.3 VALIDATE IT OPPORTUNITY

Once profiled, the IT opportunity is assessed by the Business Champion to understand and validate the merits of expending IT Services and other shared services resources to further investigate the business need at this time. In close partnership with the Requestor(s) and Business Champion, BRM will determine whether IT Services requires more information to investigate the IT opportunity for its technical feasibility, solution options, required resources, time and cost to complete. The Business Champion will either decide to move the IT opportunity forward to investigate high-level options and high-level costing or decline to move forward with the IT opportunity.

> The result of this decision-making checkpoint is a decision by the Business Champion to either (a) investigate, (b) put on hold, or (c) decline to commit further effort to this IT opportunity at this time.

## 1.4 DETERMINE TECHNICAL APPROACH, DEMAND AND COST ESTIMATES[3]

IT Services resources, in consultation with appropriate stakeholders are engaged to evaluate the IT opportunity for potential solution options and provide technical input and guidance. IT Services' determination of the best technical approach for the IT opportunity is informed by knowledge of the technology and application portfolio and architecture, as well as architecture policies and standards.

To ensure security, compliance and infrastructure alignment, the proposed high-level technical systems design for all IT opportunities and any options are evaluated by the enterprise architect in conjunction with the information security officer (ISO). These include, but are not limited to, cybersecurity, technology platform, data interoperability and integration requirements.

IT Services resources are engaged to determine a high-level estimated measure of effort both for IT Services resources and business resources, available resource capacity to deliver, initial delivery schedule and estimated costs for implementation and sustainment.

> The output of this process activity is an updated intake of the IT opportunity with technical approach, solution options (when applicable), high-level requirements and initial costing and effort included.

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[3] See Appendix C – Step #1.4 Determine Technology Approach, Demand and Cost Estimates

## 1.5 RECOMMEND IT OPPORTUNITY

BRM facilitates a review of the IT opportunity intake form updates with the Business Champion, including the technical approach, any solution options, and initial high-level estimates of resource effort and costing both for implementation and sustainment. If satisfied, the Business Champion recommends the IT opportunity move forward for funding or may request appropriate modifications to the intake form to address any concerns related to scope, scale, or compliance issues, etc.

The Business Champion with support of the BRM team will use the rubric for scoring IT opportunities (Table 2) to score the IT opportunity and self-assess its relative importance.

The scoring, which stems from the information presented in the intake form provides a quantitative approach to reviewing opportunities and will be part of the consideration by the committees for prioritization of proposed projects.  The scoring will help create an initial list when presented to the respective steering committees and Queen's Digital Planning Committee (QDPC). It will support deliberations and assist with transparent decision making.

*Table 2 - IT Opportunity Scoring Rubric*

| Prioritisation Criteria | Definition | Guideline | Scale |
|---|---|---|---|
| Strategic  Alignment | How well does the initiative directly support institutional strategies? | No direct alignment | 1 |
| | …student experience & learning outcomes? | Minor direct alignment | 2 |
| | …research intensification? | Moderate direct alignment | 3 |
| | …internationalisation? | Considerable alignment with multiple elements | 4 |
| | …equity, diversity and inclusivity? | Complete alignment | 5 |
| Benefits | What benefits does the initiative provide? | No demonstrable benefits | 1 |
| | …competitive advantage? | Minor benefits identified | 2 |
| | …improved quality? | Moderate benefits identified | 3 |
| | …reputation? | Major benefits identified | 4 |
| | …relationships? | Significant benefits identified | 5 |
| Improvement Impact | What is the breadth of impact of this initiative? | Single department or unit | 1 |
| | | Multiple departments or schools | 2 |
| | | Some segment of Student, Faculty or Staff population | 3 |
| | | Significant segment of Student, Faculty or Staff population | 4 |
| | | Institution wide | 5 |
| Fiscal Sustainability | Does the initiative produce new net revenue annually? | $1,000.00 | 1 |
| | | $10,000.00 | 2 |
| | | $100,000.00 | 3 |
| | | $1,000,000.00 | 4 |
| | | over $1,000,000 | 5 |
| Operational Efficiency | Does the initiative anticipate any annual cost reduction or avoidance and/or time savings? | $1,000/100 hours | 1 |
| | | $10,000/1000 hours | 2 |
| | | $100,000/10000 hours | 3 |
| | | $1,000,000/100000 hours | 4 |
| | | Over $1,000,000/100000 hours | 5 |
| Risk Mitigation | How well does the initiative mitigate against the Universities key risks? (refers to Queen's University Key Risk Register) | Does not mitigate any risk | 1 |
| | | Provides mitigation to a low risk | 2 |
| | | Provides mitigation to a medium risk | 3 |
| | | Provides mitigation to a high risk | 4 |
| | | Provides mitigation to multiple risks | 5 |

The result of this decision-making checkpoint is a decision by the Business Champion to (a) recommend the IT opportunity for funding, or (b) to turn it back to prior steps for necessary revision to address any concerns.

## 1.6   APPROVE IT OPPORTUNITY AND FUNDING ALLOCATION

The Business Champion's decision to submit the IT opportunity for funding results in it being routed to the appropriate level of approval in accordance with Table 3.

IT opportunities are classified according to the specific factor furthest to the right.

*Table 3 - IT Opportunity Approval Levels*

| CLASSIFICATION FACTORS | IT OPPORTUNITY APPROVAL LEVELS | | |
|---|---|---|---|
| | Faculty/Department/ Shared Services (1.6a) | Strategic (1.6b) | Executive (1.6c) |
| Effort Estimate | < 250 hours | 250 - 5,000 hours | > 5,000 hours |
| Cost Estimate | <$100K | >$100K | > $2.5M (SLT*) > $5.0M (BoT**) |
| ***Institutional Risk Assessment (The highest score of:  Risk of doing nothing OR Risk of doing something) | LOW (up to 4) | MEDIUM (5 to 19) | HIGH (20 to 25) |

*Senior Leadership Team **Board of Trustees *** as per Queen's Enterprise Risk Management framework*

## Step 1.6a - Faculty/Department/Shared Services Approval Level

An IT opportunity with relatively low cost, low effort and low risk based on the Queen's Enterprise Risk Management framework, is routed to the Faculty, Department, Shared Services approval level.

The Faculty, Department or Shared Service decision-maker can:

* Proceed by approving the recommended approach or by approving with conditions;
* Refer up to a domain-specific steering committee for further discussion (1.6b); or
* Not proceed by rejecting, putting on hold.

Once it is confirmed that the necessary funding is available and approved within the Faculty/Department/Shared Service and that all shared resources are available to implement and sustain the proposed options, the approved IT opportunity is moved to detailed resource planning and scheduling within IT Services. (See Section 2)

## Step 1.6b - Strategic Approval Level

IT opportunities that are routed to the strategic level for approval are those for which the cost, effort and institutional risk factors are assessed within the parameters of Table 3 - IT Opportunity Approval Levels as well as those opportunities that have been referred up from a Faculty/Department/Shared Service. The strategic level has two distinct approval layers:  domain-specific and cross-domain.

* **Domain-specific**:   Designated steering committees prioritize IT opportunities within the five domains indicated in Figure 4.
* **Cross-domain**: The QDPC conducts, for funding and resource planning purposes, an overall prioritization against other IT opportunities stemming from the other domains that require funding or use of limited shared resources.  If necessary, and in consultation with the steering committees' chairs, the QDPC can align initiatives to take best advantage of resource scheduling, contracting, and/or interdependencies. QDPC decisions are made by consensus wherever possible and fall to the co-chairs if consensus cannot be reached.

*Figure 4 - IT Opportunity Domains*
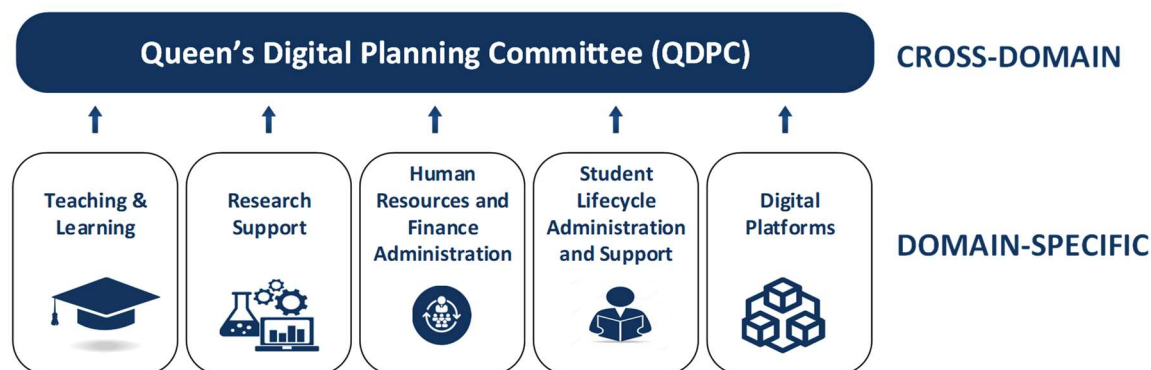


## Domain-Specific Path – Designated Steering Committees

IT Opportunities are assigned to the appropriate domain-specific steering committee for the purpose of having stakeholders consult each other and seek consensus in the prioritization of those IT Opportunities. To assist them, steering committees may choose to consult with their own advisory committees.

### Domain-Specific Steering Committees

- Teaching and Learning: Educational Technologies (EdTech) Steering Committee
- Research Support: Associate Dean (Research) Committee
- Human Resources and Finance Administration: Business Officers Committee (TBC)
- Student Lifecycle Administration and Support: Student Lifecycle Coordination Committee (TBC)
- Digital Platforms: Queen's Digital Planning Committee (QDPC)

The domain-specific steering committees review and discuss the proposals within their respective governance areas for accuracy, completeness and institutional alignment and makes one of the following decisions:

- proceed by approving the recommended approach or by approving with conditions;
  - o when no funding is required from the Digital Planning fund and resources are available, the decision to move the IT Opportunity to detailed resource planning and scheduling within IT Services remains with the domain-specific steering committee
  - o when funding from the Digital Planning fund is required or when cross-domain prioritization of resources is required the decision maker/funding authority is the QDPC.
- refer up to the cross-domain steering committee for further discussion (1.6b); or
- not proceed by rejecting or by putting on hold.

Steering committee decisions are made by consensus or as established in their Terms of Reference. If necessary, it is referred up to the QDPC.

## Cross-Domain Path – Queen's Digital Planning Committee (QDPC)

The QDPC completes a cross-domain review of recommended IT Opportunities to ensure their collective understanding including their institutional alignment and contributions to the University's strategic goals and objectives. They then prioritize the cross-domain IT Opportunities taking into consideration the priorities and timelines set by the domain-specific steering committees. If necessary, and in consultation with the steering committees' chairs, the QDPC can align initiatives to take best advantage of resource scheduling, contracting, and/or interdependencies. If QDPC identifies that additional information or changes are required, the feedback will be provided to the domain-specific committees and Business Champion and the proposal will be returned via the governance administrator.

If the amalgamated funding request is within the Digital Planning fund envelope, the QDPC can make one of the following decisions regarding all or some of the recommended IT Opportunities:

- proceed by approving the recommended approach or by approving with conditions and allocating funding; or
- not proceed by rejecting or by putting on hold.

If the amalgamated funding request is greater than the Digital Planning fund envelope, the QDPC will make one of the following decisions:

- proceed by approving the recommended approach or by approving with conditions and pursue further through a funding request to the Provost's Advisory Committee on Budget (PACB).; or
- not proceed by rejecting or by putting on hold.

At a minimum, the committee will be presented with an annual list to coincide with the yearly budget submission process.

Should initiatives come forward out of cycle, the QDPC could be called upon to assess a new initiative to:

- approve its funding within the Digital Planning fund envelope or seek funding opportunities; or
- delay an already prioritized and funded initiative (exceptionally).

## Step 1.6c – Executive Approval Level

Projects are submitted to the executive level funding authority for approval through the Senior Leadership Team (SLT) (>$2.5 million) or Board of Trustees (=>$5.0 million).

The IT Services BRM team provides all the coordination and administrative support for the IT Opportunities as they are routed through the governance process.

## 1.7 PROCESS FLOW AND RACI –INITIATIVE INTAKE

The process activities and decision-making checkpoints previously described in this section of the SOP are illustrated in the following process flow diagram – Figure 5.

*Figure 5 –Initiative Intake Process Flow*
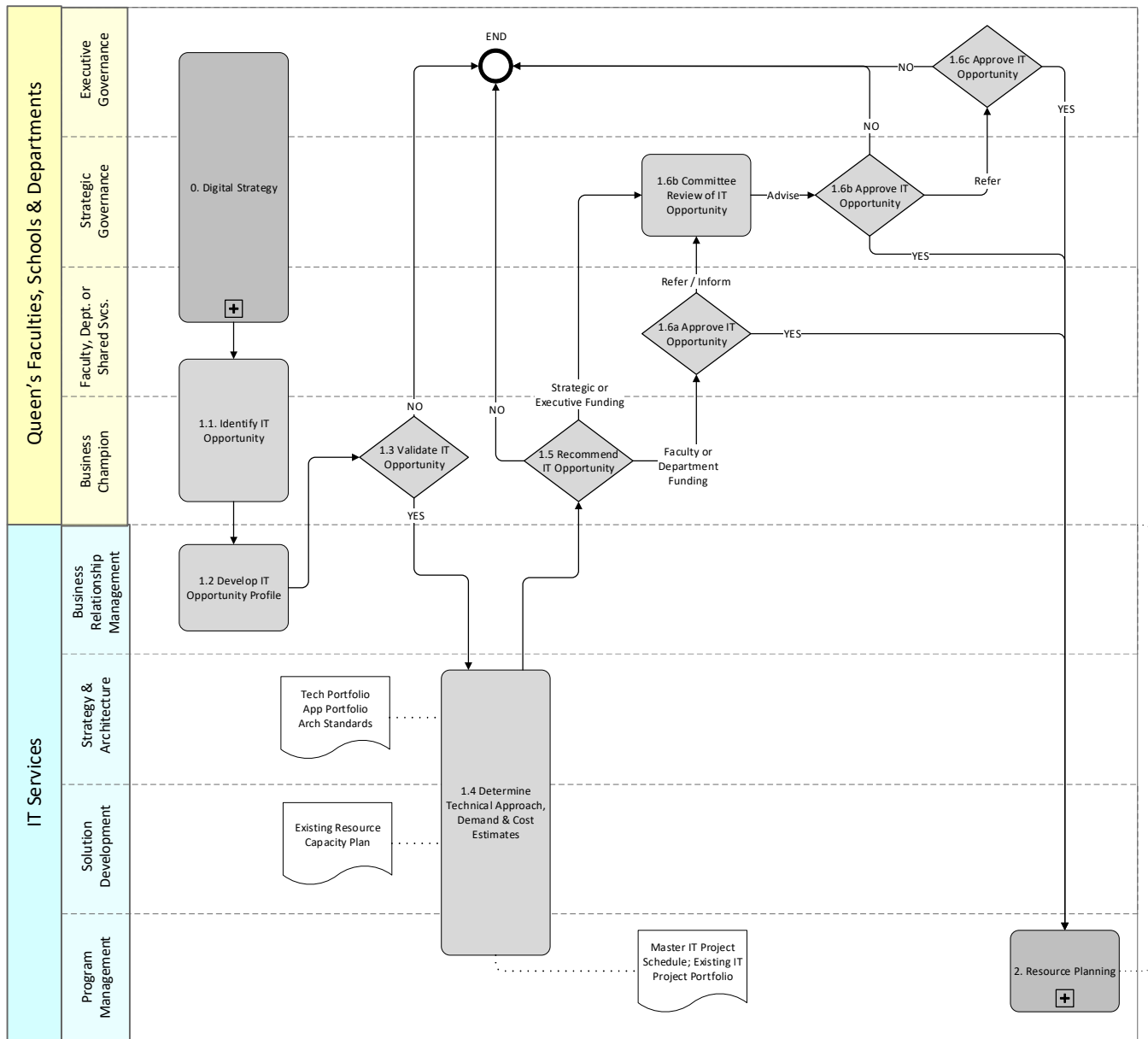
# 2 Resource Planning Process

IT opportunity initiatives that successfully receive funding approval, and that involve central IT Services resources, must be scheduled by the IT Services Program Manager so that resources can be allocated to undertake the approved work.

## 2.1 CONFIRM IT OPPORTUNITY FOR SCHEDULING

The IT Services Program Manager will review the documented IT opportunity intake form for completeness prior to scheduling. When necessary, further information and modification may be requested to ensure the development team has all relevant information prior to starting any work. Once confirmed the IT opportunity can be scheduled based on resource availability and dependencies as described below.

*The result of this decision-making checkpoint is a decision by Program Management to either (a) confirm the IT opportunity is funded and sufficiently documented to proceed to be scheduled and resourced, or (b) escalate through BRM for modification to address any deficiencies.*

## 2.2 SCHEDULE IT OPPORTUNITY[4]

Based on the IT opportunity intake form, the IT Services Program Manager facilitates scheduling taking into full account the faculty, department or shared services stakeholder's desired timelines, benefit stream assumptions, priority, project interdependencies, available capacity, procurement lead times, etc.

BRM is notified of the proposed schedule and informs the faculty, department or shared services stakeholders. If these stakeholders have a concern with the proposed schedule, BRM facilitates conversations between the stakeholders and IT Services to reach a suitable resolution.  If a suitable resolution cannot be reached, BRM facilitates escalation to strategic governance for a decision on prioritization.

*The output of this process activity is the proposed scheduling of the IT opportunity, notification of the faculty, department or shared services stakeholders and the resolution of any conflicts or concerns.*

## 2.3 CHARTER IT PROJECT

Once the IT opportunity has been scheduled, the IT Services Program Manager will engage with the required Solution Development resources and requisite IT opportunity stakeholders to undertake the creation of an IT project charter. Prior to starting project execution the Business Champion will sign off on the completed IT project charter.

*The output of this process activity is a completed IT project charter for the IT opportunity, signed off by the Project Sponsor.*
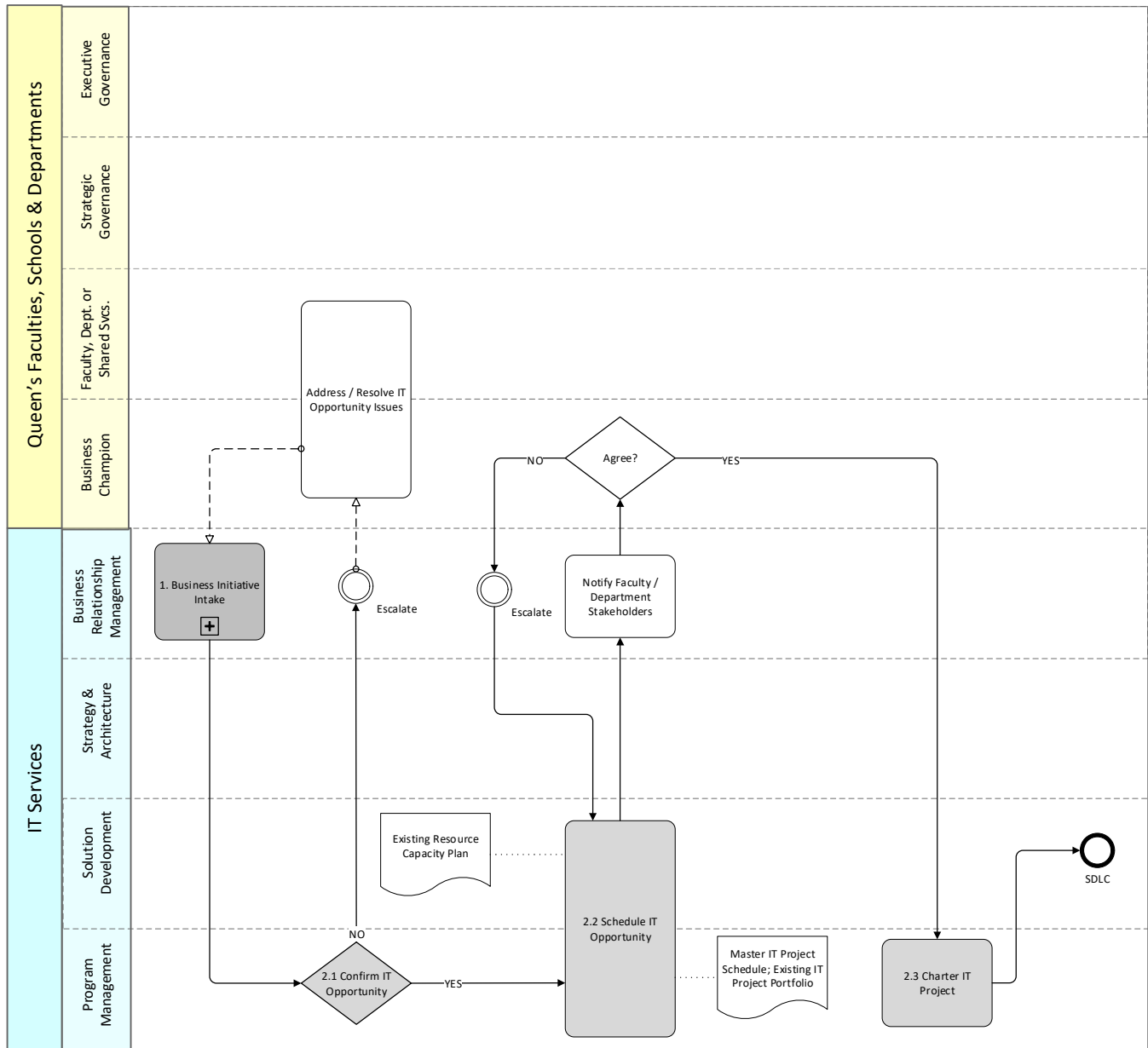
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[4] See Appendix D – Step 2.2 Schedule IT Opportunity

## 2.4  PROCESS FLOW AND RACI – RESOURCE PLANNING

*Figure 6 – Resource Planning Process Flow*

# Appendix A – Glossary

| TERM | DEFINITION |
|---|---|
| Business Champion | The Business Champion provides the business context for the IT opportunity and agrees to the accuracy and completeness of the documented IT opportunity intake form related to the business need. They are pivotal to the related operational change management and communications on the institution side. Has overall authority and accountability for the business initiative on behalf of the institutional area that they represent. This role will be played by either the (Assistant/Associate/Vice) Principal, (Vice/Deputy) Provost or (Assistant/Associate/Vice) Dean or CIO depending on the nature of the business initiative. |
| Business Relationship Management (BRM) | BRM is familiar with Queen's business processes and reduces the barriers between centralized IT and university functional areas by acting as the IT Services liaison across all faculties, departments and shared services. BRM works closely with stakeholders to understand institutional strategies and priorities, seek and investigate new business needs, advise on services and solutions, actively participate in digital planning and proactively bring new opportunities to improve efficiency/cut costs to stakeholders and the university through continuous improvement. |
| Data Custodian | A Data Custodian is an employee of the University who has administrative and/or operational responsibility over Institutional Data. In many cases, there will be multiple Data Custodians. An enterprise application may have teams of Data Custodians, each responsible for varying functions. |
| Domain-specific steering committee | Domain-specific steering committees who prioritize IT Opportunities within the following five (5) domains:<br>• Teaching and Learning;<br>• Research Support;<br>• Human Resources and Finance Administration;<br>• Student Lifecycle Administration and Support; and<br>• Digital Platforms. |
| Enterprise Architect | The enterprise architect works closely with stakeholders to create, maintain and manage the IT architecture. They interpret, use and apply information contained within IT architecture models to inform a range of university improvement activities, particularly those involved in the design, development, enhancement and maintenance of IT systems. |
| Funding Decision Authority | IT opportunities are routed for funding to the appropriate Funding Decision Authority based on classification of the IT opportunity intake. Funding Decision Authorities include Faculty Deans, Queen's Digital Planning Committee (QDPC), Senior Leadership Team (SLT formerly VPOC) and the Board of Trustees (BoT). |
| Governance Administrator | The Governance Administrator role undertakes all of the necessary governance administration activities required to support and enable each of the review steps and decision-making checkpoints throughout the Business Initiative Intake and Resource Planning processes. This role is played by IT Services Business Relationship Management (BRM) resources who also ensure the flow of decision-making information throughout these SOP processes. |
| Information Security Officer (ISO) | The information security officer is responsible for setting security policy and plays a key role in informing, advising, and alerting management on matters relating to information security. |
| Initiative Intake Form | The standard template used by IT Services to iteratively capture and describe the salient details of an IT opportunity sufficient to come to an understanding of the full nature of the opportunity in the form of a documented IT opportunity.<br>(see Appendix B – Initiative Intake Form and Initiatives Master List) |
| Initiatives Master List | Listing of all IT opportunities documented, or in the process of being documented using the Initiative Intake Form to capture the details of the related IT opportunity. The Initiative Master List is maintained by BRM and will make reference to the unique "Initiative ID#" assigned to each documented IT opportunity for identification and tracking purposes.<br>(see Appendix B – Initiative Intake Form and Initiatives Master List) |

| TERM | DEFINITION |
|---|---|
| IT Integration | An IT integration represents one or more systems/applications communicating with one another. The form of communication can vary depending on the client needs. |
| IT Opportunity | The characterization of Queen's stakeholder business needs and resulting IT investment. IT opportunities are uncovered in consultation between BRM and stakeholders across Queen's faculties, departments (including CIO) and shared services having business goals and requirements that can be addressed (at least in part) through IT solutions and services. |
| IT Demand Forecast | Enables matching of expected work portfolio (macro demand) to IT Services ability to deliver resource capacity. Regular resource demand forecast reports should involve Queen's faculties, departments and shared services providing strategic plans and updates for initiatives and work that impact IT Services. IT Services analysts will confirm work plans and updates with the faculties and the program manager will oversee up to date resource demand forecasting |
| IT Project Charter | A short document that provides a shared understanding of the IT project, describes the scope, objectives and participants and serves as a contract between the project sponsor, key stakeholders and the project team. The IT opportunity intake form is a key input to the creation of the project charter. |
| IT Services Teams Site | IT Services electronic collaboration location (Microsoft Teams) of all key templates and submitted documents relevant to this SOP. |
| Queen's Digital Planning Committee | The Queen's Digital Planning Committee's (QDPC) purpose is to review, endorse, prioritise and fund IT opportunities that contribute to an evolving digital environment at Queen's. The QDPC is an authoritative body, responsible to complete cross-domain reviews of recommended IT opportunities, ensuring their collective understanding including their institutional alignment and contributions to the University's strategic goals and objectives. |
| Requestor | A faculty, department or shared services stakeholder who provides input to the IT opportunity and/or integration requirements and agrees to the accuracy and completeness of the documented IT opportunity Initiative Intake Form related to the business need. Works with the Business Champion to ensure alignment with plans and goals of the faculty, department or shared service. |
| Software as a Service (SaaS) | Software as a Service is a cloud-based software licensing and delivery model. Software is licensed on a recurring subscription basis (e.g. monthly or annually), centrally hosted in the cloud and accessed via an internet browser. Typical expected SaaS benefits include lower up-front costs, quick set up and deployment, easy upgrades, accessibility, and scalability. |
| Systems Development Life Cycle (SDLC) | Systems Development Life Cycle (SDLC) is a term used in solution engineering to describe the process for planning, creating, testing and deploying an IT system. |
| 3rd party/external system | A system or application not maintained by IT Services. IT Services is not responsible for 3rd party systems. |

# Appendix B – Initiative Intake Form and Initiatives Master List

## INITIATIVE INTAKE FORM

The current version of the Initiative Intake Form can be found on the IT Services Contact Us page on the IT Services website.

There are 3 sections contained in the intake form. The first section is to be completed with the institutional stakeholders (Requestor(s)/Business Champion). The second section captures integration needs and use case scenarios along with information related to security classification. The third section is for IT Services to complete. It contains the technical approach, solution option(s), high level effort and costing for implementation and sustainment for both the business side as well as IT Services. Additionally, it captures where there is a funding source identified and what years that funding is available.

## INITIATIVES MASTER LIST

The Initiatives Master List is a living document whose purpose is to provide transparency on endorsed, approved and proposed initiatives. The list can be found [TBC] and is refreshed on a regular schedule.

The Initiatives list will include a simple entry containing information related to the initiative such as the Business Champion, Requestor, title of initiative, whether an intake form has been completed, and what stage it's at within the intake process (as described within this standard operating procedure). It will also indicate where the initiative has been placed for prioritization and any funding approvals given or being requested.

# Appendix C – Step #1.4 Determine Technology Approach, Demand and Cost Estimates

The Business Initiative Intake process includes activity by IT Services, in consultation with appropriate stakeholders to determine the technical feasibility, approach, resource demand, effort and cost estimates for an IT opportunity. The purpose of this activity is to begin a systematic approach to finding, capturing and tracking the requirements to reach an agreed-upon understanding of what the recommended solution should do.

Successful completion of this step (#1.4) optimizes the trade-offs between requirements and constraints to identify a compliant solution option(s) that maximizes value relative to stakeholder expectations. Subsequent to this step, stakeholder agreement on the recommended high-level solution design is achieved (see subsection 1.5) before any major funding investments are made or IT Services proceeds with resource scheduling of the IT opportunity for solution development.

The work in this step (#1.4) is only undertaken after:
   * The required business initiative information has been elicited and captured by Business Relationship Management (BRM) using the Initiative Intake form (see Appendix B); and
   * The Business Champion has approved IT Services to proceed with these activities (see subsection 1.3).

The appropriate[5] Manager, Solution Engineering is accountable to lead completion of the required activities in this step (#1.4) of the process. They collaborate closely with BRM, the architecture team and identify and notify those on the engineering team and appropriate stakeholders that are required to review and assess the IT opportunity (see Table 4). They will involve Service Operations (eg; for input on sustainment) and Operational Oversight (eg; for input on vendor management).

*Table 4 - Business Intake Process (RACI) for Business Intake Process Activity #1.4*

| # | ACTIVITY | QUEEN'S STAKE-HOLDERS | | IT SERVICES STRATEGY & ARCHITECTURE | | IT SERVICES SOLUTION DEVELOPMENT | | IT SERVICES SERVICE OPS |
|---|---|---|---|---|---|---|---|---|
| | | Requestor | Shared Services Stakeholder | BRM | Architecture | Engineering Managers | Program Manager | Operations Managers |
| 1.4 | Determine Tech Approach, Demand and Cost Estimates | I | C | C | C | A | R | C |

**For each IT Opportunity, the appropriate Manager, Solution Engineering, ensures the Initiative Intake form:**

1. Contains the findings and output of the work completed by IT Services during this part of the intake process in the applicable section of the form that profiles these findings for the IT opportunity; and
2. Includes updated technology approach, solution options (if applicable) and initial effort and costing estimates determined by those consulted (Figure 7).

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[5] Appropriate based on the assigned areas of responsibilities of each Manager, Solution Engineering and the nature of the IT opportunity

BRM then reviews this technology approach, options, effort and costing information captured in the IT opportunity intake form with the Business Champion to enable them to make an informed decision to proceed with funding the IT opportunity.

*Figure 7 – Collaboration on IT Opportunity Technology Approach and Cost Estimates*
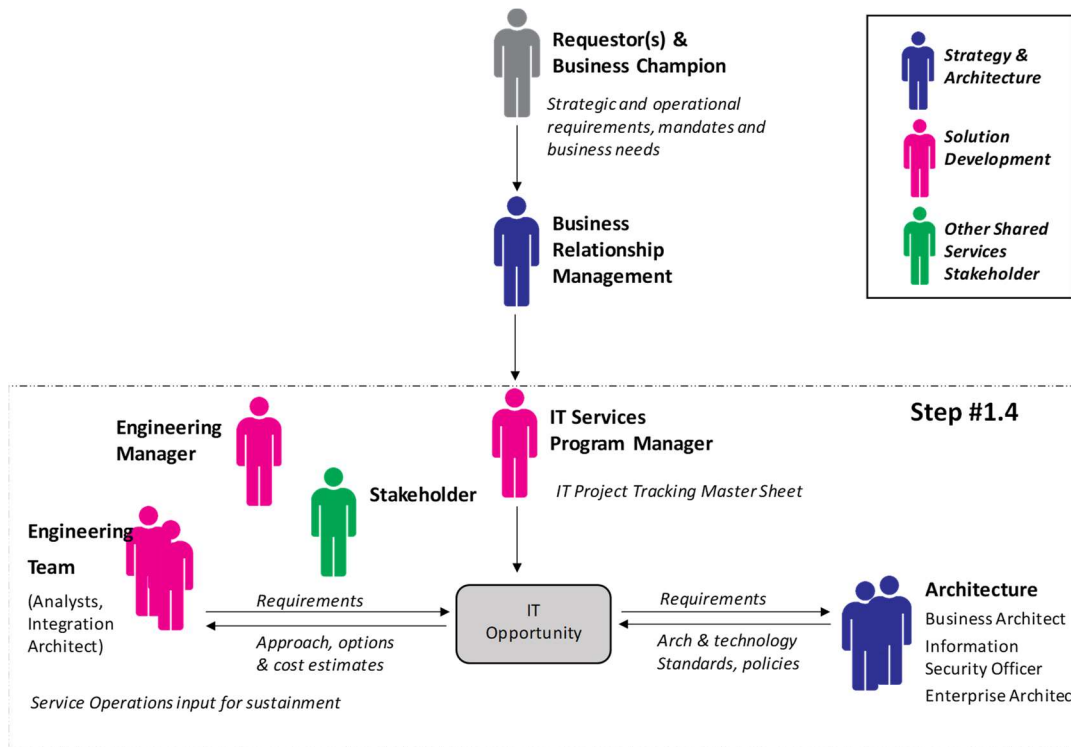


## MANAGER, SOLUTION ENGINEERING RESPONSIBILITIES

In general, the Solution Engineering Managers oversee the continual development and improvement of IT systems through both incremental and innovative technological changes and improvements. This includes the planning, development and refinement of application and technology infrastructure architectures, components and services based on business needs, application or technology lifecycles, new technology developments, operational performance and stakeholder satisfaction.

The appropriate Manager, Solution Engineering (depending on the nature of the IT opportunity) quarterbacks this step (#1.4) of the intake process and determines the required resources (e.g. solution architects, systems analysts, integration architects etc.) to bring together based on information provided in the Initiative Intake form. They are accountable for overseeing this team to determine the high-level technology approach and solution design option(s) for the IT opportunity. This includes:

  * Ensuring that the technology approach is compliant with IT standards and policies and the new or enhanced solution is appropriately designed to support requirements, including any integration requirements;
  * Actively collaborating with BRM to engage Queen's stakeholders to identify requirements as needed to complete a high-level technology approach and solution design, including negotiation of required vs. desired features based on cost, time to implement etc.;
  * Translating the IT opportunity into the amount and type of resources required i.e., work/effort, skills, infrastructure components etc.;

- Using estimation models based on different activity types (package implementation, custom development, etc.) and historical trends to aid in costing and resource forecasting;
- Referencing the existing IT Services Project Tracking Master (overseen by the IT Services Program Manager) to determine any project interdependencies and aid in high level scheduling estimates.

Reuse of any applicable existing solution designs and components minimizes time-to-implementation and improves solution quality.

## ENGINEERING TEAM RESPONSIBILITIES

Determination of the best technology approach for an IT opportunity will be informed by analysts' and specialists' knowledge of the technology and application portfolio as well as architecture policies and standards. The required Solution Development analysts and specialists are enlisted by the Manager, Solution Engineering to evaluate the IT opportunity. These resources will conduct an internal IT Services meeting[6] (in person, online or over the phone) to:

- Assess the information provided in the IT opportunity intake form;
- Determine if sufficient information has been captured for initial solution option(s) and high-level effort and cost estimates;
- If the analysts and specialists assigned to the IT opportunity deem there is inadequate information in the IT opportunity intake form to proceed, and BRM cannot provide sufficient clarification, then BRM will facilitate a meeting with the stakeholder Requestor(s) to provide the additional information required.
- Develop an action plan to put together the information required to update the applicable part of the IT opportunity intake form to provide the required technology approach, level of effort, available resource capacity to deliver, initial delivery schedule and estimated costs.

The integration architect will carefully and comprehensively analyze integration requests (when and where applicable).

## ARCHITECTURE TEAM RESPONSIBILITIES

This team includes the Business Architect, Enterprise Architect, Information Security Officer and Information Data Management Officer.

To ensure security, compliance and infrastructure alignment, the proposed technical systems design and any solution options for an IT opportunity will be evaluated for compliance with business and technical architecture principles, IT strategy, and applicable policies and standards. These include, but are not limited to, cybersecurity, technology platform, data interoperability and integration concerns. The architecture team participates in this activity.

The Strategy & Architecture team is:

- Involved in clearly defining goals for IT aligned to Queen's strategic objectives and vision;
- Charged with ensuring solution design compliance with the business and IT architectures; and
- Safeguards the development and ongoing maintenance of architectural and technology standards to facilitate interoperability, reuse, rapid development and to confirm they remain current with leading practices (e.g. Cloud, API, cybersecurity, etc.). They also oversee the development and maintenance of IT policies and guidelines aligned with university policies and Queen's objectives.

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[6] This may be in the form of a standing internal IT Services meeting for the purposes of regularly evaluating new IT opportunities

Within this step (#1.4) of the Business Intake process, the architecture team is responsible for providing architectural input as required and reviewing the IT opportunity to confirm compliance with applicable IT goals, standards and policies.

This may include:
- Considering privacy, security, and regulatory requirements in the solution design;
- Ensuring the solution design is based on reuse and established architecture patterns;
- Conducting a preliminary architecture review of the solution design;
- Acting as subject matter expert to represent published IT strategy, technology roadmaps and architectural policies, guidelines and principles.

As required, the architecture team will coordinate with the appropriate Manager Solution Engineering and BRM to bring any issues to the attention of the Business Champion. For non-compliant solution designs, the architecture team will ensure that any exceptions are identified, noted and resolved appropriately.

## BRM RESPONSIBILITIES

Throughout the Business Intake process, BRM is responsible for managing the relationship between IT Services and its stakeholders to understand the strategies and priorities of Queen's stakeholders. In general, BRM shares information on available services, overall IT Services strategies and generally provides advice and guidance to Queen's stakeholders on services and solutions. They also proactively work with stakeholders to identify new opportunities to improve efficiencies and increase value for the university.

In the early part of the Business Intake process a key responsibility for BRM is to facilitate IT Services demand management by identifying and capturing emerging business needs and priorities for future IT initiatives. This is done in close consultation with stakeholders, and specifically knowledgeable Requestor(s) who can describe the business needs as well as the Business Champion[7] accountable for the IT opportunity. Emerging business needs are captured by BRM using the Initiative Intake Form[8], to provide IT Services with the necessary context, high-level requirements and understanding of the business challenges or opportunities. This informs and enables IT Services to determine the appropriate technology approach, options and initial costing estimate for the IT opportunity.

Within this step (#1.4) of the Business Intake process, BRM is specifically responsible for coordinating with Requestor(s) and the Business Champion (as necessary and in cooperation with the Manager, Solution Engineering).

This may include BRM:
- Collaborating with the Manager, Solution Engineering and rest of the IT Services team by acting as a proxy for the Requestor(s) and Business Champion to clarify and/or elaborate the IT opportunity context, concept and requirements captured through the Initiative Intake Form;
- Liaising with Queen's stakeholders to further clarify business strategies and needs related to the IT opportunity and/or coordinate with relevant external 3rd party(s) they may have engaged (e.g. SaaS provider) to capture any required inputs needed to complete the technology approach assessment;

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[7] See Appendix A – Glossary
[8] See Appendix B – Initiative Intake Form and Initiatives Master List

- Communicating and resolving issues and challenges uncovered during the technology approach assessment that require the attention of the Business Champion. This could include things such as any compliance related issues, for business or technical policy compliance, technical standards compliance, regulatory related issues etc.

*Table 5 – Process Deliverables for Business Intake Process Activity #1.4*

| # | ACTIVITY | IT OPPORTUNITY INTAKE FORM | INITIATIVES MASTER LIST | IT SERVICES PROJECT TRACKING SPREADSHEET | IT PROJECT CHARTER |
|---|---|---|---|---|---|
| **1.4** | Determine Technology Approach, Demand and Cost Estimates | Updated for Effort & Estimates | Updated for status | Referenced | |

# Appendix D – Step 2.2 Schedule IT Opportunity

The Resource Scheduling Process includes the activity completed by IT Services to schedule an IT opportunity based on resource availability and dependencies. The purpose of this activity is to confirm the sequencing of IT opportunities as agreed with stakeholders on the highest priority initiatives for IT Services to charter, resource and start first.

Successful completion of this step considers:

- The Business Champion/Requestor(s) desired timing;
- Benefit stream assumptions and local priorities related to this initiative;
- Project dependencies/interdependencies with other IT projects and any external dependencies;
- Available IT Services resource capacity; and
- Procurement lead times.

Scheduling IT opportunities results in more control of the project portfolio for IT Services and more transparency for stakeholders. Information on the priority and schedule for an IT opportunity is captured, stored and shared consistently with stakeholders so they know definitively when IT opportunities will be chartered, and IT projects will start.  They are also aware of which IT projects are currently resourced and in progress.

The project work is only undertaken after:

- The IT opportunity is sufficiently documented and funded to proceed (refer to the Business Initiative Intake process in section 1); and
- IT Services Program Manager has confirmed the IT opportunity for scheduling (see subsection 2.1).

Program Management is accountable to lead completion of the required activities in this step (#2.2) of the process. They maintain the accuracy and completeness of the project portfolio and associated IT Services Project Tracking Master Sheet in close collaboration with the Solution Engineering Managers and BRM, as well as consultation with the architecture team, other stakeholders and Service Operations to elicit their input as required (see Table 6).

*Table 6 - Business Intake Process (RACI) for Business Intake Process Activity #2.2*

| # | ACTIVITY | QUEEN'S STAKE-HOLDERS | | IT SERVICES STRATEGY & ARCHITECTURE | | IT SERVICES SOLUTION DEVELOPMENT | | IT SERVICES SERVICE OPS |
|---|---|---|---|---|---|---|---|---|
| | | Requestor | Shared Services Stakeholder | BRM | Architecture | Engineering Managers | Program Manager | Operations Managers |
| 2.2 | Schedule IT Opportunity | C | C | C* | C | R | A | C |

*(for escalation)

**For each IT Opportunity, IT Services Program Manager ensures the:**

1. IT Services Project Tracking Master Sheet contains the ranking and other information on the IT opportunity; and

2. includes updated proposed scheduling of the IT opportunity (Figure 8).

The IT Services Project Tracking Master Sheet shows when IT projects will both start and finish over the course of a planning period.  BRM reviews the proposed resource scheduling information for the IT opportunity with the Business Champion.  If they agree, then the IT opportunity scheduling can be confirmed, and the IT opportunity chartered as an IT project. Otherwise, BRM escalates the scheduling issue within IT Services for resolution.

*Figure 8  – Collaboration on IT Opportunity Resource Scheduling*
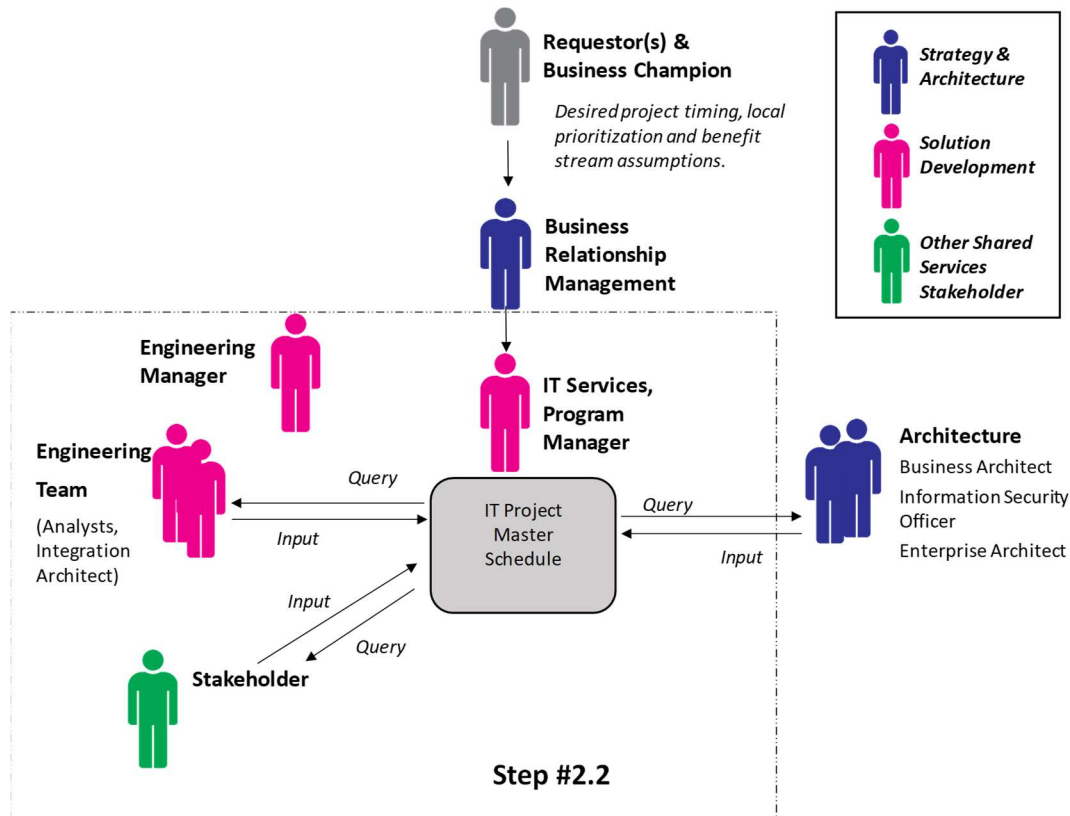


## IT SERVICES PROGRAM MANAGER RESPONSIBILITIES

Based on the IT opportunity, the Program Manager facilitates scheduling of the IT project with the appropriate Manager, Solution Engineering taking into account the faculty or department stakeholder's desired timing, benefit stream assumptions, priority, project interdependencies, available capacity, procurement lead times, etc. The IT opportunity is entered as a pending project into the IT Services Project Tracking Master Sheet.

## MANAGER, SOLUTION ENGINEERING RESPONSIBILITIES

The Manager, Solution Engineering is the resourcing authority for their area and evaluates the availability of the required resources (e.g. solution architects, systems analysts, integration architects etc.) necessary to execute on the IT opportunity as currently understood. The Manager, Solution Engineering is responsible for guiding and providing their input to the IT Services Program Manager to facilitate optimizing the scheduling of the IT opportunity.

## BRM RESPONSIBILITIES

BRM is notified of the proposed schedule and informs the Business Champion when the IT opportunity is scheduled to be chartered as an IT project and will both start and finish over the course of the planning period. If the Business Champion (representing the faculty, department or shared services stakeholders) disagrees with the proposed schedule, BRM facilitates conversations between the IT opportunity stakeholders and IT Services to reach a suitable resolution.

*Table 7 – Process Deliverables for Resource Scheduling Activity #2.2*

| # | ACTIVITY | IT OPPORTUNITY INTAKE FORM | INITIATIVES MASTER LIST | IT SERVICES PROJECT TRACKING SPREADSHEET | IT PROJECT CHARTER |
|---|----------|---------------------------|------------------------|------------------------------------------|--------------------|
| **2.2** | Schedule IT Opportunity | | Updated for status | Updated for priority | Scheduled |