This brief addendum addresses changes to the University New Budget Model and to the budget process in the Faculty of Arts and Science that occurred after this report was completed and published online in May 2017. The Dean of the Faculty of Engineering and Applied Science reported that there had been no substantive changes to the budget process in his Faculty since 2017.

### University New Budget Model

In October 2017, Provost Bacon announced changes to the University Budget Model designed to support research. These changes, implemented for the 2018-19 budget cycle, are in addition to the research support allocation mechanism incorporated into the University NBM for fiscal 2016/17 that applied an additional tax of 1% to the total revenue of each faculty and school and these funds were then distributed back to the faculties and schools based on their share of tri-council grants. (see p. 31 of the May 2017 QUFA Report).

The three new changes announced by the Provost:

a. A change to one of drivers used to attribute the cost of shared services. This change modifies a driver that previously used research revenue in addition to other revenues to attribute the costs associated with senior administrative portfolios such as the Offices of the Principal and Provost Office to Faculties. Research revenues will now be removed from the driver so that research intensive faculties are not disproportionately disadvantaged;

b. The introduction of a new research intensity driver to “address the issue that Faculties who are very research intensive in relation to their operating revenues have less operating revenues on a proportional basis to support the costs of the research activity and therefore need additional support to maintain and grow their research activity.” (2018-19 Budget Report p. 5). The driver measures the relative ratio of research revenues to operating revenues on a Faculty-by-Faculty basis. Using this new drive, the 2018-19 budget allocated a total of $7 million to Faculties out of the University Fund. Although the driver provides an incentive to all Faculties to benefit by intensifying research, clearly the major beneficiary is the Faculty of Health Sciences that has limited ability to increase operating revenues through student enrollment growth but has a high level of costly research activity.

c. Establishment of a Research Catalyst Fund administered by the VP Research in support of research. In the 2018/19 budget, the Research Catalyst Fund is $600,000.
The 2018-19 Budget Report (p.5) also notes that “The recovery rate from the Faculties and Schools [the “tax” that helps fund the University Fund] for 2018-19 will be increasing from 3.25% to 3.5%, and the recovery rate is tentatively planned to increase to 4.0% in 2019-20”.

Faculty of Arts and Science Budget Process

In February 2017, the then Interim Dean announced changes to the budget process in Arts and Science. The announcement of these changes came after the interviews conducted with Heads of Department in the Faculty of Arts and Science for this report were completed. The changes are described on pp. 67-70 of the May 2017 Report.

It is worth repeating that the revenue allocations generated by the ASC model remain largely notional. ASC runs the allocation model but does not actually hold departments to the budgets produced by the model. But if a department would be in surplus IF the revenue allocations produced by the model were actually implemented, then the department receives a partial increase to its existing base budget to cover annual increases in departmental salaries. If the model allocation would result in a deficit then the department must find ways to cover its annual salary increases by finding savings elsewhere in its existing budget allocation.

In the summer of 2017, the Interim Dean announced a change to the ASC revenue allocation formula to take effect for the 2018-19 budget year. This involved an adjustment to the salary pool to account for the impact of cross-teaching. According to the then Director of Finance and Administration in ASC: “In the salary pool, the salaries for each department will reflect the proportion of teaching that is for Arts and Science students, rather than 100% of the department salaries. This is appropriate since the salary pool distributes grant and tuition revenue generated by students registered in Arts and Science only. Compensation for teaching non-Arts and Science students flows via the inter-faculty cross-teaching revenue, for which no allocation goes to the salary pool. This change fixes a major inequity in the existing formula.” (Steve Tanner, personal communication July 17, 2017).

In the event, this change was not implemented in 2018-19. A decision was taken to delay this change pending the outcome of some potential other changes (Heather Woermke, Director of Finance and Administration in ASC, personal communication July 16, 2018). If the salary pool adjustment is eventually implemented, it should have the effect of reducing the revenue allocated from the salary pool using the current formula to those departments (CHEM, PHYS, MATH, GEOL and ECON) that do the bulk of cross-faculty teaching and increasing revenue allocated to departments that teach few non-ASC students. One humanities department reports that this change, if implemented, would generate roughly an additional $100,000 to its revenue allocation under the model.
The only change introduced to the ASC allocation formula in 2018-19 was a weighting of 0.15 to undergraduate certificates in the concentrator budget allocation line to recognize certificate programs. Departments also receive funding for an increase in graduate enrollment over the previous year (should their enrollment decrease, their allocated budget is also reduced accordingly). This provides a direct financial incentive for departments to expand graduate enrolment.

John Holmes

August 2018
Queen’s University New Budget Model

A Report Prepared for Queen’s University Faculty Association

by

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Emeritus Professor
Department of Geography and Planning
Queen’s University

May 2017
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Leslie Jermyn for her meticulous editing of the final report.
# Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ABB</td>
<td>Activity Based Budgeting</td>
</tr>
<tr>
<td>ASC</td>
<td>Queen’s Faculty of Arts and Science</td>
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<tr>
<td>ASC NBM</td>
<td>Faculty of Arts and Science New Budget Model</td>
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<tr>
<td>AST</td>
<td>Queen’s-QUFA Anomalies Side Table</td>
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<td>BISC</td>
<td>Queen’s Bader International Study Centre</td>
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<tr>
<td>BIU</td>
<td>Basic Income Unit</td>
</tr>
<tr>
<td>BOG</td>
<td>Basic Operating Grant</td>
</tr>
<tr>
<td>BUS</td>
<td>Queen’s Smith School of Business</td>
</tr>
<tr>
<td>CDS</td>
<td>Queen’s Continuing and Distance Studies – renamed Arts and Science Online</td>
</tr>
<tr>
<td>CFREF</td>
<td>Canada First Research Excellence Fund</td>
</tr>
<tr>
<td>CIHR</td>
<td>Canadian Institutes of Health Research</td>
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<tr>
<td>CIO</td>
<td>Chief Information Officer</td>
</tr>
<tr>
<td>CMC</td>
<td>Canadian Microelectronics Corporation</td>
</tr>
<tr>
<td>EDU</td>
<td>Queen’s Faculty of Education</td>
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<tr>
<td>EFT</td>
<td>Equivalent Full Time</td>
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<tr>
<td>ENG</td>
<td>Queen’s Faculty of Engineering and Applied Science</td>
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<tr>
<td>ENG NBM</td>
<td>Faculty of Engineering and Applied Science New budget Model</td>
</tr>
<tr>
<td>FTE</td>
<td>Full Time Equivalent</td>
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<tr>
<td>HS</td>
<td>Queen’s Faculty of Health Sciences</td>
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<tr>
<td>H-MED</td>
<td>Queen’s School of Medicine</td>
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<tr>
<td>H-NUR</td>
<td>Queen’s School of Nursing</td>
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<tr>
<td>H-REH</td>
<td>Queen’s School of Rehabilitation Therapy</td>
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<tr>
<td>IBCPA</td>
<td>Isabel Bader Centre for the Performing Arts</td>
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<tr>
<td>IMG</td>
<td>International Medical Graduates</td>
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<tr>
<td>LAW</td>
<td>Queen’s Faculty of Law</td>
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<tr>
<td>MAESD</td>
<td>Ministry of Advanced Education and Skills Development, formerly MTCU</td>
</tr>
<tr>
<td>MIR</td>
<td>Queen’s Master of Industrial Relations Program</td>
</tr>
<tr>
<td>MTCU</td>
<td>Ministry of Training, Colleges and Universities, now MAESD</td>
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<tr>
<td>NASM</td>
<td>Net Assignable Square Metres</td>
</tr>
<tr>
<td>NBM</td>
<td>New Budget Model – refers to Queen’s ABB</td>
</tr>
<tr>
<td>PACB</td>
<td>Queen’s Provost’s Advisory Committee on the Budget</td>
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<tr>
<td>PEC</td>
<td>Physical Education Centre</td>
</tr>
<tr>
<td>QOPB</td>
<td>Queen’s Office of Planning and Budget</td>
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<tr>
<td>RCM</td>
<td>Responsibility Centre Management</td>
</tr>
<tr>
<td>RIG</td>
<td>Research Initiation Grant</td>
</tr>
<tr>
<td>SAL</td>
<td>Student Assistance Levy</td>
</tr>
<tr>
<td>SEAMO</td>
<td>Southeastern Ontario Academic Medical Organization</td>
</tr>
<tr>
<td>SEMG</td>
<td>Strategic Enrolment Management Group</td>
</tr>
<tr>
<td>SGSR</td>
<td>School of Graduate Studies and Research</td>
</tr>
<tr>
<td>SNOLAB</td>
<td>Sudbury Neutrino Observatory Laboratory</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<td>--------------------------------------------------</td>
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<tr>
<td>SPS</td>
<td>Queen’s School of Policy Studies</td>
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<tr>
<td>SURP</td>
<td>Queen’s School of Urban and Regional Planning</td>
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<tr>
<td>VPFA</td>
<td>Vice-Principal Finance and Administration</td>
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Executive Summary

Queen’s University commenced implementation of an Activity-Based Budgeting (ABB) model (commonly referred to as the New Budget Model (NBM)) in 2013/14. It is scheduled to be fully implemented by the fiscal 2019/20 budget year. An Administration review of the NBM released in 2016 recommended only minor modifications prior to its full implementation in 2019/20.

ABB, which has been widely adopted by universities in the United States and, more recently, Canada, is driven by the overarching principle that revenue centres within an enterprise primarily should be responsible for all the direct and indirect expenses they incur. In the case of universities, revenue centres (faculties and schools) are treated like “profit centres” in private sector businesses; managing the revenue they generate and, controlling their own costs while also covering their share of the costs incurred in the delivery of shared university services.

The literature on ABB within universities suggests that, on the plus side, ABB increases financial transparency, decentralizes decision making, and encourages units to be entrepreneurial. On the negative side, ABB can impede inter-faculty collaboration, lead to inefficient course duplication, erode quality as departments offer easier courses to attract students, encourage a production-oriented logic focused on increasing net revenue generated through teaching, and increase the “cost of doing business” by requiring more financially-skilled administrative staff. Concerns have been expressed that ABB leads to a clash between corporate values and academic values.

More than one new budget model is being implemented at Queen’s. The Queen’s NBM, operates to allocate revenues and costs to faculties. Two departmentalized faculties – Arts and Science (ASC) and Engineering and Applied Science (ENG) – have developed new budget models to allocate revenues and some costs to departments within their faculty. These faculty-level models are revenue attribution models rather than strict ABB models.
This report addresses the University NBM and the NBMs being implemented in ASC and ENG. A detailed description of the structure of each model is provided together with an assessment of its impact to date. The report is based on a review of relevant documents and interviews conducted with the current and previous Provosts, the Dean and/or Director of Finance in each of the six faculties, and 22 Heads of department.

This report and other reviews of the NBM undertaken at Queen’s suggest that modifications need to be made to the University NBM. These include incorporating recognition of the importance and cost of research and addressing the unwelcome behaviours arising from both the formula for cross-faculty teaching revenue transfers and the NBM’s overemphasis on “capturing” undergraduate teaching revenue. The University Fund needs to be increased in size in order to adequately fund future new initiatives and the Administration should do more to communicate that it recognizes that it will likely need to continue to provide budget supplements to at least one faculty beyond 2019/20.

The primary experience of QUFA members in ASC and ENG, and especially Heads of department, is with their respective faculty-level NBM rather than with the University NBM. The introduction of the ENG NBM appears to be progressing well and enjoys support within the faculty. The evidence suggests that the widespread budget-related angst expressed by QUFA members in ASC is directly attributable to the implementation of the ASC NBM and only indirectly to the University NBM. The wisdom of driving revenue attribution down to the departmental level in a faculty with such a diverse range of pedagogic practices is questionable. Short of very extensive modification, the ASC NBM is incapable of being fully implemented without causing irreparable damage to the academic fabric of the faculty.
I. Introduction

1. Context

In 2013/14, Queen’s University began implementing an activity-based model for determining budget allocations to faculties within the university. This decentralized resource allocation model was a response to the constrained financial reality that had developed due to the evolving postsecondary funding environment in Ontario, existing financial obligations, and underperforming endowment investments (Queen’s University, Financial Services 2011; Queen’s University, Office of the Provost 2012; Derring and Sá 2014). In fact, Queen’s had experienced four years of deficits and across-the-board budget cuts. The initiative, commonly referred to as the “New Budget Model” (NBM), was led by the then-Provost, Alan Harrison, and marked a significant departure from the budget model used previously at Queen’s. In the past, university revenues were pooled centrally and budgets for all academic and non-academic units were based primarily on previous allocations. Under the NBM, revenue is attributed directly to the faculties and schools which have generated the revenue. In turn, faculties and schools are responsible for paying both their own direct costs, including salaries and a charge for occupied space, and a share of the indirect costs incurred in the delivery of shared services such as library, student affairs, senior administration, human resources

Section Highlights

The report is based on a review of relevant documents and interviews conducted with the current and previous Provosts, the Dean and Director of Finance in each of the six Faculties, and 22 Heads of department.

More than one new budget model is being implemented at Queen’s. The University NBM, operates to allocate revenues and costs to faculties. Two departmentalized faculties - Arts and Science (ASC) and Engineering and Applied Science (ENG) – have developed new budget models to allocate revenues and some costs to departments within their faculty. The ASC and ENG NBMs are best characterized as revenue attribution models rather than true activity-based budget models.

The primary experience of QUFA members in ASC and ENG, and especially Heads of department, is with their respective faculty-level NBM rather than with the University NBM.

The evidence suggests that the budget related angst expressed by QUFA members in ASC is directly attributable to the implementation of the ASC NBM and only indirectly to the University NBM.

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1 Responsibility Centre Management (RCM), value centre management, decentralized budgeting, value responsibility budgeting, or cost centre budgeting are other labels sometimes used to refer to Activity-Based Budgeting (ABB) (Priest et al. 2002). ABB was the descriptor favoured by the Provost when he first introduced the Queen’s New Budget Model (NBM). In this report, we use ABB when discussing this type of budgeting in general terms and NBM to refer to the model adopted at Queen’s.
and physical plant. The administration stresses that “the new budget model will not, in and of itself, increase net revenue for the university; it is simply a different method of revenue and cost allocation. It is designed, however, to encourage faculties and schools to increase revenue and constrain costs, enhancing financial opportunities within their academic units and the university as a whole” (Queen’s University, Office of Planning and Budget n.d.b).

The University is now in the fourth year of phasing in the NBM, which is scheduled to be fully implemented by the fiscal 2019/20 budget year. In 2015, the Provost announced the formation of a NBM Review Committee to conduct a third-year review of the NBM. The Committee’s mandate was to “review the principles, objectives, and processes of the NBM and provide a report of recommended modifications to be incorporated into the fiscal 2017-2018 budget.” (Queen’s University, Office of the Provost and Vice-Principal Academic 2015). To supplement the Review Committee’s report, US-based Huron Consulting Group, a leading proponent of the implementation of ABB models in North American postsecondary education institutions, was contracted by the Provost’s Office to undertake an “objective third party assessment of the strengths and weaknesses” of the NBM.

It was evident from both the mandate and membership of the Provost’s NBM Review Committee that the review would focus primarily on identifying “technical” aspects of the NBM that may require tweaking in light of experience to date. The technical review motivated QUFA to engage substantively with the new budget model in order to better represent their members. In particular, the QUFA Executive was concerned that the technical review would not address a crucial concern that had been voiced by members since the introduction of the NBM; namely, the perceived incompatibility between this form of budgeting and decision-

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2 Note that ABB models apply to the Operating Budgets of universities, which is only one component of a university’s Consolidated Budget.

3 The voting members of the Review Committee, chaired by Megan Sheppard (Associate Vice-Principal, Planning and Budget), comprised the senior staff person responsible for finance in each of the faculties and schools and in the offices of the V-P Advancement, V-P Research, V-P (Student Affairs) and the CIO.

4 The Review Committee Report dated January 2016 was made public following the May 2016 meeting of the Board of Trustees. Although there are frequent references within in the Review Committee’s report to the Huron Report, the Provost’s Office stated that the actual report from the Huron Consulting Group would not be released publicly.
making based on the academic values and the core academic mission of the university. Neither would it examine the on-the-ground experience of QUFA members, especially department Heads, working under the NBM. Hence, I was engaged by QUFA to undertake research and analysis on activity based budgeting and its implementation at Queen’s with a primary focus on how it had been experienced to date by members.

2. Activity Based Budgeting at Queen’s: University vs. Faculty Levels

From the outset, it is important to recognize that currently there is more than one new budget model being implemented at Queen’s. What in this report will be referred to as the University NBM is the one introduced by the Provost in 2013/14 which operates to allocate revenues and costs to faculties and schools. It is the model (and the only model) reviewed by the Provost’s NBM Review Committee.

When first introducing Activity-Based Budgeting (ABB), the Provost indicated that although his preference was for faculties to develop and implement their own intra-faculty ABB models, each faculty was free to decide whether or not to drive ABB down below the level of the faculty. Queen’s has three departmentalized faculties – Arts and Science (ASC), Engineering and Applied Science (ENG), and Health Sciences (HS) – and three non-departmentalized faculties – Law (LAW), Education (EDU) and the Smith School of Business (BUS). ASC and ENG each opted to develop budget models to allocate revenues and some costs to departments within their faculty; in this report these are referred to as the ASC NBM and the ENG NBM respectively. The ASC and ENG NBMs are best characterized as revenue attribution models rather than true ABB models. Although they attribute revenue to individual departments and

5 Previously, the School of Urban and Regional Planning (SURP) and the School of Policy Studies (SPS) resided within the School of Graduate Studies and Research (SGSR). Recently, SURP was transferred to ASC and merged with Geography to form the Department of Geography and Planning and the Industrial Relations program and Industrial Relations Centre were transferred from within SPS to ASC. What remains of SPS has a unique “quasi-faculty” status and is treated as a separate “responsibility centre” under the Queen’s NBM as is the Bader International Study Centre (BISC).

6 Several important structural differences exist between the ASC NBM and the ENG NBM. The details of each model will be spelled out later in this report.
departments are responsible for covering staff and faculty compensation costs from within their net departmental budgets, except for assigned space costs, the University NBM shared service costs and faculty shared service costs are not further disaggregated and “charged” to individual departments.

For purposes of revenue and cost allocation, the University NBM distinguishes between the three schools that comprise HS – Nursing (H-NUR), Rehabilitation Therapy (H-REH) and Medicine (H-MED) – but HS elected not to push ABB down to the level of individual departments within the School of Medicine.7

Although the aggregate allocation of revenues and costs to ASC and ENG is determined by the University NBM, the allocation of revenues and space costs between departments within those faculties is determined by the ASC NBM and ENG NBM respectively. Hence, the primary experience for QUFA members in ASC and ENG, and especially Heads of department in those faculties, is with their respective faculty-level NBM rather than with the University NBM. For QUFA members in HS or any of the non-departmentalized faculties, it is the University NBM which directly governs the budgetary environment within which they work.

This report discusses both the University NBM and the NBMs being implemented in ASC and in ENG.

3. Methodology

The research for this report was conducted in several phases between February and February 2017. First, the bibliography and review of literature on the implementation of ABB in universities and colleges compiled for an article in QUFA Voices in 2012 was updated (QUFA 2012). The second phase reviewed publicly available Queen’s documents related directly to the implementation of the University NBM as well as recent annual University budget and financial reports. A search was also undertaken for relevant documents (e.g. Faculty Board Minutes, Strategic Plans, etc.) regarding implementation of the NBM in the various faculties and, in particular, the development of the faculty-level NBMs in ASC and in ENG.

7 The School of Medicine is comprised of 15 clinical and 2 basic science departments.
Following these initial phases, two series of interviews were conducted. The first series was with the Dean and/or the Director of Finance in each faculty to ascertain their views on (1) how the implementation of the University NBM had impacted their particular faculty, and (2) to explore, in the case of the departmentalized faculties, how ABB was being implemented within the faculty. These interviews enabled me to gain insight into how each faculty had approached the introduction of ABB and, crucially, to develop a detailed and accurate understanding of the structure of the ASC NBM and the ENG NBM. I also met with then-Provost Alan Harrison and Megan Sheppard (Associate VP, Planning and Budget) and more recently with the current Provost Benoit-Antoine Bacon. The second series of interviews was conducted with a cross-section of Heads from within the departmentalized faculties. The selection of Heads to be interviewed was designed to achieve a sample that was broadly representative with regard to disciplinary area and size of department.

The following summarizes the research undertaken:

1. Background Literature Search:
   - Experiences with ABB-type budgeting in postsecondary institutions in the US and Canada
   - Review of available documents related to ABB at the University of Toronto

2. Review of Queen’s documents:
   - Documents on the University NBM
   - Budget Reports (incl. 2016-2017)
   - Financial Reports
   - Faculty Materials: Faculty Board minutes, Strategic Plans etc.

3. Meetings & Interviews (February-October 2016 except where indicated):
   - Former Provost Alan Harrison

---

8 This series of interviews was delayed following the first interview when via the Joint Committee to Administer the Agreement (JCAA) Faculty Relations raised the issue of protocols covering interviews with administrative staff. This issue took well over a month to resolve. Once resolved, Deans were very accommodating in scheduling and engaging in these interviews.

9 Only one Head failed to respond to requests for an interview. These interviews lasted between 60 -80 minutes on average and Heads were open and candid in sharing their opinions.
o Provost Benoit-Antoine Bacon (February 2017)
o Megan Sheppard, Associate VP Planning and Budget (May 2016 and February 2017)
o Professor David Hanes, Faculty Representative on the Provost’s Advisory Committee on the Budget (PACB)
o Faculty Deans and Directors of Finance:
  ▪ ASC: Interim Dean (February 2017)
  ▪ ASC: Director of Finance (February 2016 and February 2017)
  ▪ ENG: Dean and Director of Finance
  ▪ HS: Dean and Director of Finance
  ▪ EDU: Dean and Director of Finance
  ▪ BUS: Dean and Director of Finance
  ▪ LAW: Dean
  ▪ SPS: Associate Director, Administration and Finance
o Heads of Units:
  ▪ ASC (18)
    • Natural and Physical Sciences (4)
    • Creative Arts, Languages and Humanities (7)
    • Social Sciences (7)
  ▪ ENG (2)
  ▪ HS (1)
  ▪ University Library and Archives (1).
II. What Is Activity-Based Budgeting (ABB)?

“It [ABB] is a budget model that seems to fit the spirit of the times, given the focus on enterprise amid economic decline... It has become a popular topic of discussion among institutions... something of a “religion” in higher education, attracting converts.” (Carlson 2015: A4)

“In 2013-14 the university [Queen’s] transitioned to an activity-based budget model which sees all revenues flow directly to the faculty or school that generates that revenue, and charges a proportionate share of central university costs, such as shared services, back to the faculties and schools. The model provides a transparent budget process and incentives to grow revenue and contain costs.” (Queen’s Office of Planning and Budget (n.d.a))

1. Adoption of ABB by North American Universities and Colleges

Activity-Based Budgeting (ABB) is driven by the overarching principle that revenue centres within an enterprise should be made primarily responsible for all the direct and indirect expenses they incur. In the case of universities, revenue centres (faculties and schools) are treated like “profit centres” in private sector businesses; they manage the revenue they generate and control their own costs while also covering their share of the costs incurred in the delivery of shared university services. ABB originated in the private corporate world in the 1970s and 1980s and the ABB literature is replete with “corporate speak” – revenue maximization, cost reduction, entrepreneurial incentives, efficiency, increased productivity, etc. In part, the vigorous debates over the desirability of introducing ABB in universities stem from the cultural clash between management concepts and values and academic concepts and values.
In the university sector, versions of ABB first appeared in the 1970s and 1980s, mainly in elite US private institutions including Cornell, Harvard, Southern California, Vanderbilt, and the University of Pennsylvania (Hearn et al. 2006). ABB migrated to the US public university sector in the late 1980s when it was introduced to Indiana University by the new President who had previously been Provost at Penn. During the 1990s, and following publication of an influential book describing its implementation at Indiana (Whalen 1991), ABB spread to a number of large US public research universities (CAUT 2015). After 2000, this approach to budgeting, which is said to be well-suited to the prevailing contemporary environment of financial constraints and declining public funding to postsecondary education, spread rapidly across both private and public universities in the US (Carlson 2015; Curry et al. 2013).

When faced with an impending financial crisis in 1994-95, the University of Lethbridge became the first university in Canada to adopt a form of ABB. The University of Toronto introduced ABB in 2006-07 using a model derived from that used at the University of Michigan. It is worth noting that Toronto’s introduction of ABB coincided with the provincial government’s Reaching Higher program (launched in 2005) which provided a source of potential additional revenue. Presently there are four Ontario universities (Queen’s, McMaster, Toronto and UOIT) that are operating under variants of ABB and another six universities that have announced their intentions to adopt an ABB model by 2018/19. There are

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10 Harvard is said to have used this approach for almost two centuries. A Harvard President in the 1800s, adopting a line from Swift’s *The Pilgrim’s Progress*, spoke of the need for “every tub to stand on its own bottom,” meaning that each faculty or school (tub) should have responsibility for its own bottom line with control over its own revenues and costs (Carlson 2015; CAUT 2015). Strictly applied this would be an extreme form of decentralized ABB. In practice, ABB in most universities involves some sharing of revenue to fund strategic initiatives and the cost of shared central services. Former Provost Alan Harrison used the phrase “every tub on its own bottom” on several occasions when speaking of the Queen’s NBM.

11 For an illustrative list of over 40 US institutions using ABB-like models see Curry et al. (2013: 121).

12 The Scarborough Campus at the University of Toronto experimented with the ABB structure for the fiscal years 1997/1998 through 2002/2003 before returning to the general university’s accounting process (Derring and Sá 2014). Outside of Ontario, and in addition to Lethbridge, variants of ABB are being implemented at Alberta, Saskatchewan and Kwantlen (CAUT 2015).

13 By contrast, when Queen’s introduced the NBM the fiscal environment was much more constrained.
some important variations in the ABB models being used across the four Ontario universities.\textsuperscript{14} The CAUT (2015: 3) notes that “in all cases, institutions present the decrease in government funding, budgetary shortfalls, or other financial challenges as the main rationale for structural budget reform.”\textsuperscript{15}

2. ABB in Universities: General Principles

Curry et al. (2013) identify the following principles shaping ABB models in the universities: \textsuperscript{16}

- Revenues (tuition, government transfers, philanthropy, etc.) are allocated to the faculties and schools (responsibility centres) that generate them;
- All costs attributable to each responsibility centre are assigned to that centre, including a charge for the space occupied by the centre;
- Responsibility centres that provide shared services such as the library, services, human resources, physical plant and senior administration are not primary generators of revenue. They are funded through charges and/or assessments against the primary revenue generating responsibility centres (i.e. the faculties and schools) for the services they provide;
- The net budgets of each faculty and school (their gross revenues less their share of the indirect costs of shared services) support their own individual direct costs including faculty and staff salaries and benefits, faculty/school administrative costs, and the cost of providing their education programming;
- A central pool of resources (in the literature usually referred to as the subvention pool), assembled through either direct central ownership of specific revenue streams or “taxes” applied to faculty/school revenues or direct expenses, is allocated to compensate for disciplinary unit-cost/price imbalances and to support university priorities and new initiatives;\textsuperscript{17}

\textsuperscript{14} Differences exist with respect to: the formula used to allocate revenues; the division of undergraduate tuition and grant revenue between the Faculty teaching the course and the Faculty of Registration; the features of so-called Hold Harmless payments; and, the source of funds for the Central Fund (including the ‘tax’ rate on faculties’ revenue) and the primary purpose of the Central Fund. For a full comparison of the four models see Glen Copplestone, \textit{Summary of ‘ABB’ models at Ontario Universities}. Resource document prepared for OCUFA University Finance Workshop, Toronto, November 4 2016. (Appendix A to this report).

\textsuperscript{15} Derring and Sá (2014) make a similar point based on their interview based analysis of activity-based budgeting at Toronto, Queen’s and Lethbridge.

\textsuperscript{16} Two of the co-authors of this book, widely regarded as the most comprehensive primer to date on the design of ABB budgeting models for universities, are principals in Huron Consulting Group’s higher education practice. One of them was the lead on Huron’s 2015 review of the Queen’s NBM commissioned by the Provost.

\textsuperscript{17} In the Queen’s NBM the subvention pool is referred to as the University Fund.
• Appropriate incentives should exist for academic and shared service responsibility centres to improve their financial position by growing revenue and/or reducing costs.

Curry et al. (2013) assert that ABB creates “a number of potentially powerful incentives” that encourage entrepreneurial activity and increase “academic productivity.” Such incentives include:

• Responsibility centres which generate revenue (i.e. academic units – faculties, schools, departments) are responsible for meeting revenue projections and living within their planned operating budgets;
• The retention by the responsibility centre of any new revenues that it is able to generate provides an incentive for growth;
• The retention of any operating surplus, and conversely the requirement to repay any operating deficit, provides an incentive for “prudent management” and the control of costs;
• The ability of the responsibility centre to retain and spend dollars saved from reduced space usage and administration costs allocated to them provides a strong incentive to optimize or reduce space usage and limit the central overhead costs allocated to the responsibility centre.

3. The Building Blocks of the Queen’s NBM: Responsibility Centres, Cost Bins and Drivers

In the jargon of ABB, the basic building blocks or key parameters of any ABB model are “responsibility centres,” “revenue drivers,” “expense (cost) bins,” and “cost drivers.” The design of a specific ABB model, such as the Queen’s NBM, requires explicit decisions be made with regard to each of these. It is important to emphasize that different decisions can result in very different budgeting outcomes and that no two university ABB models are identical.18 The Queen’s NBM is constructed around ten revenue generating responsibility centres, and a large number of revenue drivers, shared service responsibility centres, cost bins and cost drivers

18 For a comparison of the different revenue and cost drivers used (or proposed) at Queen’s, Toronto, McMaster, York, and WLU see the draft report prepared by Brock’s Associate V-P Finance in March 2015 (Boles 2015a). The drivers proposed for Brock are to be found in the Associate V-P Finance’s final report (Boles 2015b).
In what follows, each is explained briefly and illustrated with reference to the Queen’s NBM.

**Responsibility Centres**
The key initial decision relates to how many “responsibility centres” to use for the attribution of revenues and costs and at what level (e.g. faculties or departments) within the organization. The Queen’s NBM is built around ten revenue generating “faculty” responsibility centres: ASC, BUS, EDU, ENG, H-NUR, H-REH, H-MED, LAW, SPS, and BISC. Shared service units (Library, Student Affairs, ITServices, senior administration, Human Resources and Physical Plant) are also responsibility centres but, unlike the faculties/schools, do not generate direct revenue for the university.

**Revenue Drivers**
These determine the attribution of revenues to the responsibility centres. The two main sources of revenue in the Queen’s operating budget are Provincial Operating Grants and Tuition Fees generated through student enrolment. The Queen’s NBM allocates operating grants and tuition fees to the faculties and schools by calculating the revenue each generates using enrolment counts, program fees and the value of Basic Income Units (BIUs).

Queen’s also derives revenue from a number of other sources such as specifically targeted federal and provincial funding envelopes, the student assistance levy, research overheads, late fee payment revenue, unrestricted donations, and investment income. Each source of revenue is attributed according to its specific revenue driver (see Table 1).

**Shared Service Expense (Cost) Bins**
These are used to capture the operating costs associated with the university’s shared service units. Shared services provide support directly to faculties and academic units and indirectly to other shared services units. The Queen’s NBM also includes expense bins for a charge for space.

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19 These tables are derived from Queen’s University, Office of Planning and Budget (2016) pages 46-75. For ease of reading, all tables and figures are at the end of the report.

20 Under Ontario provincial funding for postsecondary education, BIUs are the funding units attached to each student enrolment. The value of BIUs vary by program with science program BIUs being valued higher than arts program BIUs, upper year students valued higher than first year students etc.
occupancy, student financial support, and a University Fund for institutional priorities. Some shared service units allocate all their costs to a single “bin” (e.g. Human Resources) whereas others (e.g. IT Services) have more than one “bin” to reflect the different cost structures associated with different parts of their operations. Table 2 provides a summary list of the shared service responsibility centres and associated expense (cost) bins used in the Queen’s NBM.

**Expense (Cost) Drivers**

These are the “formulaic rules” used to attribute the cost of the shared services to faculties and schools (the revenue generating responsibility centres) in relation to the activity that drives the cost of the service. For example, in the Queen’s NBM the cost associated with Human Resources (a shared service responsibility centre) is divided among faculties and schools according to their proportion of the total employee headcount while the expenses incurred by Alumni Relations are attributed to each faculty and School in proportion to the 5 year average of the number of degrees they have awarded. There are 18 different cost drivers used in the Queen’s NBM; some of which are quite complex (see Table 3 for a full and detailed list).

The net budgets (gross revenues less indirect costs of shared services) of each faculty and school support their own direct costs, including salaries and charges for occupied space.

4. General Assessments of ABB in the University Sector

“Budget models do not make decisions, people do. Each model encourages or discourages specific kinds of behavior, but all resource allocation decisions are made by individuals. The impact of the budget model, therefore, depends more on the quality of decision-making than on the inherent strength of the model. Budget models are not a silver bullet.” (Auerbach and Edwards 2013:4)

An extensive literature exists on the implementation of ABB in North American universities. In addition to general introductions and primers on how to structure such budgeting models, there are numerous descriptive case studies of implementation in individual US universities.

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21 The University Fund will be discussed fully in a later section of the report.
(see the Bibliography in Appendix B). Auerbach and Edwards (2013) provide a succinct and informative comparison of different types of budgeting, including ABB, used in US universities. For comprehensive reviews of the pros and cons of activity-based and ABB budget models see Hearn et al. (2006), Balough and Logue (2013), and Curry et al. (2013) – although bear in mind that the latter is written from a very pro ABB position. Relatively little exists on the Canadian experience with ABB, which is not altogether surprising given its relatively recent adoption by Canadian universities. Exceptions are a chapter on ABB at the University of Toronto (Lang 2002) and a recent paper (Derring and Sá 2014) discussing, at a very superficial level, ABB at Toronto, Lethbridge and Queen’s. The following are some of the main points gleaned from a review of the literature.

i) Two Key Points Related to ABB at Queen’s

Given the specific way in which the Queen’s NBM is structured, two points from the literature review are of particular relevance:

1. At Queen’s, while the University NBM apportions revenues and costs to faculties and schools, both ASC and ENG each operate their own form of ABB to allocate revenue and some costs to the individual departments that comprise their faculty. Except in the very largest institutions, ABB in US universities is almost never forced down to the level of individual academic departments; revenue generating responsibility centres being most often defined at the level of faculties and schools. Balough and Logue (2013:135), for example, observe that “Units identified to be responsibility centers must be large enough to be able to take advantage of scale economies. At issue in many larger institutions is whether to locate responsibility centers at the level of departments or college level. It is very unlikely a department would be of sufficient size in a mid-sized or smaller institution to be considered a viable responsibility center.”

22 At the University of Toronto, it is only within the Faculty of Engineering that ABB operates within a Faculty.

2. With regard to the role of central administration, some view ABB to “just be a way for presidents and provosts to slough off the burdens of running a university in tough times and a way to push the problem down to the deans and let them make the hard decisions and take the flak.” (Carlson 2015:A4). For a number of reasons, however, ABB still requires active management from the centre:

   o Invariably, there is a need for central administration to redistribute some revenue within the university. There will be faculties and schools, viewed as essential to the overall mission of the university, which for a variety of reasons will never be able to generate enough revenue to cover their costs and, hence, will require ongoing subsidies. To fund such subsidies, and also provide a reserve from which to fund new strategic university initiatives, central administration
must either appropriate specific revenue streams or levy a “tax” on the revenues that flow directly to faculties/schools. *In the case of US universities these central subvention funds are on average around 10-12% of total revenue and sometimes much higher. In comparison, the University Fund at Queen’s is much more modest.*

- Central administration must also monitor and take steps to discourage counter-productive competition among faculties aimed at poaching students (and, thus, revenue) from other faculties by duplicating courses and discouraging cross-faculty teaching.

ii) Pros of ABB

The following are the principal arguments put forward by proponents in support of ABB:

- ABB leads to increased transparency with regard to the revenue and costs associated with each academic unit and the intra-institutional flows of revenues and expenditures between both academic and shared service units.
- Decentralizing budgeting and management processes give the various functional units of the university more autonomy in their decision-making than they experience under a more conventional centralized budgeting system.
- Such autonomy encourages individual units to be entrepreneurial and to make decisions that will encourage efficiency, cost control and revenue generation. Individual units are allowed to make decisions based upon their preferences and expectations, but will bear the consequences of those decisions, whether positive or negative. Consequently, units have a strong incentive to make decisions aligned with the well-being of the unit, while demonstrating increased institutional flexibility.

iii) Cons of ABB

Concerns on the other side of the ledger include:

- There is an incentive to encourage students to only take courses in their home units and reduced inter-faculty collaboration is often cited as a principal negative outcome of ABB budgeting. Academic programs in one responsibility centre (i.e. faculty) become less likely to require their students to take courses in another responsibility centre because it will result in lost revenue. Deciding to offer required courses in their own faculty and no longer requiring students to take equivalent courses offered in another faculty, leads to inefficient duplication of courses across faculties. There is also a danger of a “race to the bottom” in quality as units lower academic requirements and offer easier courses to attract more students.

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23 For fiscal 2016/17 the $35.18 million of expenditures from the University Fund represent 6.86% of Total Operating Expenses. And 71.5% of the University Fund expenditures are non-discretionary: covering hold harmless transfers to faculties/schools and transfers to the Capital Budget.
• Likewise, new joint programs spanning different responsibility centres are less likely to be proposed because of the challenges involved in reaching agreement regarding the splitting of costs and revenues.
• ABB budgeting pushes universities towards a production-oriented logic focused on increasing the net revenue generated through teaching. This favours outcomes such as reducing the number of full-time faculty, increasing teaching loads, hiring lower paid contract academic staff to teach new course sections, and eliminating majors and programs with low enrolment numbers.
• The introduction of ABB often entails a growth in administration as the “cost of doing business” increases due to the time and effort required to track revenue, measure all kinds of costs, and determine the formulae for the attribution of various revenue streams and costs among responsibility centres. The decentralization associated with ABB leads to a duplication and expansion of financial administrative support in each centre and the need to upgrade the skill sets of support staff.
• Such models can be ruinous to the academic fabric of a university since they favour corporate values over academic values.
III. Queen’s University New Budget Model (NBM)

“The budget model is an enabling tool that will facilitate planning and enhance accountability in the budget process, but it is not intended to replace policy or discretionary investment in institutional priorities.” (Queen’s University, Financial Services 2016: 5)

1. Prior System of Budgeting at Queen’s

The most common methodology still used by Canadian and US universities for funding individual academic and service units is known as general fund accounting (Vonasek 2011; Hearn et al. 2006). In this type of budgeting model, revenue streams are directed to central administration which then redistributes funds to academic and support units according to institutional priorities and how persuasive Deans and unit Heads are in arguing for increases to their budgets. Individual academic units (and even whole faculties) typically are only required to track their direct expenditures. Consequently, Deans and department Heads have little clear understanding of the actual revenues or overhead costs associated with their own faculty or department, much less any incentive to economize on spending or grow revenues (Vonasek 2011).

This was the kind of budgeting used at Queen’s prior to the introduction of the NBM. Revenue generated from government grants (principally BIUs and student fees) flowed to central administration. The cost of shared services such as ITServices, Human Resources, Library, Physical Plant and Student Services were covered by the central administration and not charged directly to faculties or individual units. In fact, until relatively recently annual salary increases including benefits (the salary base
budget) were covered by central. The Principal and Vice-Principals decided allocations to the faculties and, in departmentalized faculties, the Deans, in turn, decided allocations to departments. In effect, this was a budgeting system infused with politics in which, in the words of one colleague, “Byzantine behind-the-scenes deals were struck and interpersonal relationships and favour trading abounded.” Above all, it lacked transparency.

In one of Provost Harrison’s early communications regarding the Queen’s NBM, he laid out what he perceived to be the drawbacks of the prior system of budgeting at Queen’s and why “a new model was required”:

- Faculty (and department) base budgets were historical in nature and it was difficult to know on what basis they were determined.
- In recent years, base-budget increments typically had been linked to enrolment increases while cuts to base budgets typically had been across-the-board “with no consideration of the appropriateness of the level of any particular unit’s base budget that was being adjusted.”
- The system lacked transparency (with regard to the true revenues and costs associated with each academic unit).
- It was only weakly aligned with academic goals.
- It lacked strong incentives for units to innovate and become more cost effective.

### 2. Structure of the University NBM

Work on developing the NBM at Queen’s began in March 2012 with the aim of launching it for the fiscal 2013/14 budget year. The Provost reported that in developing a model for Queen’s he had looked in particular at the use of activity-based budgeting at the University of Toronto and the University of Michigan. The Provost’s Advisory Committee on the Budget (PACB) was charged with determining the “attribution rules” to be used in the Queen’s NBM to allocate revenues and costs between the various faculties.

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24 Around 2010-11, faculties were told that they must now find the additional cost of compensation increases from within their own budgets. In retrospect, this change might be seen as a first step towards the introduction of an “activity-based” budget model at Queen’s.


26 The PACB was introduced following the abolition of the Senate Budget Review Committee. The PACB committee is comprised of: the Provost; the V-P Finance and Administration; the Vice-Provost, Planning and Budgeting; the Associate Vice-Principal, Finance; the Deans; the Shared Service Leaders; and one faculty member. The faculty
The diagrammatic representation of the University NBM (Figure 1) has been well publicized through various presentations made by the Provost and others and, by now, should be familiar to most QUFA members. The following are the key features of the Queen’s University NBM.

**Attribution of Revenues**

In general, all revenues from provincial grants (BIUs), student tuition, non-credit teaching, research support and overheads, and restricted endowments (mostly student support) flow directly to the faculties and schools. Table 1 provides a detailed list of the revenue drivers for each source of revenue. In the case of undergraduate cross-faculty teaching, 40% of the BIU and tuition revenue generated flows to the faculty/school in which the student is registered and 60% is transferred to the faculty/school which delivers the teaching. There are no inter-faculty transfers for cross-faculty graduate teaching; the revenue generated by graduate enrolment flows 100% to the faculty/school in which the student is registered. Increased revenue (generated, for example, through increased enrolment, new programs, restricted gifts, etc.) remains in the faculty/school that generates it. This provides a strong incentive to be innovative in course programming, enrolment planning, and fundraising.

**Attribution of Expenses**

Each faculty/school is “charged” for:

- Its respective share of indirect costs incurred in the provision of shared services (e.g., the Library, IT Services, Physical Plant, Human Resources, central administration, etc.);
- Space occupancy;
- Student support and financial aid;
- University Fund Charge;
- Research Intensity Fund Charge (introduced for fiscal 2016/17).

Tables 2 and 3 respectively provide a summary and a detailed list on all the “cost bins” and the cost drivers that determine the share of each “cost bin” attributed to each faculty/school. The member was added to the PACB after QUFA expressed concerns that the initial PACB had no faculty representation.

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27 Figure 1, found at the end of this report, is reproduced from Queen’s University, Office of Planning and Budget (2016) p. 28. Two points to note regarding this particular schematic version of the NBM: there is now, for the first time, a box labelled “Research Support Allocation”; and, the arrow going from the faculties and schools box to the University Charge/Shared Services/Student Support box was inadvertently omitted in the online document.
net budgets (gross revenues less indirect shared costs) of the faculties and schools support their direct costs including faculty and staff salaries and benefits and such items as recruitment expenses and research initiation grants for new faculty. Cost savings remain in the faculty/school that generates the savings.

**Hold Harmless**

When the NBM was initiated in 2013/14, the hold harmless guarantee ensured that no faculty or school would receive a budget under the NBM lower than what they had received in 2012/13. Differences are covered by supplements drawn from the University Fund. Full hold harmless funding to faculties and schools was guaranteed for 2013/14 and 2014/15 and then is to be phased out according to the following schedule:

- 2015/16 funded at 90%
- 2016/17 at 75%
- 2017/18 at 60%
- 2018/19 at 30%
- 2019/20 at 0%

Early NBM documents circulated by the Provost showed that only two faculties HS ($8.4 million) and EDU ($2.7 million) required hold harmless supplements from the University Fund in 2013/14. For 2016/17, Hold Harmless supplements to faculties/schools amount to a total of $12.7 million broken down as follows: HS $6.6 million; ENG $0.6 million; EDU $3.5 million; SPS $0.6 million; ASC $1.0 million;\(^{28}\) and BISC $0.4 million.

**The University Fund**

This is a central discretionary fund used to “financially support strategic initiatives and university priorities.” Spending decisions are made by the Principal and Provost. The University Fund is created through a “tax” (the University Fund Charge is currently set at 3.25%) levied against faculty/school total revenue, and the capture of revenue not directly attributable to faculties and schools such as unrestricted gifts, late payment fees, net income from ancillary operations (e.g. Parking or Residences), and investment income. Table 4 lists the revenues and planned expenditures from the University Fund for the fiscal 2016/17 budget year. Over 70% of

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\(^{28}\) The transfer to ASC appears to be linked to the transfer of the SURP and MIR programs from the SGSR to ASC.
the Fund in the 2016/17 budget year was used for the hold harmless supplements to faculties/schools and transfers from the operating budget to the capital fund to cover past capital project payments. The remaining funds were directed to support strategic priorities.

**Research Support Allocation**

Starting with the multi-year budget for fiscal 2016/17, and as a partial response to concerns raised by the HS, a new levy – the Research Support Allocation – has been incorporated into the NBM to partially recognize the cost of research. The 1% levy is applied to the total revenues of faculties/schools and then distributed back to the faculties/schools in proportion to their shares of Tri-Council grant revenue.

**Actual Revenue and Cost Allocations under the NBM**

The annual Queen’s Planning and Budgeting Reports provide a wealth of information pertaining to budgeted revenue and costs. This includes (a) the allocation of revenues, derived from application of the various individual revenue drivers, to each of the ten University NBM responsibility centres; (b) the budgets of units within each of the faculties; (c) detailed budgeted expenses for each of the shared service units; and (d) the calculation based on the specific cost driver of the percentage of the budgeted expenses associated with each of the shared services allocated to each of the ten faculties and schools. This information enables one to not only trace the flows of revenue to faculties and schools and the subsequent transfers from faculties and schools to pay for their portion of shared service costs but also to see the revenue and cost driver calculations that determine those flows and transfers. For example, the budgeted expenses for Human Resources in 2016/17 were $13,453,400 and, on the basis of the application of the relevant cost drivers, the proportion of these expenses ‘charged’ to each responsibility centre was as follows ([Queen’s University, Office of Planning and Budget 2016:73](#)):
**Human Resources Cost Driver (Emp7):**
**Paid Employee Headcount: Total Paid (>0) Employee Headcount (excl. Adj-1)**

<table>
<thead>
<tr>
<th>Responsibility Centre</th>
<th>ASC</th>
<th>BUS</th>
<th>EDU</th>
<th>ENG</th>
<th>H-NUR</th>
<th>H-REH</th>
<th>H-MED</th>
<th>LAW</th>
<th>SPS</th>
<th>BISC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Headcount</td>
<td>963</td>
<td>297</td>
<td>147</td>
<td>270</td>
<td>36</td>
<td>77</td>
<td>1,044</td>
<td>74</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Share of Human Resources Expenses</td>
<td>32.91%</td>
<td>10.14%</td>
<td>5.03%</td>
<td>9.23%</td>
<td>1.23%</td>
<td>2.63%</td>
<td>35.68%</td>
<td>2.53%</td>
<td>0.62%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
IV. Provost’s NBM Review Committee Report

The Provost established a committee in early 2015 to review the experience gained during the first three years of the NBM (Queen’s University, Office of the Provost 2015). He also engaged the services of Huron Consulting to provide a third-party assessment of the NBM. The Executive Summary from the Review Committee’s report (Queen’s University, Office of the Provost 2016) contained 14 recommendations (see Appendix C attached). The main issues raised during the review are outlined here.

1. Overall Assessment and Recommendations

Overall, the Committee concluded that the NBM is working effectively to meet established objectives and agreed with Huron Consulting’s recommendation that, in the short to medium term, only a few relatively minor adjustments should be incorporated into the NBM to address concerns raised during the review. Although they found that the bins and drivers in the Queen’s NBM are too complicated and should be simplified at some future point, Huron recommended that no changes be made to bins and drivers until after another review is undertaken once the hold harmless period ends in 2019/20. For the present, efforts should focus on the more substantive issues of addressing concerns over support for the cost of research and clearly

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29 The Review Committee’s Report dated January 2016 was released in May 2016 (Queen’s University, Office of the Provost 2016). Although the Review Committee’s report makes frequent reference to it, the Huron Consulting report is not a public document.
communicating continued support to faculties. In particular, Huron felt that the University needed to be clear, and to better communicate, the willingness of the University to consider the possible continued use of the University Fund to support specific faculties on a “case by case basis” beyond the end of the hold harmless period.\textsuperscript{30}

2. Cross-faculty Teaching

Concerns regarding the NBM’s treatment of cross-faculty teaching relate to the issue of cross-subsidization between faculties. Currently, for students taking courses outside the faculty in which they are registered, the NBM’s formula for cross-faculty teaching allocates 60% of the tuition and government grant (i.e. BIU) revenue generated to the faculty delivering instruction, with the faculty in which the student is registered retaining 40%. This amounts to a form of cross-faculty subsidization, especially given the differences in tuition/BIUs between different programs and faculties. This is a major issue for ENG which transfers approximately $13 million annually to ASC under the NBM’s cross-faculty teaching formula. Recently, ENG begun offering its own in-house courses to replace some of the courses previously taught to engineering students by ASC.\textsuperscript{31} Also, it was likely a prime motivation behind the recent decision by ASC to reduce from 24 to six the maximum number of course units that ASC students are allowed to take in other faculties and schools.

The Review Committee accepted Huron’s recommendation that changes to the cross-faculty teaching driver should not be made until after the end of the hold harmless period. They argued that, given the inextricably linked relationship between the three different forms of cross-faculty subsidization – the University Fund Charge, the cross-faculty teaching formula, and the hold harmless formula – changing the NBM’s current formula for cross-faculty teaching would very likely result in the need to change one or other of the other mechanisms to

\textsuperscript{30} Huron pointed out that this is something that is characteristic of virtually every implementation of an activity-based (or responsibility centre management) budget model in North American universities.

\textsuperscript{31} ENG has ‘taken back’ courses or course sections previously taught by Physics, Math, Chemistry and Geology. This action has poisoned the atmosphere between the two faculties. At the same time, BUS appears quite content with the fact that it transfers almost $1 million each year to ASC for courses BUS students take in ASC; mainly in Economics.
redistribute revenue between faculties (i.e. a higher University Fund Charge or larger hold harmless payments). The Committee, however, did recommend that “policy levers” be implemented to prevent “unwanted behaviours” (e.g. course duplication and redundancy due to the promotion of “in-faculty” courses) that adversely affect academic collaboration between faculties.\textsuperscript{32} It is unclear as to what form such “policy levers” might take.

3. Costs of Research

The NBM is driven almost solely by revenue generated through teaching and does not recognize the full costs of research. As originally formulated, and except for limited revenue received for the indirect cost of research, the NBM prior to the review did not distribute any additional revenue to faculties to support the costs of research. This is an especially sore point for HS which is highly constrained in its ability to grow teaching revenue owing to provincial government regulation of medical school enrolments and fees but also engages in a large volume of high-cost research.\textsuperscript{33}

The Review Committee recommended that a funding mechanism be developed to support the costs of research. Subsequently the research support allocation mechanism was incorporated into the NBM for fiscal 2016/17. Under this mechanism, an additional tax of 1% is applied to the total revenue of each faculty and school to generate a “Research Intensity Fund” which is then distributed back to the faculties and schools in proportion to their shares of Tri-Council grant revenue. It appears that, for 2016/17, this mechanism will result in a transfer of approximately $1.0 million from BUS to HS but essentially will be a “wash” for the other faculties/schools.

\textsuperscript{32} A 2012 QUFA Voices article highlighted the fact, well-documented in the ABB literature, that such “unwanted behaviours” are a common consequence of the implementation of university ABB models (QUFA 2012).

\textsuperscript{33} For these reasons, it is generally acknowledged that HS is one faculty which will need continued subventions from the University Fund once the hold harmless period comes to an end. When the University of Toronto introduced ABB, it was made clear that the hold harmless guarantees for faculties/schools, including Medicine, would not be phased out over time as is happening at Queen’s (as reported to me by the Queen’s AVP Planning and Budget).
4. University Fund

During the review, stakeholders raised concerns that there are insufficient funds available in the University Fund to support university initiatives. There are two aspects to this concern: the size of the University Fund and the uses to which the University Fund is currently put. With regard to size, Huron Consulting observed that the University Fund, as a percentage of operating revenue (just under 7%), is much lower than research-intensive universities in the US and marginally lower than at the University of Toronto and McMaster University. Obviously, the size of the University Fund could be increased by increasing the current 3.25% “tax” levied against the total revenue of faculties. The Review Committee, however, did not feel the tax rate is too low “as it works well with the other components in the NBM” and did not recommend that it be increased. For fiscal 2016/17, well over 70% of the committed and recommended expenses charged against the University Fund are for either hold harmless transfers to faculties or transfers to the Capital Fund, which leaves little to support new initiatives. To partially address this second point, for the fiscal 2016/17 budget year, the cost associated with administrative systems was removed from the University Fund and attributed directly to faculties. Consideration also will be given in future budgets to removing other items currently funded out of the University Fund. Decisions on what initiatives are supported by the University Fund reside with the Principal and Provost and the review report observed that greater transparency is called for since “these decisions were not properly communicated in the past.” ([Queen’s University, Office of the Provost 2016:13](https://www.queensu.ca/office-of-the-provost)).

5. Bins and Drivers

Huron recommended that no changes be made to bins and drivers until after the hold harmless period ends in 2019/20. The Review Committee reviewed, but did not change, 18 specific bins and drivers identified for Committee consideration by at least either one faculty or a shared service unit. HS raised concerns regarding the Total Revenue driver used to attribute the costs of Senior Administration (see Table 2) and questioned whether research revenues should continue to be included in this driver. HS also challenged the inclusion of SEAMO revenue in
the Total Revenue driver. Questions were also raised about the differential weightings assigned to “On-Campus” versus “Off-Campus” students and faculty in “headcount”-related drivers and, especially, the inclusion of clinical faculty in HS.

6. Other Issues and Recommendations

There is an apparent lack of clarity with regard to the level and cost of services provided by Shared Service units. The committee recommended the development of more transparent and standardized Shared Service agreements and a review of the appropriateness of internal service charge-backs over and above Shared Service budgets. It was recommended that, going forward, research overhead, non-MTCU grants, and admission fee revenue be included in the NBM. The review report identified the pressing need to invest in university-wide budgeting software to better facilitate budget modelling, planning and forecasting.

7. Summary

Both Huron Consulting and the Provost’s NBM Review Committee recommended that no significant changes be made until after another review is conducted at the end of the hold harmless period. Thus, only relatively minor adjustments will be made to the NBM before 2019/20 at the earliest. The most significant change for the fiscal 2016/17 budget was the inclusion for the first time of the Research Intensity Fund. Two faculties voiced significant concerns regarding the NBM: ENG with regard to the cross-faculty teaching formula, and HS

34 SEAMO (Southeastern Ontario Academic Medical Organization) covers clinical teaching at Queen’s and in the Kingston hospitals. SEAMO receives a funding “envelope” which replaces a variety of traditional sources of funding for academic medicine and includes a replacement of fee-for-service funding generated by clinical activity. This funding flows through HS.

35 Arrangements involving shared service units are one aspect of the Queen’s NBM that I do not fully understand, primarily because I was unable to interview the Heads of any of those units. It is unclear what ‘incentives’ exist for shared service units to constrain expenses or how appropriate ‘service levels’ are established. I understood one Dean to say that his faculty ‘purchased’ additional janitorial services above and beyond what was received in return for their shared service cost.

36 Apparently, the budget is presently run off a very large Excel spreadsheet which requires large investments of time and effort to be checked and double checked. The cost of the required budgeting software is estimated to be $500,000.
with regard to (a) the lack of a mechanism within the NBM to address the costs of research, and, (b) cost drivers linked to total revenue and headcounts which HS believes results in an unfair proportion of Shared Costs assigned to that faculty. In several places, the review committee’s report commented on the need for improved communication regarding the NBM; especially with respect to the senior administration’s thinking regarding University Fund support for faculties beyond the end of the hold harmless period.
V. The University NBM: Faculty Office Perspectives (Deans and Directors of Finance)

1. Activity-based Budgeting Strategies

What general budgetary strategies are available to responsibility centres operating under an ABB model such as the Queen’s University NBM? Revenue-generating responsibility centres (at Queen’s the “faculties and schools”) can seek to increase revenues, constrain costs or, as is most likely, use some combination of the two. The literature notes that although, in theory, ABB encourages and rewards the reduction of costs as well as the generation of new revenue, the track record with regard to revenue generation is much better than that of cost reduction (Curry et al. 2013; Lang 2016). The experience with the NBM at Queen’s appears to bear this out.

Additional revenue can be raised by simply increasing tuition fees for the existing student complement or by increasing enrolments, which will increase both tuition fee revenue and government grant revenue (BIU revenue). Since, in most cases, fees are regulated by the provincial government and set by central administration, increasing revenue through increased enrolment within the faculty is probably the most practical strategy for faculties to pursue.\(^{37}\) This can be achieved by growing enrolment in existing programs, mounting new programs to attract new students to the faculty, or by

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\(^{37}\) Faculties, however, do not have *carte blanche* to increase enrolments since enrolment planning for the university is still done centrally by the Queen’s Strategic Enrolment Management Group (SEMG). Enrolments in Medical Schools are controlled by the provincial government.
discouraging students from taking courses outside of their “home” faculty.38 When considering expanding enrolment in existing courses or adding new programs, it is important, under an ABB system, also to consider what additional costs will be incurred and how such costs might be minimized.39

Once there is agreement on the shared cost drivers, the revenue generating responsibility centres have little direct control over their assigned portion of shared costs.40 A number of cost drivers in the Queen’s NBM are linked to measures of student enrolment and/or faculty and staff complements and, so, a faculty’s levy for shared costs will vary as enrolments and complements change over time. Another important shared cost driver in the Queen’s NBM is the number of square metres of space assigned to the responsibility centre. Through a more efficient use of space, a faculty may be able to reduce costs by reducing its total assigned space.

Salaries and benefits represent a very significant proportion of the costs that a responsibility centre must fund out of its own net budget once it has paid its share of shared costs. Furthermore, under the Queen’s NBM faculties and schools are responsible for covering annual increases in salaries and benefits as well as the costs of faculty and staff recruitment, including Research Initiation Grants (RIGs) for new faculty members. Any salary savings generated by retirements or resignations remain with the responsibility centre and, so, by not immediately refilling a vacant faculty or staff position, a responsibility centre can use the salary savings to bring its budget into balance.

38 This strategy is particularly relevant when the ABB incorporates inter-faculty transfers of revenue for students who take courses in faculties other than the one in which they are registered. Under the Queen’s University NBM, 60% of the revenue generated by such students is transferred from the “home” faculty to the faculty which delivers the course.

39 The growing trend towards mounting online and “blended” courses or the addition of extra course sections taught by Contract Academic Staff can be interpreted as strategies designed to grow revenue through expanding enrolment whilst at the same time constraining the additional costs incurred in course delivery. The development of successful online courses requires considerable upfront design and development costs but, once developed, the marginal cost of expanding enrolment in such courses is generally low.

40 This certainly is true of the Queen’s NBM, a fundamental principle of which is that no responsibility centre may opt out.
2. Faculty Office Perspectives

“Very different types of faculty are under the one budget model: a model that works well for those faculties with the ability to grow revenue.” (Interview with Dean of HS)

This section is based on information garnered during interviews conducted with the Dean and/or Financial Director in each of the faculties at Queen’s. All those interviewed expressed generally positive assessments of the overall impact of the NBM on financial management within Queen’s. Those with experience working under the previous Queen’s budgeting system were unanimous in their view that the NBM represented a significant and major improvement. Deans like the financial discipline the NBM imposes on decision making allowing them to better understand the financial impacts of their decisions. Several commented positively that the NBM is encouraging innovation and entrepreneurial initiatives to grow revenue. Some, however, expressed varying levels of concern regarding particular elements of the NBM. Both HS and SPS felt that the NBM, as currently devised, is ill-suited to the particular (but different) circumstances of their units.41 ENG voiced concerns about the revenue transfers incurred as a result of the cross-faculty teaching formula.

The following summarizes the main points gleaned from the interviews with Deans and Directors of Finance:42

**Transparency**

Virtually all those interviewed commented positively on the transparency that the NBM had brought to the overall budgeting process in the university. Moreover, several emphasized that they thought the most positive aspect related to the Introduction of the NBM was not so much the model *per se* but rather the transformation of the *budget process* within the university. Previously, Deans had little first-hand knowledge of their fellow Deans’ budgets or the shared

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41 In the case of HS the concern is that the NBM does not adequately address the costs of research. The Dean observed that “the more research intensive a unit, the more challenging the NBM” since while education (teaching) increases revenue, research increases costs. HS also argues that the use of Total Revenue as a cost driver for some shared services results in an inequitable distribution of costs across faculties that disadvantages HS. SPS views the NBM as ill-suited to a relatively small unit which only offers teaching at a Masters level.

42 The examples provided in this section are intended to be illustrative rather than exhaustive.
service unit budgets. Now, they all sit on the PACB and each year hear the budget presentations from each faculty and shared service unit.\footnote{43 By all accounts, the PACB involves many meetings over the course of the budget preparation process (see \textit{Queen’s University, Office of Planning and Budget (2016)} pp. 23-26 for a detailed description of the process). The one faculty member who sat on the PACB spoke very positively about the work of the committee and commented how impressed he had been with the committee. From his experience and perspective, whilst there is great transparency and goodwill within the PACB, there is great cynicism regarding the NBM among faculty members “in the trenches.”} Several Deans commented that the PACB provides a forum for constructive and fruitful collegial discussions among the Deans with regard to program development and the overall direction taken by the university: a forum that did not exist before the advent of the NBM. There is also a Budget and Business Officers Committee which meets regularly. Those interviewed felt that the budget process and these committees foster improved levels of trust and communication among faculties. One member of the PACB, however, commented that the one downside of the NBM itself is that, unless counter steps are taken, the model will lead to interfaculty tensions and retrenchment into silos, especially in periods where overall enrolment is stable.

\textit{Revenue Growth}

The introduction of the NBM has spurred every faculty at Queen’s to seek to grow tuition and BIU revenue by expanding enrolment in existing programs, launching new programs, or by reducing the ‘revenue leakage’ to other faculties that occurs when students take courses outside of the faculty in which they are registered. Although several Deans mentioned that revenue growth is allowing them to make new faculty appointments, they acknowledged that a by-product of the strategy to expand enrolment has been an increase in student/faculty ratios.

\textit{Expanding student enrolment in existing programs:} The current \textbf{LAW} Strategic Plan, which was shaped by the advent of the NBM, calls for a 20\% expansion of enrolment for the expressed purpose of generating additional revenue (\textit{Queen’s University, Faculty of Law 2014}). The Dean stated that would not have happened without the NBM since previously there was no incentive to grow enrolment. An increase of 35 more students in first year Law translates into approximately $2.0 million in additional revenue. The opening of two new student residences enabled \textbf{ASC} to increase first year enrolments and hence grow overall enrolment and revenue.
over the first four years of the NBM transition period.\textsuperscript{44} Enrolment in ENG has increased from 2400 to 3000 and, in part, the additional revenue generated by this increase has allowed the faculty complement to be increased back to its 2008 level. Within HS, increased revenue from enrolments has been generated by the Schools of Nursing and Rehabilitation but the faculty is unable to grow its core programs in Medicine due to the provincial government’s control over enrolment. BUS has expanded enrolment in both the B.Com and M.Management programs. 

\textit{Development of new online degree programs:} Growing on-campus enrolment at Queen’s is constrained not only by the availability of residence spaces and off-campus student housing but also by classroom infrastructure, much of which was built when the overall student population was much smaller. Thus, the delivery of blended and wholly online courses and programs offers a strategy for overcoming the barriers to increasing on-campus enrolment. Constrained to grow enrolment in its traditional programs in medicine, HS has designed, developed and launched an innovative Bachelor of Health Sciences (BHSc) degree program delivered entirely online.\textsuperscript{45} The faculty made a major investment in the up-front costs of developing the program, hiring several specialized course developers to work with faculty in designing the online courses, a number of which are new courses developed specifically for the new program.\textsuperscript{46} ENG has developed a new online Bachelor of Mining Engineering Technology Degree (BTech) program. This is described as a “diploma-to-degree program for engineering technologists who want to take their careers to the next level.” The program gives block transfer credits for the first two years of the degree to college engineering technology

\textsuperscript{44} Queen’s has a long standing practice of offering each first-year student the opportunity of a place in residence. The addition of the two new residences has allowed the expansion of first year enrolment and offered somewhat of a “safety valve” for the generation of additional tuition and BIU revenue during the NBM transition period as the first cohort moves through its four-year cycle to graduation. 2019/20 will prove to be a critical year, since total enrolment will have stabilized at the end of the four-year growth cycle.

\textsuperscript{45} The banner on the BHSc program web-page reads “Earn a Queen’s University degree. Anytime. Anywhere. Online” and states “Graduates from this program are well-positioned to apply to a wide range of health professional programs including medicine, dentistry, pharmacy, veterinary medicine, occupational therapy, physiotherapy, and advanced two-year nursing programs, as well as public health sciences and health sciences graduate programs.”

\textsuperscript{46} One source reported that HS invested $1.2 million to develop the online program including hiring 4 educational PhDs and 3 graphic designers but was optimistic that the new program will generate significant revenue and “knock off a good bit of the FHS deficit.”
graduates but, unlike the Bachelor of Applied Science (BASc) engineering program, is unaccredited. ASC now offers a fully online BSc program in Life Sciences and fully online BA degree programs in History, Psychology, Global Development Studies, English and (beginning in Summer 2017) Liberal Studies. EDU has started an Online Graduate Diploma and Professional Master of Education program that, with 200 students, generates an additional $1 million in revenue.47

Development of certificate programs: Certificate programs usually consist of four to six courses and are designed mainly to capture enrolment from students who are already on campus. LAW has launched an undergraduate Certificate in Law program that “is Canada’s only undergraduate law program to be offered by a law faculty both online and in a blended format on campus.” The program consisting of four term length courses has attracted 360 student enrolments each term. BUS offers a six-course Queen’s Certificate in Business “designed for Queen’s University ASC, ENG, and Four-Year Nursing students who want to gain fundamental knowledge in the key areas of business, in order to broaden their career options upon graduation.”48 Both the Law and Business certificate programs allow students to count two of the certificate courses also as electives in their primary degree programs, such that those two courses are charged at the student’s home faculty tuition rate. The remaining courses required for the certificates may not be counted towards the student’s undergraduate degree and are charged at the higher Law and Commerce tuition rates respectively. Queen’s Arts and Science Online49 has developed three new Certificate Program offered in online formats: Academic Writing, Film and Media and Employment Relations.50 The Dan School of Drama and Music, in

47 EDU revenue generation has also benefited from a ramping up of the continuing teacher education program and by absorption of the Queen’s School of English which brings in $1 million to EDU.


49 The rebranded name for CDS.

50 The Certificates in Film and Media and Employment Relations are offered to both Queen’s undergraduate students and distance students while the Academic Writing Certificate is offered only to distance students. ASC already offered several other certificate programs for on-campus students. http://www.queensu.ca/artsci/students-at-queens/academic-calendar#section-degree-plans-course-lists-and-certificates. Accessed April 10, 2017.
conjunction with the Isabel Bader Centre for the Performing Arts (IBCPA), is offering both a new Arts Management Graduate Diploma and a Master of Arts in Arts Leadership “for students and working professionals who have the passion and acumen for the arts and are seeking opportunities in arts management and leadership.”\textsuperscript{51}

\textit{Reducing revenue “leakage” to other faculties:} Under the Queen’s NBM when a student takes a course in a faculty other than their ‘home’ faculty, 60\% of the revenue generated by that enrolment is transferred to the faculty providing the course. This NBM revenue attribution rule presents an issue for ENG whose students traditionally have taken a number of ASC courses in math, physics, chemistry and geology. Under the NBM, ENG found itself transferring upward of $13 million annually to ASC. In response, ENG has begun to mount its own in-house courses to replace some of the courses previously taught by ASC departments to ENG students.\textsuperscript{52}

Recently, ASC decided to reduce from 24 to six the maximum number of course units that ASC students are allowed to take in other faculties and schools; a very unpopular decision among students. Driven by the NBM, inter-faculty competition for “bums in seats” works against the development of cross-faculty program initiatives that could benefit students. Life Sciences, already one of the largest BSc programs at Queen’s, is “owned” by ASC, but the Department of Biomedical and Molecular Sciences in HS provides the primary teaching in the program. I was told that HS would like to see enrolment expand in the Life Sciences program but this is resisted by ASC, which believes that such a development would draw students away from other ASC programs and result in a loss of ASC revenue. Conversely, some ASC departments view the new online BHSc program developed by HS as potentially drawing enrolment and revenue away from ASC.

\textit{Cost Containment}

In the interviews, the Deans and Directors of Finance spoke at much greater length about revenue generation as the pathway to financial salvation for their faculty than cost reduction. The two primary areas where cost savings might be found under the NBM are by reducing the

\textsuperscript{51} \url{https://sdm.queensu.ca/graduate-programs/arts-management-graduate-diploma/}. Accessed April 10, 2017.

\textsuperscript{52} One interviewee described this phenomenon as “an unanticipated rather than totally unexpected outcome of the NBM.”
amount of occupied space and by seeking to reduce aggregate faculty and staff compensation costs.

Most felt that although the NBM had led to a more efficient use of space, their ability to achieve significant savings through reducing the space requirements of their faculty was limited. SPS was the only unit that mentioned reducing occupied space as an explicit cost saving strategy. Faced with a significant hold harmless position under the NBM and with limited ability to grow enrolment revenue, SPS has both reduced its faculty and staff complements and shed 12 offices and some storage space. BUS views space as a fixed cost and has striven to achieve a high capacity of space usage – changes to class timetabling have increased space utilization by 20%. LAW has developed a more efficient use of space by moving legal clinics off campus and reorganizing space in the Law Library. EDU also mentioned that the NBM had led it to restructure and rationalize its use of space.

Since labour costs represent such a large proportion of the operating costs within faculties, they also represent a prime area in which a faculty potentially could take action to achieve a balanced budget. This might include delaying refilling positions vacated through retirement or resignation or using Contract Academic Staff to teach new course sections added to generate additional revenue. Whilst acknowledging that these were logical strategies for a faculty to pursue, those interviewed were quick to emphasize that their primary aim was to grow revenue in order to be to hire additional faculty.

Administration Costs

There was a broad consensus among those interviewed that while the NBM has driven efficiencies it has also added to overall administration costs by “increasing the costs of doing business.” Everyone agreed that the NBM has added complexity to managing budgets and requires an enhanced skill set among those responsible for budgeting and planning. The acquisition of a new budget software module as recommended by the NBM Review Committee is viewed as absolutely essential in order to reduce the amount of checking and cross-checking that is required currently. The general consensus, however, was that the transition to the NBM is progressing relatively smoothly.
Other Observations

The Dean of HS stated that while the NBM can be tweaked, HS will not be able to get out of deficit since it is unable to grow its core programs in Medicine and the NBM does not account adequately for the costs associated with research. Since ABB in universities originated in the US, he pointed out that it is important to recognize that the medical research landscape in the US is very different from Canada; in the US, endowments, research overheads and the fact that medical schools can make money through operating affiliated private hospitals make a significant difference. This leads to a general observation. In interviews with the Deans and with both the former and current Provost, it was clear that they fully expect that at the end of the hold harmless period not all faculties and schools will be “in the black” and one or more will continue to require some level of ongoing subventions from the University Fund.

EDU presents a special case. At the time the phase-in of the NBM began, the Ontario Ministry of Education introduced major changes to teacher education in the province: the program was doubled in length; the BIU was cut by a third; and enrolments were capped. The introduction of the NBM allowed for a redesign of the program to adjust to the Ministry changes. The program is now offered to students in a four consecutive term format which enables students to enter the job market a full year ahead of students from similar programs in other universities and provides a competitive advantage. The Dean stated that if it had not been for the Ministry changes, the faculty would not require the current hold harmless transfer.

3. Current Provost’s Perspective

I met with the then-Provost, Alan Harrison, and the VP Planning and Budget (Megan Sheppard) in May 2016 prior to conducting the majority of the other interviews for the project. The new Provost, Benoit-Antoine Bacon, assumed office in August 2016. In late February 2017 and after completing a first draft of my report, I met with Provost Bacon and Megan Sheppard to clarify a few points and ascertain the new Provost’s perspective on the NBM.

The Provost commented that the Principal had made it clear to him that Queen’s was committed to the NBM and there would be no reversal of that decision. The Provost finds the NBM to be much superior to the other forms of university budgeting experienced in his prior
university appointments. He is 100% in agreement with the principles underlying the NBM; “it [the NBM] is clear, transparent and everyone knows the rules.” The Provost noted that Queen’s, for a number of years prior to the introduction of the NBM, had faced difficult financial circumstances. But over the last five years revenue has increased by 5% annually. When asked about the sources of these increases, he stated that roughly 40% came from the annual increase in tuition, 30% from the overall increase in enrolment and 30% from an improved “program mix.”

When pressed on what measures were being used to address the “unwelcome behaviours” identified in the Review Committee’s Report (repatriation of courses, duplication of courses), the Provost responded that the approval of new positions provided a useful lever to influence the Deans. He recognizes that the NBM disproportionately advantages teaching activity over research and that going forward there is a need to develop ways of incentivizing research. He also sees a need to increase the size of the University Fund which is currently being stretched by the need to fund institutional initiatives to respond to recent issues that have come to the fore (e.g. Truth and Reconciliation; Sexual Violence).

The Provost views ASC as a “federation” of quite diverse and distinct areas of intellectual endeavour and thinks that in retrospect it was probably a mistake to drive elements of the budget model down to the departmental level in such a diverse faculty. With regard to shared service budgets, the Provost stated that the PACB is focused on cost containment and that in response to questions raised about levels of service and service charge backs, especially with regard to custodial services and IT services, a review of service agreements will be undertaken in Summer 2017 with a view to standardizing them.53

When I raised the issue of the negative impact of the NBM on morale, the Provost stated that before introducing the NBM Queen’s had been in a difficult and unsustainable situation financially and things simply had to change. This had required some austerity until additional revenue could be generated by incentives built into the NBM. Now, with a more stable

53 Whilst I am still not entirely clear about how budgets are set for Shared Services, I did learn that cost drivers such as assigned space are not applied to Shared Services.
financial position, the university was “in a position where we can think about faculty renewal which should help with morale.”

VI. Budget Models in the Departmentalized Faculties

There are three departmentalized faculties at Queen’s: HS, ENG, and ASC. Both ENG and ASC are implementing intra-faculty budget models that reflect some elements of the University NBM. However, these are best characterized as revenue attribution models rather than true activity-based budget models. Although they attribute revenue to individual departments, outside of an expense for space assigned to each department, the University NBM shared costs and faculty shared costs are not further disaggregated and “charged” to departments.

The majority of this section will be devoted to the ASC NBM since it is the most complex and applies to 31 units which are much more heterogeneous in terms of the nature of their academic endeavours and their histories in comparison to the five units which constitute ENG.

1. Faculty of Health Sciences (HS)

The Schools of Nursing (H-NUR), Rehabilitation (H-REH) and Medicine (H-MED) are treated as separate responsibility centres within HS for purposes of attributing revenues and costs under the Queen’s NBM. The School of Medicine consists of 15 clinical and two basic science departments but HS elected not to drive activity based budgeting down to the level of individual

Section Highlights

HS: the University NBM treats H-NUR, H-REH and H-MED as separate responsibility centres for revenue and cost attribution, but ABB is NOT driven down to individual departments in Medicine.

ENG: ENG share of university shared service costs and cost of ENG shared services (including Dean’s Initiative Fund) are first deducted from the revenue allocated to ENG by the University NBM. The remaining revenue is then assigned to the five ENG departments according to a revenue allocation formula that considers both enrolment and departmental FTE complement.

ASC: Although structurally similar to ENG, the ASC model is more complex due to the inflow of revenue from cross-faculty teaching; the inclusion of CDS and a differential split in undergraduate revenue to more richly reward concentrators. Furthermore, there are significant differences in revenue-generating potential, space needs, pedagogy and research intensity across the 31 ASC departments. Only nine ASC departments currently show positive budget variances.

Increased ASC undergraduate enrolment has grown revenue but also resulted in higher student/faculty ratios. Budget-related dissatisfaction and angst in ASC is primarily the result of how the faculty-level NBM is being implemented.
departments within Medicine. The residual revenue, after Medicine’s share of NBM shared service costs has been held back, is distributed to departments more or less on the basis of “historical” budgets. The rationale for not driving ABB down to departments is based in part on the fact that approximately 1000 of the students in Medicine are “shared” between departments and thus the bulk of the revenue is “generic” and not easily attributed to particular departments. The Dean views Medicine as a “separate ecosystem” pointing out that the clinical departments, in effect, subsidize the non-clinical and that, if Medicine were to departmentalize the attribution of revenues and costs, it would introduce tensions between the two and upset what is currently a good cooperative relationship. Space is treated as a shared cost for Medicine.

Echoing concerns voiced by the Dean regarding the perceived handicaps suffered by HS under the University NBM, the department Head interviewed from Medicine spoke passionately of the need to fight for research and scholarship which the NBM significantly undervalues. He pointed out that the introduction of the NBM coincided with a marked reduction in CIHR funding success rates and that the real issue for HS regarding the cost of research was the combination of the NBM and change in the CIHR funding model. He could not understand why Deans in other faculties were not joining his own Dean in fighting for better recognition of the true costs of research and scholarship and their importance to the central mission of the University.

2. Faculty of Engineering and Applied Science (ENG)

i) New Budget Allocation Model

Figure 2 is the schematic representation of the ENG NBM provided by the Dean’s Office. From the total revenue that is attributed to ENG by the University NBM (which is net of the revenue transfers to other faculties for cross-faculty teaching), except for the costs of assigned departmental space, none of the shared service costs assigned to ENG by the University NBM

54 Remember that this is a significant cost (at least $13 million) for ENG given the number of ASC science courses its students are required to take.
are downloaded to departments. The faculty-level shared service costs (e.g. for ENG IT services, faculty administration expenses etc.) are also taken off the top and restricted revenues, which include federal funds for Canada Research Chairs, departmental endowments, research overhead and indirect cost of research revenue, flow directly to the departments that generate them. Approximately 4-5% of the Base Budget Allocation to ENG is used to fund the Dean’s Initiative Fund (this can be thought of as equivalent of the University Fund in the University NBM).

The remaining net revenue is assigned as follows. Departments receive 100% of the revenue generated by their respective share of graduate student enrolment. Of revenue generated by undergraduate enrolments, 60% flows to departments based on each department’s faculty FTE count. The remaining 40% is further allocated 75/25 between departments and “first year and faculty courses” based on Student FTE counts.55 The rationale for the 60/40 undergraduate revenue split in favour of a department’s faculty FTE is that undergraduate enrolments in several of the engineering disciplines are cyclical in nature and, thus, the split provides a way of buffering fluctuations in revenue caused by swings in enrolment between departments within the faculty. In the interview, the Dean mentioned that she must find approximately 15% of the operating budget from soft money; soft money which is indispensable in being able to launch new initiatives. Since the provost pledged that he would not “scoop” back trust funds, the NBM shows Heads the advantage of fundraising in order to enhance their unit’s revenue. From their assigned budgets, departments are responsible for their assigned space costs, staff and faculty compensation, costs of hiring, including RIGs, and other general expenses.

ii) ENG Heads’ Perspectives

Both ENG Heads interviewed for this report were strong supporters of both the University NBM and the ENG NBM. They were pleased with the transparency and the ability to model the likely consequences of making particular decisions. It was noted that predating the University NBM, the previous Dean had introduced a form of revenue attribution into ENG budgeting. The

55 The engineering program at Queen’s is built around a common first year such that students do not choose a discipline within engineering prior to entering their second year.
cross-faculty teaching between ENG and ASC has always been an issue but the introduction of the University NBM had caused it to become a flashpoint. Several courses had been “taken back” into ENG but the one head thought that “we have now overcome this” and it was unlikely that more courses would be mounted to substitute for ASC courses. Space was identified as an issue since it has a big impact on shared service costs and the space requirements of departments across the faculty varies significantly. Departments such as Civil, with its Coastal Research laboratory, had initially been hit with a sizable charge for space. One head thought it a mistake to think of research space as separate from teaching since often a faculty member’s research lab is used for graduate student teaching. Reduction of custodial services was perceived to have become a problem across campus and ENG was seeking a faculty-level solution to provide additional services.

The Heads mentioned that with the advent of the ENG NBM, departments had moved from a system where they were actively discouraged from building a surplus to one where it was now essential to do so in order to cover the costs (recruitment, space, research start-up) associated with making a new hire. One interviewee had little sympathy for heads unwilling to make the effort to get out and raise revenue – the NBM certainly encouraged entrepreneurship which he fully supported. He stated that his department couldn’t function without trust funds and overheads on contract research. Referring to the University NBM, one head remarked that communication is of prime importance in this kind of model but that communication from the Provost’s Office had been problematic and this had led to morale problems in some areas of the university. One head stated that he thought that the NBM had led him to be more conservative than his Dean when it came to setting starting salaries for new hires since he knew that the department would be responsible for all the compensation costs associated with the new hire going forward. He was concerned because although his department was currently running a positive budget balance, he was projecting flat-line revenue over the next few years and with the negotiated salary increases, especially in the current QUFA collective agreement, he was concerned about the financial state of the department three years hence.
3. Faculty of Arts and Science (ASC)

i) The ASC New Budget Allocation Model

The structural architecture of the ASC NBM is similar to the ENG NBM in that it is essentially a revenue attribution model rather than a strict ABB model. However, the ASC model is the more complex in three respects: the incorporation of the inflow of revenue from cross-faculty teaching; the inclusion of Arts and Science Online (the rebranded CDS); and a differential split in undergraduate revenue to more richly reward departments for concentrators (Queen’s University, Faculty of Arts and Science 2014).

Since it appears that the ASC NBM, rather than the University NBM, is the prime source of concern for many Heads and faculty members in ASC, it is worth laying out the structure of the model in some detail. The model went through several iterations whilst under development and the Faculty Office stresses that it remains “fluid” and a work-in-progress. Currently (February 2017), an ASC working group is reviewing the model with a view to making significant modifications. The following description of the ASC NBM is based on the February 2015 version which was provided to me in early 2016 by the ASC Director of Finance. This is the version of the model which guided budget discussions in ASC for the 2015/16 and 2016/17 fiscal years. Figure 3 provides a schematic representation of the ASC NBM, including the 2016/17 fiscal year dollar amounts associated with each element in the model.

A. Tuition and Grant (BIU) Revenue

Departments receive tuition and grant revenue from both the pool allocated to ASC directly by the University NBM and indirectly as a result of revenue transferred to ASC from other faculties for cross-faculty teaching.

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56 Several ASC Heads reported that as the ASC NBM was “tweaked,” their department had experienced significantly different outcomes. For example, two Humanities departments reported that their “deficits” had progressively grown larger as the model was tweaked. When asked, the Dean pointed out that one reason was that the outcomes of the AST exercise had favoured the Humanities departments thus adding to their base salary costs going forward. The amounts being set aside for future pension solvency special payments were also a factor.

57 An update on changes to the ASC “budget process” introduced for fiscal 2017/18 is discussed later in the report.
**ASC Tuition and BIU Revenue**

Before the tuition and grant revenue allocated to ASC by the University NBM ($186.2 million for 2016/17) is disaggregated and flowed through to departments, both the share of University shared costs ($82.8 million) assigned to ASC and ASC shared costs ($18.6 million) are subtracted. This leaves a pool of $85.2 million, or less than 50% of the tuition and grant revenue flowing from the University NBM, available to be allocated to departments. This is then split into three components:

1. **Faculty Complement**: To provide some stability in budget allocations in the face of year-to-year enrolment swings, 25% of the undergraduate pool is allocated based on each department’s share of the current year budgeted faculty and staff salary dollars.

2. **Graduate Student Pool**: This is allocated to each department based on its proportionate share of the faculty’s total graduate student count at November 1 (on a one-year lagged basis because of data availability constraints). Revenue differences between Masters and PhD, domestic and international, and funding-eligible/ineligible students are factored in by the budget model.

3. **Undergraduate Student Pool**: This pool is further divided into three components:
   a. **CDS Delivered Courses**: tuition and grant revenue (net of “central” charges) for CDS taught courses flow to CDS which deducts direct course costs and CDS administration expenses. The remaining net revenue (referred to as “profit” in some ASC documents) flows to the department that owns the course.
   b. **Undergraduate Teaching**: 60% of the remaining 75% of the Undergraduate Pool is allocated to each department based on its percentage share of teaching to ASC students at the undergraduate level. This includes all students in all years enrolled in courses taught by the department. It also factors in the differential BIUs generated by students in different programs (first-year, Arts and Humanities, Sciences, etc.). ASC documents state that “the relatively high weight for this component is to encourage and reward departments for teaching students within their programs as well as from other units.” Once again, there is a one-year lag between the data and the budget year.
   c. **Undergraduate Concentrators**: the remaining balance of the Undergraduate Pool (40% of 75%) is allocated based on each department’s share of the plan counts (Majors, Specializations, Medials and Minors).

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58 Besides covering the cost of “running the Faculty,” ASC Shared Costs include the $4.1m. transferred to the Faculty Fund and $0.8m. to other faculties for cross-faculty teaching.

59 Recall that for ENG the equivalent percentage is 60%.

60 It was reported that initially the Undergraduate Pool was going to be split between departments solely on the basis of the number of students taught but the 60:40 split to provide more weight to concentrators was introduced in response to lobbying from Heads.
Cross-Faculty Teaching Revenue

Where students take courses outside their “home” department, the University NBM transfers 60% of the tuition and grant revenue per FTE student taught to the faculty in which s/he is taking the course. ASC is the faculty that receives the majority of cross-faculty teaching revenue, mainly as transfers from ENG and BUS. In the ASC model, 5% of the 60% flows into the ASC Undergraduate Pool and the remaining 95% flows directly to the departments doing the teaching.

B. Non-Teaching Revenue

Research Overhead Recovery: the majority of research overhead recovery revenue flows directly to departments. Departments, however, are responsible for covering the costs of research stipends, Research Initiation Grants (RIGs), and teaching relief associated with research chairs.

Department Endowment and Trust Income: the long-standing practice of allowing departments to hold discretionary department-level trust and endowment funds to support their operations is unchanged.

Other Revenue: departments also have the ability to supplement their operations through revenue sources such as non-credit courses and services to external parties.

C. Costs Charged to Departments

Recall that ASC’s share of university shared costs and ASC faculty-level shared costs are taken off the top before tuition and BIU revenue is allocated to individual departments. Thus, the costs that departments must cover from within their allotted departmental budgets, in addition to their day-to-day educational running costs such as supplies, are faculty and staff salaries and benefits, recruitment and research initiation costs associated with new hires, and the charge for departmental assignable space (department offices, faculty offices, department controlled teaching rooms, etc.).

Space requirements do vary significantly across ASC. For example, the need for performance and studio space in the creative arts or for teaching and research laboratories in the physical sciences results in higher space usage than in the social sciences and humanities. After some initial uncertainty, the decision was made that under the ASC NBM the faculty
would cover the space charges for undergraduate teaching science laboratories and would share the cost of faculty research laboratory space on a 50/50 basis with departments. These costs are subsumed within the faculty shared costs and thus represent a degree of cross-subsidization of the physical sciences by non-science departments. For several physical science departments, these decisions about how space is charged made a very significant difference to their bottom lines.

D. Faculty Fund

The Faculty Fund is set at 2% of ASC tuition and grant revenue (including net cross-faculty teaching revenue), which for 2016/17 translated to $4.1 million. Like shared costs, the Faculty Fund is taken off the top before any revenues are attributed to departments. The Faculty Fund is the ASC NBM equivalent to the University Fund in the University NBM and is intended to serve broadly similar purposes:

- Provide a smooth transition to the ASC NBM until enrolment and revenue growth materializes;
- Provide long-term financial support for strategically important programs that have low enrolment and/or especially high costs;
- Provide funding for start-up of new programs and new initiatives;
- Shield departments from unexpected “risks” such as medical leaves, accommodations, and special pension payments.

The ASC document (Queen’s Faculty of Arts and Science 2015: 8) states that “we will have several departments/programs that are likely to receive permanent financial support (beyond the budget allocation formula). The Faculty Fund needs to anticipate this and it must be acknowledged as part of the nature of our Faculty.”

ii) Transition to the ASC NBM

When implementation of the ASC NBM commenced in the 2015/16 fiscal year, the intention was for it to be fully phased in over five years. During those five years, the minimum budget

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61 Physical science departments already benefit from the higher BIU revenue associated with science students.
received by each department is “guaranteed” to be no less than its 2014/15 budget.\textsuperscript{62} For departments for which the ASC NBM allocates more than the minimum budget, funding growth is to be phased in. Such departments initially are allowed to keep X\% of the difference between the NBM allocation and the minimum “guaranteed” budget (i.e. their 2014/15 budget), where X is a weighted average of salary settlements.\textsuperscript{63} Until at least 2017/18, amounts in excess of X\% will be held back by the faculty and added to the Faculty Fund. It was intended that, beginning in 2017/18, such departments would be allowed to retain a progressively increasing share of the excess funding amount until eventually they would retain 100%. For departments for which the ASC NBM attributes less than the minimum funding level, the Faculty Fund will cover the shortfall with a ‘hold harmless’ transfer. It has become increasingly apparent that the transition will take significantly longer than five years; with ten years being frequently mentioned during the interviews.\textsuperscript{64}

The challenges facing ASC in implementing its NBM are starkly reflected in Tables 5A and 5B which provide budget allocations by department for 2015/16 and 2016/17 respectively. The tables also show the level of cross-faculty teaching revenue which would be received by each department if the NBM were fully implemented. \textbf{When reading these tables it is important to remember that the “net allocations” are the budget allocations each department would receive if the ASC NBM was fully and strictly implemented}. For 2015/16 and 2016/17 departments with positive variances received their 2014/15 base budget plus 2\% of the difference between their base budget and the net allocation produced by the ASC NBM. Those with negative variances received only the 2014/15 base budget.

\textsuperscript{62} However, the ASC document notes that the hold harmless guarantee “can be reviewed if a decision is taken to downsize, restructure, or suspend a material component of a program or unit.” (Queen’s Faculty of Arts and Science 2015:9).

\textsuperscript{63} For 2015/16 and 2016/17, X was set at 2.0\%.

\textsuperscript{64} Towards the end of 2015/16, ASC was faced with two unanticipated additional charges: responsibility going forward for salary adjustments stemming from final resolution of several back years of Anomalies Side Table payments; and for monies being set aside by the University to cover potential “special pension payments” once the pension solvency relief period ends. The ASC Faculty Fund was already being fully expended by hold harmless payments to departments and covering staffing “emergencies” arising, for example, from parental leaves or ill health.
The numbers in Tables 5A and 5B reveal large differences between departments in the variances between the net allocation generated by the ASC NBM and the “guaranteed” minimum budget.\textsuperscript{65} For 2016/17, these range from a positive variance of $2.51 million for Mathematics and Statistics to a negative variance of $1.49 million for English. Only nine of the 30 departments (and CDS) have positive variances, and of those, the variances for Film and Media and Computing are each less than $15,000. Three departments – Economics, Sociology, and Classics – have negative variances of less than $70,000 each. English, History and Philosophy have a combined negative variance of $3.68 million whereas Math and Stats, Chemistry, Physics and Geology have a combined positive variance of $4.17 million.\textsuperscript{66} Although the 2016/17 negative variance for ASC as a whole (to be covered out of the Faculty Fund), fell from $5.27 million to $4.31 million, the negative variance for ten departments was larger in 2016/17 than in the previous year.

The tables also show that over 80% of the revenue received by ASC for cross-faculty teaching is generated by, and would flow to, just five departments – Economics, Chemistry, Geology, Mathematics & Statistics, and Physics.\textsuperscript{67} For several of these departments, cross-faculty teaching represents over 50% of their budget. Not surprisingly, these are the departments that would have the most robust budget sheets and positive variances under a fully implemented ASC NBM.

Given that the ASC NBM has a built-in incentive for departments to grow revenue through increasing enrolments; it is instructive to examine trends in student/faculty ratios (Tables 6A and 6B) and faculty complement (Table 7) by department. For ASC as a whole, whilst graduate student/faculty ratios have remained relatively stable, undergraduate student/faculty ratios

\textsuperscript{65} Note that for several departments the 2014/15 guaranteed budget differs between Tables 5A and 5B. I was told by the Interim Dean that, for example, this is because of adjustments made to account for faculty FTEs transferred between departments.

\textsuperscript{66} The positive variance in CDS of close to $1 million in 2016/17 is a reflection of the relatively small 2014/15 base budget that existed prior to the rapid expansion over the last two years of courses offered through CDS. Of the $7.6 million in CDS course revenue (net of University and Faculty shared costs), $3.7 million is retained by CDS and the remaining $3.9 million is flowed through to the departments owning the courses.

\textsuperscript{67} For Economics most of this revenue flows from BUS for courses taught by Economics to Commerce students. For the other four, this revenue flows from ENG for engineering students who take ASC courses.
have increased steadily since 2012/13. Some departments exhibited sharp increases in their ratios as a result of increased enrolment, a reduction in faculty complement, or a combination of both. There are now large variations in undergraduate student/faculty ratios across departments in ASC. Nine departments (Film and Media, Classics, French, Gender Studies, Global Development, Kinesiology and Health, Psychology, Sociology, Mathematics and Statistics) had ratios greater than 35.00 in 2016/17.

Differences between the broad disciplinary groupings within ASC can be roughly characterized as follows:

- Creative Arts and Humanities: large negative budget variances under the ASC NBM; lower than average undergraduate student/faculty ratios which have remained relatively stable;68
- Social Sciences: a diverse grouping in terms of budget variances (from a large negative variance in Political Studies to a large positive variance in Kinesiology but with most in the + or - $200,000 range); above average and increasing undergraduate student/faculty ratios;
- Physical Sciences: positive budget variances; significant revenue from cross-faculty teaching; average undergraduate student/faculty ratios.69

ASC currently operates with a structural deficit and the Executive Summary to the 2016/17 ASC Budget Report states that “in order to ensure its short and long term financial sustainability, along with quality programs, the faculty must generate revenue growth through enrolment increases and new programs.” (Queen’s Faculty of Arts and Science 2016). For 2016/17, ASC had a projected deficit of $2.7 million ($2.4 million of which is structural) to be covered out of carry-forward funds. The Executive Summary, however, also states that “once we get to year 3 of the increased first-year enrolment growth, the situation turns to a surplus of $400,000 ($700,000 structural surplus) in 2017-18 and a surplus of $1.8 million ($2.1 million structural surplus) in 2018-19.” ASC has clearly been helped by the growth in first-year enrolment occasioned by the opening of two new residences. This has translated into revenue

68 Film and Media and Classics stand out as two departments within this group with quite different profiles – high student/faculty ratios and small positive or negative budget variances.

69 Exceptions are Art Conservation (a unique within Canada small, high cost, predominantly graduate unit) and Biology which has a large negative variance and, in comparison to other science departments, receives relatively little cross faculty teaching revenue.
growth but also in higher student/faculty ratios. Enrolment is projected to level off again after 2018/19 and several Heads expressed concerns that this will intensify inter-departmental competition for a static level of enrolment/revenue. With the rebranding of CDS as Arts and Science Online, the ASC strategy appears to involve expanding online course offerings to attract non-Queen’s students and partially circumvent the constraint placed on on-campus enrolment by the availability of residence spaces for first year students.

iii) ASC Heads’ Perspectives

“Budget model change is difficult — both technically and culturally. A new budget model requires deans, chairs, and even faculty to change the way they make decisions, which requires retraining, technical support, and change management approaches. Budget model transitions also create winners and losers. The losers will not be pleased and will often vocally resist the change.” (Auerbach and Edwards 2013:5).

Arts and Science is a large and diverse faculty. It is not surprising that interviews with 18 Heads drawn from across the faculty revealed a wide range of responses regarding their experience working with the new ASC budget process and the impact it is having on their unit. One Dean had observed that a critical problem with the University NBM is that “very different types of faculty are under the one budget model.” This statement is even truer of ASC departments under the ASC NBM. There are enormous differences in the pedagogic practices between creative arts departments, language departments, humanities, social science, and physical science departments; differences that have a major impact on their relative revenue generating potential and cost profiles. It is doubtful that any single budget model could adequately and equitably address the disciplinary heterogeneity that exists across the 30 units within ASC.70

During the interviews, it became apparent that Heads’ knowledge and understanding of the budget process within both the university and ASC varied widely. Discussion focused

70 In sharp contrast, the five departments that constitute ENG are much more similar to each other in terms of their disciplinary practices.
almost exclusively on the ASC model since it directly impacts departmental budgets. There was little comment regarding the University NBM except in the very broadest of terms. Whilst many Heads understood and were engaged with the ASC NBM, others freely admitted to relying heavily on their support staff when it comes to budgeting. Some Heads had embraced the new model fully and were working hard to develop and implement strategies to generate additional revenue. Some felt that they were operating in an unreal transitional shadow-world since they still receive their full 2014/15 base budget and the Dean’s Office continues to make adjustments to the budget model. One Head, for example, stated that “we’ve stopped worrying because it’s all artificial – we could be a million over or a million under depending on how the parameters are tweaked.” Skeptical that the ASC NBM will ever be fully implemented, a few have simply adopted a wait and see attitude.

Most Heads were very candid in expressing their views and the interviews generated a wealth of information and opinions. In organizing this information, I sought to identify themes that recurred across interviews. The following commentary is organized around these themes and includes representative comments received from Heads.

Overall Assessment

Heads’ overall assessments of the ASC budget model covered a wide spectrum. Not surprisingly, those in departments registering significant positive variances under the ASC NBM were the most positive in their assessment. For example, one stated “this department is very happy with the NBM and anticipates that it will be able to add positions.” Another that, “this department would like a shorter hold harmless period since then we can use our surplus to hire new appointments.”

The Head of a department with a very high student/faculty ratio suggested that:

“QUFA should welcome a model which will even out workload across departments” [arguing that] “currently, a small number of departments have very high undergraduate student/faculty ratios while older established departments have low student/faculty ratios. Over time, the model should lead to a convergence in student/faculty ratios across departments, and hence workloads.”
At the other end of the spectrum, were those who expressed strongly negative overall assessments:

“My views of the NBM are mainly negative – it is a corporate ideological model in which everyone is a junior bean counter.”

“The NBM is against the very idea of the university.”

“I’m opposed to the NBM since student enrolment determines everything and the model does not recognize research or service.”

Several questioned the initial wisdom of the decision by faculty Officers to drive the revenue allocation model down to the departmental level with the implication that the “numbers” were going to drive future decision making.

The most commonly expressed overall assessment was that there are both positives and negatives associated with the ASC budget model and that, although people had serious reservations regarding certain aspects of the model as currently structured, with adjustments they thought that it could be made to work. For example:

“I don’t like the NBM but it may be possible with some tweaking and a differential tax for the Faculty Fund.”

“The old budget process was opaque, I’m in favour of the new model but the balance is not there yet and there need to be restraints placed on adverse behaviours.”

“I’m not wholly against the model, but it needs adjusting to do what they want it to do. Senior administration is only tinkering, they need to be more open-minded and model differential levels of tax.”

Many of those who were generally positive in their assessment of the ASC NBM still expressed serious concerns about certain aspects of the budget model:

“The NBM has both positives and negatives. The NBM has been good for the department. It provides transparency, allows us to plan effectively, and to effectively argue for new positions ….. the downside of the NBM is that we are a university and should be driven by academic philosophy and not just driven by money. If decisions are only based on financial arguments it will lead to decisions that are bad for the faculty and bad for the University.”
One very common refrain was that the budget model had significantly and negatively impacted morale within individual departments and also undermined collegiality and morale within ASC as a whole.

**Departmental Strategies**

During the interviews, Heads outlined the strategies adopted by their department in response to the introduction of the ASC NBM and described the impact that such strategies were having on the department. If the NBM were already fully implemented, many departments would have negative variances and some, such as several Humanities departments, would have very large deficits (Table 5). Several Heads reported feeling intense pressure from the Faculty Office to address these potential deficits by growing departmental revenue and/or reducing costs.

A number of departments have grown revenue by expanding class size in existing courses or by mounting new courses or programs to capture additional undergraduate enrolment. Online courses were widely mentioned as a relatively low-cost strategy for increasing revenue, although one Head noted that:

“It’s all about teaching and CDS is playing a central role. We thought we should put more courses online but cash flow from CDS has diminished and CDS is no longer the financial draw it once was.”

There were two types of complaint associated with the use of strategies to increase undergraduate enrolment revenue. The first came from departments that have successfully grown enrolment but have yet to see the increased revenue translate into additions to their faculty complement. Instead they have experienced a sharp rise in student/faculty ratios:

“We’ve taken in a lot of students and have one of the highest undergraduate student/faculty ratios in the faculty but have not been getting positions.”

“During the hold harmless period any revenue generated has to go to pay down the [ASC] deficit. I’m doing exactly what they want but they are cutting me off.”

The second, and widely held, concern was regarding the impact such strategies are having both on enrolments in other departments and on the overall quality of the ASC undergraduate curriculum:
“Everyone is chasing “clients” – enrolments in our first year course have fallen because of the plethora of new first year courses and online courses being offered.”

“Departments are creating courses simply to generate revenue and there has been a proliferation of certificate programs.”

“Some of the new certificate programs will generate revenue but are not pedagogically sound.”

“Departments are putting on new courses to attract enrolment that are not entirely rigorous.”

Whilst they continued to search for ways to grow revenue, a number of Heads reported that the only realistic available strategy for their department to move out of the “red” is to reduce costs by shrinking the full-time faculty complement by not refilling vacated positions:

“ASC is mainly containing costs rather than generating revenue. Cost containment has been driven by the Faculty Office with regard to appointments, or rather the lack thereof.”

“Over two years we have moved from a large deficit position to being in the “black.” This has been achieved through no faculty replacements.”

“The department would need to lose six positions without replacement to eliminate our deficit under the NBM – we are under strong pressure to take care of the deficit.”

“Only perceived solution to resolving our deficit was through attrition of faculty complement and a strategy of growing revenue by attracting students from Business and Law through the development of online courses.”

Of course, reducing faculty complement has resulted in fewer courses being offered, larger class sizes and an increase in the student/faculty ratio in those departments: “we have lost 4 faculty positions in recent years resulting in a significant increase in the student faculty ratio.” Thus, the combination of some departments increasing enrolment with no increase in faculty complement and others reducing faculty complement to reduce costs has resulted in a sharp 17.7% increase in the overall ASC undergraduate student/faculty ratio since 2012/13 (Table 6).
The fact that departments are now responsible for covering faculty and staff salaries but have no direct control over annual salary increments was mentioned as an issue by several Heads. For example, one stated that:

“Currently the department has a relatively young faculty, a high undergraduate student/faculty ratio and we are solidly in the “black” but over time we will be faced with an increasing salary bill which leads me to wonder whether the model can ever be fully implemented?”

Very few departments reported reducing assigned space as an explicit strategy to reduce costs, with most perceiving practical barriers to doing this. Budgetary strategies involving Adjunct faculty were varied. Clearly there is a real financial incentive to grow undergraduate teaching revenue by hiring Adjuncts. Several departments saw hiring Adjuncts as a least additional cost strategy for growing enrolment revenue by adding additional courses, course sections, or online courses:

“The NBM encourages the use of Adjunct faculty given the real incentive to make course delivery cost effective.”

“Growing realization that we have to shrink [full-time faculty complement] first and hire more Adjuncts to generate teaching revenue.”

“There is a real incentive to hire Adjuncts and grow teaching revenue.”

Concern was expressed by at least one Head that the logic of the model could lead to the development of a two-tier structure within the professoriate:

“the logic of the model points to teaching only positions and using Adjuncts, since it doesn’t reward research, but we need to avoid developing a two-tier system.”

One department reported that although it was “in the black” it had hired more Adjuncts because “it was not allowed to hire into continuing positions whilst the faculty [ASC] is in deficit.”

On the other hand, at least two departments explicitly mentioned reducing their reliance on Adjuncts:
“We are currently in moderate deficit but think we can solve it by boosting enrolment to grow revenue and by cost reduction by reducing our assigned space and limiting Term Adjuncts”.

**Transparency**

The overwhelming majority of Heads found the financial transparency afforded by the ASC NBM to be helpful and, for those who had also worked under the “old” faculty budgeting system, a vast improvement over the past. Comments such as this were common:

“I like the transparency that the NBM brings to discussions. In the past, lump sums would be transferred with no idea where the money was coming from. No information on the flow of money made it very difficult to deploy.”

One Head made an interesting and pertinent observation regarding what they viewed to be a major negative consequence of increased transparency. In their opinion, the most contentious issue within ASC is how the revenue from cross-faculty teaching is treated; an issue that has the potential to tear the faculty apart. Cross-faculty teaching revenue accounts for 25% of the ASC revenue that flows to departments for teaching undergraduate students.71

Under a fully implemented ASC NBM, over 80% of this revenue would flow to just five departments – Economics, Chemistry, Geology, Mathematics & Statistics, and Physics. Due to the transparency afforded by both the University NBM and the ASC NBM, everyone now knows exactly how much ENG transfers to ASC and precisely which ASC departments generate this revenue and this “shapes the field of action within ASC.”72 The Heads of departments generating the cross-faculty teaching revenue argue that ENG is closely watching how ASC allocates that revenue and that if the revenue is not retained by their departments, ENG could pull those courses. Under the “old system” the money was “simply a transfer from the centre and the Dean of Engineering could not say how much of the money properly “belonged” to engineering and their students.” The Head stated that “by adopting this model in ASC, we have

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71 For 2016-17 revenue flowing to departments from the Undergraduate Pool, CDS and Cross-Faculty Teaching amounted to $60.4 million of which $15.4 million came from Cross-Faculty Teaching (Figure 3).

72 The Head’s concern focuses on the revenue transferred from ENG to the science departments rather than with the revenue transferred from BUS for the teaching of Commerce students in Economics.
unwittingly given other Faculties much more power to exert pressure on our [ASC] budgetary processes.”

**Academic vs. Budgetary Goals**

A common concern expressed by many Heads, including several who were otherwise very positive in their overall assessment, was that the tone and content of discussions within the faculty has changed significantly since the introduction of the new budgetary process. They are concerned that academic priorities and goals both within individual departments and for the faculty as a whole are being overridden by budgetary concerns. For example, at the faculty level:

“[There is] no focused discussion at either Committee of Departments or Faculty Board about anything other than budget.”

“Academic goals are being compromised by the revenue issue. Not one conversation about academic quality. [the Dean’s Office] want nothing from us other than how are we going to solve the budget.”

And at a departmental level:

“The NBM has impoverished our discussions. In the past, discussions were only driven by academic factors. Now, discussion in department meetings is always framed by the budget. We have a deeply flawed model.”

“Creativity is being shaped and driven by the need for revenue generation. Academic goals are being compromised by revenue generation.”

**Quality**

The concern that academic goals are being compromised in the quest for strategies to increase revenue was often illustrated with reference to a perceived decline in the quality of the undergraduate curriculum. This concern was so widespread that it is worth highlighting. In one department, that has very successfully grown revenue and is solidly in the “black”, the Head stated that:

“We made a decision to grow our revenue and enrolment by redesigning courses and reducing the number of Adjuncts. We are now reversing this since we care about quality which has suffered. If quality continues to decline our reputation will suffer and enrolment decline. Because we have a surplus on paper we are taking steps to improve quality.”
Another department reported that “the Faculty Office wants us to increase enrolment further but there is resistance because of the quality issue.” Concern was expressed that “[although] some of the new certificate programs will generate revenue, they are not pedagogically sound” and that “we are teaching to popularize [to attract enrolment] with no appeal to intellectual rigour.” The idea that there is a decline in intellectual rigour was raised by several Heads. For example, “departments are putting on new courses to attract enrolment that are not entirely rigorous” and “there is a real danger of slipping into less rigorous ways of thinking…. a Mickey Mouse course was once an embarrassment, now it is a badge of honour!”

The Head of a humanities department deplored the fact that the department had involuntarily been forced to change its pedagogic practice in an effort to reduce its negative variance under the new budget model:

“We are being forced to move away from courses focused on seminar discussion and writing, which is very work intensive, towards developing a stream of courses to be evaluated by methods other than essay writing – it is a real challenge to find a way to be cheap. The budget model is leading to a flattening out of pedagogy.”

**Impact on Morale and Interdepartmental Cooperation**

It was widely reported that the implementation of the ASC budget model/process has had a profoundly negative impact on morale across the faculty and is actively discouraging cooperation between departments. There is increased cynicism among faculty members and divisiveness between departments. For many, this has been by far the most damaging consequence of the ASC NBM. However, the underlying causes of low morale and rising levels of angst and frustration vary across the faculty. Departments for which the ASC budget model forecasts large negative variances experience heightened levels of stress and anxiety from constantly having to justify their existence. Typical comments included:

“Morale is at rock bottom and a lot of people are pessimistic and fear being closed or folded into other departments. People won’t take risks when they feel threatened.”
“The budget model ramps up the level of stress, many people are outraged by the neoliberal nature of the model.”

On the other hand, there is growing frustration within those departments for which the model predicts positive variances; frustration heightened by the realization that full implementation of the ASC budget model will take much longer than first anticipated. For example:

“We have increased enrolment and our student faculty ratio has really increased. It is damaging reputation and morale – people are tired, overworked and depressed because we don’t see the additional revenue we are generating.”

“Why should we embrace the logic of the NBM when we see departments like Classics which have been big winners in growing enrolment but still are not getting new appointments?”

“The NBM seems to be a moving target – moving the goal posts generates morale issues. Frustration occurs when the roll-out doesn’t proceed as it is supposed to.”

One person questioned why any Head would seek to be renewed for a second term since, given the current fiscal and budgetary environment within ASC, there are simply “no parameters for success.”

The structural logic of the ASC revenue attribution formula clearly encourages departmental self-interest. Thus, besides sapping morale, the implementation of the new budget model is seen as being divisive and to work against interdepartmental cooperation:

“Deans want collegiality and collaboration but the model is structured to foster competition between departments to capture enrolment from a finite pool of students.”

“We have a deeply flawed model, drilling it down to the department level is absurd. It pits departments against each other.”

One science department Head expressed concern that the University NBM has damaged the relationship between ENG and ASC science departments:

“The claw back of courses by ENG is detrimental to both faculties and the Provost should have intervened. It is all about the money and has created resentment. These courses should be taught by the science disciplines.”

The whole issue of how cross-faculty teaching revenue is allocated within the ASC NBM, coupled with uncertainty about how long the hold harmless transitional period in ASC will last,
threatens, in the words of one Head, to “tear the faculty apart.” Another Head commented that:

“Budget dominates Committee of Departments and is divisive. Musing that hold harmless will need to be extended is divisive. People are asking why have I worked so hard to get out of deficit if I don’t get to hire?”

Yet another referred to “the pyrotechnics at Committee of Departments meetings between the [budget] ‘haves’ and the ‘have nots.’”

Research

The lack of any real incentive in the ASC NBM to encourage research at a departmental level was commented on by several Heads who noted that the costs associated with research, such as the cost of reduced teaching loads, just add to a department’s deficit:

“We are a research intensive department but research is not recognized in the model.”

“The research overhead we receive is negligible and so teaching also has to pay for research and service.”

One Head mused that one reason that there is no real revenue in the model linked to research is because “you don’t need an incentive to get individuals to research but you do need an incentive to get them to teach.”

Administrative Issues

The final theme that emerged from the interviews was the impact that the introduction of the ASC NBM has had on administrative functions within the faculty. Several commented on the changed role of Heads under the new budgeting system and the perceived increase in the load of administrative chores for Heads and departmental assistants caused by the downloading of financial work to departments:

“the Head’s role is becoming one of a mini-CEO driven by how am I going to save money off this or that person which means that there is a cost incentive to hire more Adjuncts.”

“We spend more and more time reporting, in training, or arguing over minor cost issues.”
One person observed that seeking to grow revenue through increased enrolment had led them to become more acutely aware of what they can’t control as Head. As an example, they cited the current slot system for timetabling courses, noting that the day of the week and/or time of day that a course is scheduled can significantly impact enrolment in the course and hence the revenue it generates for the department.

The perception of many Heads is that there has been a proliferation of staff within ASC to deal with the new budget system and added reporting requirements. More than one Head also commented that the implementation of the new ASC budget model had not been handled well and there was a “need for the Dean to lead and communicate the budget model more effectively.” The following is typical of comments regarding the lack of budget leadership shown by the former Dean who, by the time of the interviews, had resigned to take up an appointment elsewhere:

“The last Dean did not understand or take ownership and champion the budget model. This was left to the Director of Finance.”

However, most felt that the new ASC Interim Dean recognized and was receptive to the pressing need to address budget process issues. Noting that “we have to work together to make this work – there is low morale and a lot of cynicism at present,” they were hopeful that changes would be made to reduce stress levels and restore morale within the faculty.

In summary, Heads welcomed the vast improvement in transparency the new budget process afforded with regard to the revenue and cost structure of ASC as a whole and of individual departments. This has the potential to improve decision making by allowing Heads to model and anticipate the financial consequences of taking a particular decision. However, and with only a very few exceptions, Heads expressed deep concerns about the way the new budget model was being implemented in ASC and the widespread negative impact it was having on morale and collegiality within the faculty. Many also voiced concerns regarding the damaging effect the new budget processes within the university was having on the quality of the ASC undergraduate education. On the basis of the comments received during the interviews, it is no exaggeration to state that by 2016 ASC had become dysfunctional as a result of the application of the budget model. As this report was being finalized, the Interim
Dean acted to modify the budget process for 2017/18 in an effort to address departmental budgetary concerns.

iv) Ongoing Review of the ASC NBM and Changes to the 2017/18 Budget Process

An ASC Budget Advisory Working Committee met during the 2016/17 academic year to review the budget allocation process and ASC NBM formula. That exercise included modelling the potential impact of various changes to the formula. A preliminary report from the committee went to an ASC Committee of Departments meeting in December 2016 and the intent is to report again to the Committee of Departments in the Spring with proposed changes. In early February 2017, I met with Gordon Smith, the Interim Dean of ASC, and Steve Tanner, the ASC Director of Finance, to discuss the nature of the review. They emphasized that they are attempting to shift the discourse around budgeting in ASC. They have stopped referring to “the budget model” and instead speak of “the budget allocation process and that within the process there is a formula.” Furthermore, “the formula should guide the Dean in making decisions but the Dean should have some discretion and not be beholden to the formula.”

I identified a list of formula “parameters” that I assumed were under consideration to be changed:

a. The 25/75 split between FTE Salary/Teaching FTEs;
b. 60/40 split between Teaching FTE/Plan Counts;
c. Cross-Faculty Teaching Revenue;
d. Devising a way to give more recognition in the formula for research.

I was informed that modelling reveals that changing (b) has the least impact whilst changing (c) potentially could have the most significant impact. Changing (c) could range from modestly increasing the current 5% “overhead” flowing into the undergraduate pool to flowing all of the cross-faculty revenue into the pool (this would have a big impact but probably is not politically feasible). Surprisingly, it was reported that changing (a) from 25/75 to say 40/60 does not particularly help the Humanities, perhaps because, on average, salaries are lowest in those departments.

73 The committee comprises 15 people and includes Heads, faculty members and departmental budget assistants.
disciplines. Another option under consideration is to “blend” the fees and BIUs received for BA and BSc students.\(^7\)

The Interim Dean acknowledged the low morale within the faculty and attributed it to the overall financial position over the last ten years, and especially the history of unfilled positions in ASC. However, with the assignment of eleven positions last year and another ten planned, he hoped that a corner had been turned.

A few days after my meeting, the Interim Dean, on February 15, 2017, sent a memorandum to Heads informing them that while the budget allocation formula was not changing, changes were being made to the budget allocation process for 2017/18. Noting that this will “impact the process for the management of budget allocations and the determination of the Faculty Fund,” the memo highlighted the following changes to the 2017/18 budget process:

- The budget allocation formula serves as a guide to the Dean in setting budget allocations;
- Rather than being set by a tax rate charged against all revenue, the Faculty Fund will be determined by the annual change in the total amount of revenue to be allocated;
- For each department/program, the results of the allocation formula will be compared to the prior year’s budget allocation. Allocations will be adjusted up or down based on circumstances such as new faculty positions and retirements. The variances will guide the priority for faculty renewal but this does not necessarily mean departments with negative variances will not see any new positions;
- The requirement for the five-year minimum funding guarantee is eliminated, as there is no longer an intention to transition completely in the foreseeable future to full reliance on the formula.

An accompanying document (Queen’s Faculty of Arts and Science 2017) notes that “the budget allocation process as currently envisioned/designed is perhaps too formulaic and doesn’t provide enough flexibility to the Dean to address academic priorities, cost considerations, and other elements that don’t necessarily align with a revenue-attribution type of formula for the budget setting process.” Furthermore, “the 5-year transition period, especially without having all the answers, is creating a high level of stress throughout the faculty, resulting in time and attention being taken away from core activities.” It notes that one consequence of the current

\(^7\) At present under the NBM, Science departments are favoured both by higher BIU revenue per upper year student and by the 50% “subsidy” to research space.
process is that “due to the ability to bank all salary savings from retirements and resignations, many units are receiving more funding than required for current needs, which is not necessarily the best use of the faculty’s cash reserves.”

A new guiding principle will be that “the budget allocation formula will serve as a guide to the Dean; however, we will not necessarily be beholden to the results.” The steps in the new budget process are laid out in the e-mailed document as follows:

1. Run the agreed to budget allocation formula (which still needs to be finalized), based on the projected revenue for the budget year and prior year enrolment data.
2. Compare the results of the formula with the actual budget allocation from the previous year (by department and in aggregate).
3. The aggregate variance becomes the Faculty Fund and is the amount that the Dean has available to adjust allocations to departments, to fund faculty priorities, and to build up cash reserves.
4. For the new [budget] year, the Dean could adjust the prior year awarded budget upwards or downwards depending on circumstances. For example:
   - Downwards for faculty retirements until such a time as positions are approved for rehiring;
   - Upwards for new faculty positions as they are approved;
   - Upwards for growth in Teaching Assistants due to enrolment increases;
   - Upwards for revenue generated to cover expenses for new programs (e.g. MEERL. Arts Leadership);
   - Upwards for annual salary increases. Depending on circumstances this may not always be automatic, especially for departments with negative variances.
5. To some extent, the negative departments are “red-circled” until revenue growth catches up to their historical budget allocation (as adjusted by the Dean). This doesn’t mean they will not get any new faculty positions; however, a higher priority will be given to those units with positive variances.
6. With this approach, the Faculty Fund in the allocation formula is set to zero as the allocation of the growth in net revenue from one year to the next is allocated by the Dean (effectively, this is the Faculty Fund). This is how the Dean is guided by the allocation formula but not blindly beholden to it.
7. In the event that net revenue growth is negative, this would mean budget allocation cuts in some areas, with a priority given to reductions for faculty retirements and resignations.

The document (Queen’s Faculty of Arts and Science 2017) goes on to note that this approach “moves the faculty towards a more formulaic approach to budget allocations in a less disruptive and threatening manner” than is currently the case. However, it still ensures an incentive to increase revenue through enrolment growth and doesn’t “preclude us from adopting a full formulaic approach (with a Faculty Fund based on some sort of tax rate)
sometime down the road, when the revenue growth is sufficient to wipe out all or the majority of the negative variances.”

This significant change made to the ASC budget process by the Interim Dean clearly is a response to the increasingly evident impossibility of completing the transition to a fully formula-determined budget within five years. It is also a response to the widespread criticism and angst the introduction of the ASC NBM engendered among faculty in ASC over the last two years. The question remains as to the wisdom, in the first place, of driving a revenue attribution model down to the departmental level in a faculty as large and heterogeneous as ASC.
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Whalen, Edward  

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Table 7: Graduate Student-Faculty Ratios by Department, ASC
Table 8: Faculty Complement by Department, ASC
### Table 1: Queen’s University NBM: Revenue Sources and Revenue Drivers

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Revenue Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provincial Operating Grants</strong></td>
<td></td>
</tr>
<tr>
<td><strong>A. Provincial Basic Operating Grants</strong>&lt;br&gt;(BOGs)Based on BIU’s and FTE Enrolments)</td>
<td>Each faculty or School receives a proportionate share of the funding determined by attributing the funding that would have otherwise been received by the faculty or School at both the Undergraduate and Graduate level to determine a weighted percentage that will be applied against the total BOG funding available.</td>
</tr>
<tr>
<td>A.1 Basic Operating Grant</td>
<td></td>
</tr>
<tr>
<td>A.2 Undergraduate Accessibility Funding</td>
<td></td>
</tr>
<tr>
<td>A.3 Graduate Accessibility Funding</td>
<td></td>
</tr>
<tr>
<td>A.4 Quality Improvement Fund</td>
<td></td>
</tr>
<tr>
<td><strong>B. Targeted Programs</strong></td>
<td></td>
</tr>
<tr>
<td>B.1 Medical Expansion, IMG Post Graduate Medical Expansion, Stand Alone Nursing, Clinical Education in Nursing and Rehabilitation Therapy, and Teacher Education</td>
<td>Allocated 100% to the faculty where they were earned.</td>
</tr>
<tr>
<td><strong>C. Provincial Research Funding</strong></td>
<td></td>
</tr>
<tr>
<td>C.1 Research Overhead Infrastructure Envelope</td>
<td>Each faculty/school’s share of provincial research funding is based on their percentage share of Tri-Council grant revenue on a two year slip basis.</td>
</tr>
<tr>
<td><strong>D. Facilities Renewal Program</strong></td>
<td>Attributed directly to Capital Budget</td>
</tr>
<tr>
<td><strong>E. Performance Fund Grant</strong></td>
<td></td>
</tr>
<tr>
<td>E.1 Performance Fund Grant</td>
<td>Each faculty/ School’s share allocated according to their proportionate percentage of Undergraduate FTE’s.</td>
</tr>
<tr>
<td><strong>F. Special Purpose Grants</strong></td>
<td></td>
</tr>
<tr>
<td>F.1 Municipal Tax Grant</td>
<td>Revenue flows 100% to a Central expense for Municipal taxes.</td>
</tr>
<tr>
<td>F.2 Special Accessibility Grant</td>
<td>Revenue flows 100% to the Dean of Student Affairs portfolio where the program is administered.</td>
</tr>
<tr>
<td>F.3 Regional Assessment Resource Centre</td>
<td>Revenue flows 100% to the Dean of Student Affairs portfolio where the program is administered.</td>
</tr>
<tr>
<td>F.4 Women’s Campus Safety Grant</td>
<td>Revenue flows 100% to the Office of the VPFA where it is administered.</td>
</tr>
<tr>
<td><strong>Federal Funding</strong></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>G. Federal Indirect Cost of Research Grant</strong></td>
<td>The proportion of the grant related to CMC, SNOLAB and the Hospitals is removed off the top and the driver applied to the remaining funds.</td>
</tr>
<tr>
<td><strong>G.1 Federal Indirect Cost of Research</strong></td>
<td>Same as C.1 above</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tuition Fee Revenue</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H.1 Tuition Fee Revenue</strong></td>
<td>Each faculty/ School allocated tuition fee revenue based on projected enrolment and tuition fee rates.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Other Revenue</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Student Assistance Levy</strong></td>
<td></td>
</tr>
<tr>
<td><strong>I.1 Student Assistance Levy</strong></td>
<td>Each faculty/ School allocated their proportionate share based on the number of Undergraduate and Graduate FTE’s that are charged the SAL.</td>
</tr>
<tr>
<td><strong>I.2 University Council on Athletics</strong></td>
<td>Revenue flows 100% to the Dean of Student Affairs portfolio where Athletic programs are administered.</td>
</tr>
<tr>
<td><strong>I.3 Student Health Fees</strong></td>
<td>Student Health fees and all user pay health fee revenue flows 100% to Health, Counselling and Disability Services within the Dean of Student Affairs portfolio.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>J. Research Overhead</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>J.1 Research Overhead</strong></td>
<td>Each faculty/school’s share of Research Overhead is based on their percentage share of the actual research overhead received on a two year slip basis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>K. Late Payment Fee Revenue, Unrestricted Donations, Investment Income, Other Income and Overhead Revenue</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K.1 Late Payment Fee Revenue, Unrestricted Donations, Investment Income, Other Income and Overhead Revenue</strong></td>
<td>Revenue flows 100% to the University Fund.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>L. Non Credit Teaching Revenue</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L.1 Non Credit Teaching Revenue</strong></td>
<td>Each faculty/school is allocated 100% of the Non Credit Teaching revenue it generates. (N.B. Only programs generated annual revenue in excess of $200K are included in the model).</td>
</tr>
</tbody>
</table>

Source: Queen’s University, Planning and Budget Annual Report, 2016 pp. 46-54
Table 2: Queen’s NBM: Summary of Cost Drivers for Shared Service Cost Bins

<table>
<thead>
<tr>
<th><strong>Cost Driver</strong></th>
<th><strong>Shared Service</strong></th>
</tr>
</thead>
</table>
| Assigned Space                                      | Custodial, maintenance, utilities etc. costs of assigned space  
Environmental Health & Safety                        |
| Teaching Space Utilization                          | Custodial, maintenance, utilities etc. costs of teaching space                                                                                       |
| Total Person Headcount                              | Custodial, maintenance, utilities etc. costs of common space  
Maintenance costs of University grounds  
Fundraising costs (as part of a composite driver)  
University-wide Community                            |
| Undergraduate + Graduate Headcount (3 versions)     | Student Affairs (version 1)  
University-wide student services (version 2)  
ITS teaching and learning services (version 3)      |
| Undergraduate + Graduate + Faculty Headcount        | ITS enterprise services                                                                                                                              |
| Rolling Average of Funds Raised                     | Development (Advancement Services)  
Vice-Principal (Advancement ) office  
The Queen’s Campaign                                    |
| Undergraduate + Graduate + Faculty FTE (2 versions) | Library information services (version 1)  
Library information resources (version 1)  
Library space (version 2)                              |
| Rolling Average of Queen’s Graduates                | Communications (University Relations)  
Alumni Relations                                                                                     |
| Undergraduate + Graduate FTE                        | Marketing (University Relations)                                                                                                                    |
| Graduate Headcount within School of Graduate Studies| SGS service operations                                                                                                                               |
| Faculty FTE                                         | University bridging programs  
University-wide faculty programs and services                                                           |
| Continuing Employee Salary Base                     | Central benefits  
Pension plan special payments                                                                                                                     |
| Total Revenue, All Funds                            | Financial, Investment, Procurement and Audit Services within VPFA  
Office of the Principal (selected)  
University Secretariat  
Planning and Budget  
Provost’s Office (selected)  
University-wide administrative functions (selected)  
University Veterinarian  
VP Research Office                                                                                   |
| Volume of Research Activity (50% research income and 50% research grant and contract applications) | eQuip Office  
Office of Research Services  
Industry partnerships  
Innovation Park  
General Research Ethics Board  
Health Sciences Research Ethics Board                  |
| Student Financial Support                           | Graduate student support (excluding need-based)  
Needs-based support  
Undergraduate merit-based support                                                                       |
| Paid Continuing Employee Headcount                  | Human Resources                                                                                                                                     |

Source: [Queen’s University, Planning and Budget Annual Report, 2016](#)
<table>
<thead>
<tr>
<th>Shared Service Cost Bin</th>
<th>Cost Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Occupancy Costs</strong></td>
<td></td>
</tr>
<tr>
<td>A.1 faculty/school Assigned Space</td>
<td>Each faculty/school and Shared Service share of assigned space measured in Net Assignable Square Metres (NASM)</td>
</tr>
<tr>
<td>A.2 Common Space and Grounds</td>
<td>Each faculty’s and School’s total Fall “community count” – its total number of faculty members, staff, undergraduate and graduate students. Off-campus and teaching hospital counts assigned 20% weight</td>
</tr>
<tr>
<td>A.3 Central Inventory Teaching Space</td>
<td>Attributed to each faculty and school on the basis of actual “seat hours” used.</td>
</tr>
<tr>
<td><strong>B. Environmental Health and Safety</strong></td>
<td></td>
</tr>
<tr>
<td>B.1 Environmental Health &amp; Safety</td>
<td>Same Driver as A. 1</td>
</tr>
<tr>
<td><strong>C. Advancement</strong></td>
<td></td>
</tr>
<tr>
<td>C.1 Development and Related Services; Vice-Principal Advancement Office</td>
<td>On the basis of a 10-year rolling average of funds raised: Faculty specific donations attributed to respective faculty (or faculties if shared donation) University-wide donations attributed to each faculty/school on basis of community count (A.2 above)</td>
</tr>
<tr>
<td>C.2 Alumni Relations</td>
<td>Attributed to each faculty and school on the basis of a five-year rolling average of degrees awarded</td>
</tr>
<tr>
<td><strong>D. University Relations</strong></td>
<td></td>
</tr>
<tr>
<td>D.1 Marketing</td>
<td>Costs attributed to faculty/school on the basis of their undergraduate plus graduate FTE enrolment (excluding post-graduate medical education students, and at a discounted rate (30%) for QSB graduate-level off-campus students.) BISC is attributed this expense as a separate “faculty/School.”</td>
</tr>
<tr>
<td>D.2 Communications</td>
<td>Same driver as C. 2</td>
</tr>
<tr>
<td><strong>E. Library</strong></td>
<td></td>
</tr>
<tr>
<td>E.1 Information Resources; Information Services</td>
<td>Total faculty FTE, total undergraduate student FTE and total graduate student FTE, each weighted at 33.3%. Teaching hospital counts assigned reduced weight of 20%</td>
</tr>
<tr>
<td>E.2 Library Space</td>
<td>Total faculty FTE, total undergraduate student FTE and total graduate student FTE, each weighted at 33.3%, faculty and students who work or study off campus and who do not use</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>F. Information Technology Services</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F.1 Enterprise Services</strong></td>
<td>The sum of each faculty/school’s undergraduate student, graduate student and faculty member Fall headcount. Undergraduate student headcounts and professional graduate program student headcounts are weighted at 50%. Postgraduate medical education student headcounts weighted at 20%.</td>
</tr>
<tr>
<td><strong>F.2 Teaching and Learning Services</strong></td>
<td>The sum of each faculty/school’s undergraduate and graduate student Fall headcount. In recognition of their distinct learning behaviours and differing program and research requirements, postgraduate medical education students are included at reduced weight (20%), off-campus undergraduate students at reduced weight (20%), and graduate students in professional programs at reduced weight (50%).</td>
</tr>
<tr>
<td><strong>G. Student Support and Financial Aid</strong></td>
<td></td>
</tr>
<tr>
<td><strong>G.1 Graduate Student Support (excluding Needs-Based)</strong></td>
<td>Costs of support are attributed to each faculty and school on the basis of a three-year rolling average of actual usage.</td>
</tr>
<tr>
<td><strong>G.2 Undergraduate Merit Support</strong></td>
<td>Same as G. 1</td>
</tr>
<tr>
<td><strong>G.3 Undergraduate and Graduate Needs-Based Support</strong></td>
<td>Same as G. 1</td>
</tr>
<tr>
<td><strong>H. School of Graduate Studies Service Operations</strong></td>
<td></td>
</tr>
<tr>
<td><strong>H.1 SGS Service Operations</strong></td>
<td>Total Fall headcount of all students enrolled in SGS.</td>
</tr>
<tr>
<td><strong>I. Student Affairs Operations and Other University-Wide Student Services</strong></td>
<td></td>
</tr>
<tr>
<td><strong>I.1 Student Affairs Operations</strong></td>
<td>Total undergraduate and graduate Fall headcount in each faculty/school. Students studying off-campus or primarily at one of the teaching hospitals are weighted at 30%. BISC is attributed student affairs operations costs separately.</td>
</tr>
<tr>
<td><strong>I.2 Other University-Wide Student Services</strong></td>
<td>Total undergraduate and graduate Fall headcount in each faculty/school (with BISC students rolled in to their “home faculty”). Students studying off-campus or primarily at one of the teaching hospitals are consistently weighted at 30%.</td>
</tr>
<tr>
<td><strong>J. Human Resources</strong></td>
<td></td>
</tr>
</tbody>
</table>

the actual physical space of the Library are assigned zero weight.
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J.1 Human Resources</td>
<td>Total headcount of all employees on payroll, as of the Fall count date, excluding Adjunct 1, 2 and 3 appointments, student employees and casual employees.</td>
</tr>
<tr>
<td>K. Specific Administrative Offices and Other University-Wide Expenditures</td>
<td>Attributed to faculty/school on the basis of an all-funds revenue measure. “All-funds” is defined as the sum of operating, trust, research, ancillary operations, non-credit continuing education, internal and external endowments, and SEAMO (with SEAMO revenue discounted to 20%). Operating revenue will include the base budget allocation, which is net of shared service costs.</td>
</tr>
<tr>
<td>K.1 Specified Operations Offices of Provost, Principal, VPFA, VPR and University-wide Administration Expenses</td>
<td>Attributed to faculty/school on the basis of total EFT faculty (comprised of Non-Renewable, Tenured/Tenure-Track, Continuing Adjunct, Post-Doctoral Fellow and Term Adjunct (using estimated EFT) appointments.</td>
</tr>
<tr>
<td>L. University-Wide Faculty Services and Functions</td>
<td>Capital funds are attributed directly to the University Fund and not to faculties and schools.</td>
</tr>
<tr>
<td>L.1 University Wide Faculty Services and Functions</td>
<td>Capital funds are attributed directly to the University Fund and not to faculties and schools.</td>
</tr>
<tr>
<td>M. Capital Transfer</td>
<td>Capital funds are attributed directly to the University Fund and not to faculties and schools.</td>
</tr>
<tr>
<td>N. Vice-Principal Research – Other</td>
<td>First, total grant and contract research income is assigned, where possible, to specific faculty/school. Remaining University-wide and faculty/school non-specific research income is distributed in proportion to assignable research income. Faculty/school shares are calculated on the basis of the sum of the two research income assignments, producing a “research income” driver that constitutes 50% of the expense attribution. Second, the total number of active research grant and contract holders is used to calculate faculty/school shares that constitute the remaining 50% of the expense attribution.</td>
</tr>
<tr>
<td>O. Special or Non-Attributable Benefits and Pension Plan Special Payments</td>
<td>Attributed to faculty/school according to their share of total employee salary base (excluding</td>
</tr>
<tr>
<td><strong>P. University-Wide Community Services</strong></td>
<td>casual staff and student employees (TA’s and RA’s).</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td><strong>P.1 University-Wide Community Services</strong></td>
<td>Same as A. 2.</td>
</tr>
<tr>
<td><strong>Q. University Fund Allocations</strong></td>
<td>See separate table (Table 3)</td>
</tr>
<tr>
<td><strong>University Fund</strong></td>
<td>A levy of 3.25% against the revenues of faculties/schools</td>
</tr>
<tr>
<td><strong>Research Intensity Fund</strong></td>
<td>Beginning in 2016-17 to recognize the cost of research, an additional 1% levied against the revenues of faculties/schools and then distributed back to the faculties/schools in proportion to their TriCouncil grant revenue shares (same driver as revenue drivers C1 and G1 (Table 1))</td>
</tr>
</tbody>
</table>

Source: [Queen’s University, Planning and Budget Annual Report, 2016](#) pp. 55-73.
Table 4: Queen's University NBM: University Fund Revenues and Expenses 2016/17

<table>
<thead>
<tr>
<th></th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
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<td><strong>Revenues</strong></td>
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<td>Direct to UF, Invest Income, Late Fees, Overheads</td>
<td>19,279,766</td>
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<td>UF Recovery</td>
<td>15,839,055</td>
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<tr>
<td><strong>Total UF Revenue</strong></td>
<td><strong>35,118,821</strong></td>
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<tr>
<td><strong>Committed Expenses</strong></td>
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<tr>
<td>Transfers to Capital</td>
<td>12,343,026</td>
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<tr>
<td>Hold Harmless</td>
<td>12,750,856</td>
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<tr>
<td><strong>Recommended Expenses</strong></td>
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</tr>
<tr>
<td>Deferred Maintenance</td>
<td>2,100,000</td>
</tr>
<tr>
<td>Library Acquisitions</td>
<td>750,000</td>
</tr>
<tr>
<td>Qsuccess &amp; Embedded Counsellors</td>
<td>262,000</td>
</tr>
<tr>
<td>ITS Infrastructure Renewal Cash</td>
<td>200,000</td>
</tr>
<tr>
<td>ITS Infrastructure Renewal New</td>
<td>300,000</td>
</tr>
<tr>
<td>Contingency</td>
<td>1,800,000</td>
</tr>
<tr>
<td>VP Research position - 1 year</td>
<td>59,085</td>
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<tr>
<td>Classroom Renewal</td>
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<tr>
<td>PEC</td>
<td>1,200,000</td>
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<tr>
<td>CFREF</td>
<td>800,000</td>
</tr>
<tr>
<td>Job Evaluation Project</td>
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<tr>
<td><strong>Total Committed &amp; Recommended Expenses</strong></td>
<td><strong>33,814,967</strong></td>
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<tr>
<td><strong>Total Remaining to be Allocated</strong></td>
<td><strong>1,303,854</strong></td>
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</table>

Source: Queen’s University, Planning and Budget Annual Report, 2016 p. 74.
**Table 5: ASC Budget Allocation Model, Budget Allocation by Department, Fiscal 2015/16 and 2016/17**

<table>
<thead>
<tr>
<th>Discipline Group</th>
<th>Department</th>
<th>2014/15 Base Budget</th>
<th>Net Allocation ($)</th>
<th>Variance ($)</th>
<th>Cross Teaching Revenue</th>
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<tr>
<td><strong>Creative Arts</strong></td>
<td>Visual Art</td>
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<td>$888,691</td>
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<td>Film</td>
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<td>$2,011,830</td>
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<tr>
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<td>$1,813,896</td>
<td>$1,764,302</td>
</tr>
<tr>
<td><strong>Humanities</strong></td>
<td>Art</td>
<td>$1,954,162</td>
<td>$2,090,553</td>
<td>$1,895,520</td>
<td>$1,938,265</td>
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<tr>
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<td>Classics</td>
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<td>$1,615,127</td>
<td>$1,619,300</td>
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<tr>
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<td>English</td>
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<td>History</td>
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<td>$2,177,304</td>
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<td>Religious Studies</td>
<td>$1,468,591</td>
<td>$1,511,455</td>
<td>$981,489</td>
<td>$1,201,425</td>
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<td>$1,704,526</td>
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<td>$2,737,497</td>
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<td>$563,193</td>
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<td>$6,344,729</td>
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<td>Geography/Planning</td>
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<td>Global Development</td>
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<td>$1,372,762</td>
<td>$1,570,213</td>
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<td>Kinesiology/Health</td>
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<td>Industrial Relations</td>
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<td>$1,073,557</td>
<td>$1,073,557</td>
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<td>Political Studies</td>
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<td>$4,243,223</td>
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<td>$6,543,093</td>
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<td>$896,097</td>
<td>$219,125</td>
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<td>$4,889,501</td>
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<td>$4,839,724</td>
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<td>$1,447,920</td>
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<td>CDS</td>
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</table>

Source: ASC Data Supplied to Heads
Table 6: Undergraduate Student-Faculty Ratios by Department, ASC

<table>
<thead>
<tr>
<th>Discipline Group</th>
<th>Department</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
<th>2016/17</th>
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<tbody>
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<td>Visual Art</td>
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<td>10.89</td>
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<td></td>
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<td>17.15</td>
<td>21.48</td>
<td>20.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music</td>
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<td>15.92</td>
<td>14.82</td>
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<tr>
<td></td>
<td>Drama/Music</td>
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<td></td>
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<td>20.09</td>
<td>19.78</td>
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<tr>
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<td>Film</td>
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<td>17.70</td>
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<td>29.81</td>
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<td>44.71</td>
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<td>38.60</td>
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<td>22.15</td>
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<td>Total</td>
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<td><strong>25.24</strong></td>
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<td><strong>27.46</strong></td>
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</tbody>
</table>

Notes: 1. Ratio = (UGRD Course FTE + DIST FTE)/(TENURED FACULTY + CONT. ADJ.)
2. Drama and Music combined in 2015/16; Geography and Planning (MPI Program) combined in 2015/16; Industrial Relations moved to ASC in 2015/16. Cultural Studies is a program but not a department.

Source: [ASC Online Data](#)
Table 7: Graduate Student-Faculty Ratios by Department, ASC

<table>
<thead>
<tr>
<th>Discipline Group</th>
<th>Department</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
<th>2016/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Arts</td>
<td>Visual Art</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Drama</td>
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<tr>
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<td>Music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Drama/Music</td>
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</tr>
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<td>Film</td>
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<td></td>
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<tr>
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Notes: 1. Ratio = GRD FTE/TENURED FACULTY
2. Drama and Music combined in 2015/16; Geography and Planning (MPI Program) combined in 2015/16; Industrial Relations moved to ASC in 2015/16. Cultural Studies is a program but not a department.

Source: ASC Online Data
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Notes: Drama and Music combined in 2015/16; Geography and Planning (MPl Program) combined in 2015/16; Industrial Relations moved to ASC in 2015/16. Cultural Studies is a program but not a department.

Source: ASC Online Data
List of Figures

Figure 1: Queen’s University New Budget Model

Figure 2: New Budget Model, ENG, Queen’s University

Figure 3: ASC, New Budget Allocation Formula Model With 2016-17 Budget Amounts ($ millions)
Figure 1: Queen’s University New Budget Model

*Other Revenue includes net income from ancillary operations, investment income.

Source: Queen’s University, Planning and Budget Annual Report, 2016 p. 28. See Footnote 27 on p. 25 of this report.
Figure 2: ENG NBM, Queen’s University

Source: ENG Dean’s Office May, 2016
Figure 3: FAS New Budget Allocation Formula Model With 2016-17 Budget Amounts ($ millions)

FAS New Budget Model

Tuition and Grant
(100% to FAS) $186.2

Less: University Shared Costs $82.8

Less: Faculty Shared Costs $13.7

Available to Departments $85.2

Faculty Fund

CDS to other Faculties

Faculty and Staff Pool

Graduate Pool

Undergraduate Pool

CDS course revenue (net of Faculty and University costs)

$7.6

Revenue (net of CDS costs)

Cross-Faculty Teaching Revenue
(60% to FAS)

Research Overhead/Indirects;
Department Trusts/Endowments

Ancillary Revenue
(service contracts, short courses, etc)

$3.7

$1.0

5% 95%

5% 95%

$15.4

$4.1

Source: Queen's University, Faculty of Arts and Science, New Budget Model Overview, February 2015
List of Appendices


Appendix B: Select Bibliography: ABB Budgeting in the North American Post-secondary Education Sector

APPENDIX A

Summary of ‘ABB’ models at Ontario Universities
Glen Copplestone
King’s University College and
OCUFA University Finance Committee

Quick Overview:

The new budget models highlighted below, each represent a variation of an Activity-Based Budget or ‘Responsibility-Centre’ budget model. For simplicity, they have been lumped together and will be referred to as ‘ABB’ models. During the ‘early’ years of ABB models, several changes have been made to the budget model at each university. Therefore, in some sense these models ‘evolve’ over time. Generally, they represent a work in progress and will continue to change. It should also be noted that ABB models apply to the Operating Budgets of universities, which is only one part of the University’s Consolidated Budget.

An ABB model establishes ‘units’ or ‘centres’. Revenues are allocated to the units that are responsible for generating that revenue (referred to below as ‘Faculties’) or, in some cases, directly to a Central Fund. In the case of inter-faculty teaching (the ‘Service Teaching’ adjustment), there are a variety of arrangements/proposals to split the undergraduate tuition revenue (and in some cases, grant revenue as well) between the Faculty Teaching the undergraduate course and the Faculty of Registration. The Central Fund also receives revenues from a ‘tax’ applied to the Faculties gross revenues (or it may be applied to the Faculties ‘net revenues’).

Each Faculty is usually responsible for the direct costs of providing its instruction, including salary and benefits. Indirect costs, or university ‘shared-costs’, are then usually ‘pooled’ together into ‘cost bins’ and attributed to the faculties by applying a cost driver(s) for each of the cost bins. In some cases, Faculties with a surplus at the end of the fiscal year retain it, and may carry it forward. In other cases, any surplus is ‘held’ by the Central Fund. For those Faculties with a ‘deficit’, they receive ‘Hold Harmless’ payments which represent a top-up, from the Central Fund, to ensure their net revenues are consistent with a base year, or ‘shadow year’. Often the ‘shadow year’ is the year before the adoption of the ABB model, but in some cases, ‘the shadow year’ may in fact be a few years. However, Hold Harmless payments would take into account falling enrolments and declines in government funding. The Hold Harmless payments may represent a full or partial ‘top-up’ and often are scheduled to be phased out over a few years. The primary objectives of the Central Fund are very similar in the ABB models adopted at Ontario universities.

Presently there are four Ontario universities that are operating under an ‘ABB’ model and another six universities that have announced their intentions to adopt an ABB model by 2018/19 (see Table 1 below). The name of the ABB version ranges across universities. More importantly, there are some variations across universities as summarized below, with respect to the formula used to allocate revenues (see Table 2), the division of (undergraduate) tuition revenue between the Faculty teaching the course and the Faculty of Registration, when there is a difference (see Table 3), the features of the Hold Harmless payments (see Table 4) and the source of funds for the Central Fund (including the ‘tax’ rate on gross revenues, or net revenues, of the Faculties) and the primary function of the Central Fund (see Table 5). This survey will highlight some of these differences. This summary, however, will not include a summary of the cost bins or cost drivers employed/proposed at the various universities.
Summary: Steps to establish an ‘Activity-Based Budget’

1. Define/distinguish revenue-generating units (‘Centre/Faculties’) and Support units (shared services).
2. Determine which sources of revenues are allocated to Faculties/Support Units/Central Fund, and on what basis.
3. Adjust the revenues among the Faculties for service teaching if necessary
4. Determine the portion of Support unit costs (indirect costs) that are charged to Faculties and on what basis (‘cost drivers’)
5. Determine the ‘tax rate’ and the ‘tax base’ (gross or net revenues) to fund the Central Fund
6. Assess ‘Hold Harmless’ payments if necessary
7. Determine if surpluses/deficits incurred by Faculties will be retained and carried forward each year? (eg WLU, McMaster)
### Table 1: Ontario Universities with ‘ABB’ models

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<tr>
<th>University</th>
<th>Name of Model</th>
<th>1st year of ‘ABB’</th>
<th>University</th>
<th>Name of Model</th>
<th>1st year of ‘ABB’</th>
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<td>McMaster</td>
<td>‘New Budget Model’ (NBM)</td>
<td>2014/15</td>
<td>Brock</td>
<td>Resource Allocation Model (RAM)</td>
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<td>Queens</td>
<td>‘New Budget Model’ (NBM)</td>
<td>2013/14</td>
<td>Trent</td>
<td>Responsibility Centre Management (RCM)</td>
<td>2017/18</td>
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<td>U of T</td>
<td>New Budget Model (NBM)</td>
<td>2007/08</td>
<td>WLU</td>
<td>Responsibility Centre Management (RCM)</td>
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<td>Enrolment-centred Model (ECM)</td>
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<td>York</td>
<td>Shared Accountability &amp; Resource Planning (SHARP)</td>
<td>2018/19</td>
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*In Brock’s 2013/14 budget report, a ‘new accounting system’ was discussed by the Capital Infrastructure Committee but no ‘announcement’ of the date of introduction yet. Working on allocating costs & revenues began in 2014/15.*
### Table 2: Revenue Allocations to Faculties and University Fund:

<table>
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<th>University*</th>
<th>Revenues going to ‘Faculties’</th>
<th>Revenues going directly to University Fund (or non-faculties)</th>
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</thead>
<tbody>
<tr>
<td>McMaster</td>
<td>Undergrad tuition – 100% of ‘teaching faculty rate’ to faculty of teaching (residual shared 50-50) Graduate Tuition (100% to faculty of registration at actual rates) Provincial grant BIU-based both undergrad and graduate – 100% to faculty of registration at actual rates Application fees – 100% to faculty of application Research Overhead grants – 93% to faculty using average Research Awards (initially 7% to VPR Research Fund but recently changed in April 2016 to 10% to VPR Research Fund)</td>
<td>Other income (includes net income from ancillary) and investment income Unrestricted donations flow to University Fund (UF)</td>
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<tr>
<td>Queens</td>
<td>Undergrad and Grad Tuition Government grants Direct and Indirect costs of Research support (targeted) Endowment income and expendable gifts</td>
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<td>UOIT</td>
<td>RAM applies only to incremental revenue beyond budget base year 2014-15 85% of ‘net tuition’ (tuition revenue minus costs allocated to faculties) goes to faculties (10% for Tuition Set Aside and 5% to Academic Quality Fund) teaching faculties will be allocated 75% of ‘net tuition’ and 25% to faculty of registration</td>
<td>100% of operating grants flow to a central fund, to cover non-academic unit costs Non-faculty specific grants flow to Central fund</td>
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<tr>
<td>U of T</td>
<td>Government grants (all grants combined to create an ‘effective BIU value’ and then allocated by BIUs) Tuition fee revenues (less tuition set-aside) Research Grant Investment income</td>
<td>Revenue from non-division-specific endowed student aid funds in the University’s budget be reflected below-the-line (i.e. not attributed to any division) flow to University Fund</td>
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Table 2: Revenue Allocations (Continued)

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<th>Revenues directly going to University Fund (or non-faculty budgets)</th>
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<td>Brock</td>
<td>Faculties will retain undergraduate and graduate faculty-specific student fees</td>
<td>Undergraduate and graduate tuition and grant revenue, research, investment income, and other revenues will be attributed to the University Global Responsibility Centre.</td>
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<td>Trent</td>
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<td>Waterloo</td>
<td>Tuition revenue plus enrolment-driven Grants plus Other Income (Research, Special-purpose grants, miscellaneous income)</td>
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<td>WLU</td>
<td>Tuition revenue (graduate and undergraduate) plus government grants (both undergrad and graduate) and other fee revenue</td>
<td>Investment income, application fees, net Ancillary revenues, unrestricted gifts &amp; donations go directly to University Fund (UF)</td>
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<tr>
<td>Windsor</td>
<td>Domestic and International tuition fee revenues (note: to ensure consistency in allocation of revenue for both domestic &amp; international students, a “deemed” government grant (equal to 50% of international student tuition revenue) has been assumed in international tuition fee revenue. That is, a portion of international student tuition fees goes to support ‘non-faculty’ units</td>
<td>Government grants, Investment income Miscellaneous revenues go to support non-Faculty budgets</td>
</tr>
<tr>
<td>York</td>
<td>Tuition revenue (net of Tuition Set Aside), grants and application fees</td>
<td>Ancillary fees, Investment income, unspecified donations and other revenue flow to UF</td>
</tr>
</tbody>
</table>

* University in bold type identifies where ABB model has already been implemented.
### Table 3: Tuition Revenue Split between Teaching Faculty and Faculty of Registration

<table>
<thead>
<tr>
<th>University*</th>
<th>Service Teaching Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>McMaster</td>
<td>Undergraduate Teaching faculty receive 100% of their Faculty tuition rate ('average per unit tuition'). Due to more students from high tuition faculties taking courses in low tuition faculties, there is a 'surplus' which is split 50-50 with the Faculty of Registration. Graduate Tuition 100% to the Faculty of Registration.</td>
</tr>
<tr>
<td>Queens</td>
<td>Revenues from tuition and grant split 60% to Teaching Faculty and 40% to Faculty of Registration.</td>
</tr>
<tr>
<td>UOIT</td>
<td>Teaching faculties will be allocated 75% of ‘net tuition’ and 25% to faculty of registration (net tuition is tuition revenue minus costs allocated to faculties).</td>
</tr>
<tr>
<td>U of T</td>
<td>No formula available</td>
</tr>
<tr>
<td>Brock</td>
<td>Currently considering a variety of possible arrangements for the division of undergraduate tuition and grant revenue between the Teaching Faculty and the Faculty of Registration. No details available at this time.</td>
</tr>
<tr>
<td>Trent</td>
<td>Attribute the revenue generated (undergraduate tuition and government grant) on a per course basis where the teaching faculty would receive 100% of the revenue per course taught.</td>
</tr>
<tr>
<td>Waterloo</td>
<td>Apportion a % of tuition and/or grant to a teaching pool. Allocate the pool to Faculty performing the teaching.</td>
</tr>
<tr>
<td>WLU</td>
<td>Undergraduate tuition is made up of two parts: a base amount and a premium amount. The base amount is the lowest rate (i.e., the Arts &amp; Science domestic rate for Undergraduate programs). The premium amount is any amount over and above this base rate (eg. In the case of Business school tuition). The base tuition be allocated based on Faculty of Teaching (100%) and all premium tuition revenue be allocated to the Faculty of Registration. - All (domestic &amp; international) Graduate tuition assigned 100% on basis of Faculty of Registration. - Undergraduate and Graduate enrolment-based grants go 100% to Faculty of Registration.</td>
</tr>
<tr>
<td>Windsor</td>
<td>100% of undergraduate tuition revenue goes to 'Teaching faculty' as opposed to Faculty of Registration.</td>
</tr>
<tr>
<td>York</td>
<td>Inter-faculty tuition and grant revenues allocated to both Faculty of Registration and Teaching Faculty (details on division of revenues not available).</td>
</tr>
</tbody>
</table>

* University in bold type identifies where ABB model has already been implemented.
### Table 4: ‘Hold Harmless’ Provisions

<table>
<thead>
<tr>
<th>University</th>
<th>‘Hold Harmless’ Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>McMaster</td>
<td>Initially Hold Harmless payments available so no new budget would be less than their 2013/14 base budget. In April 2016, announced elimination of Hold Harmless and replaced with a fixed Faculty Supplement for a 3-year period that will top up Faculty budgets to the allocation they had in year prior to introduction of NBM. This represents a lower commitment of funds, relative to the originally proposed Hold Harmless payments so this will free up funds in the University Fund (UF). It will also provide a greater incentive, to faculties receiving Hold Harmless transfers, to seek out new sources of revenues, or cut costs. After 3 years, this will be re-considered.</td>
</tr>
<tr>
<td>Queens</td>
<td>Hold Harmless available in full for first two years but then phased out. Based on final 2013/14 Hold Harmless Payments (first year of NBM), the gap each year after 2014/15 is reduced. In 2015/16 the rate is 90%, in 2016/17 it is 75%, 2017-18 it is 60%, 2018-19 it is 30% and then in 2019-20 it is 0% (Hold Harmless payments end in 2019/20).</td>
</tr>
<tr>
<td>UOIT</td>
<td>No mention of Hold Harmless</td>
</tr>
<tr>
<td>U of T</td>
<td>The central fund makes ‘Allocations’ to divisions. The allocations take into account academic priorities, the student experience, budget constraints, leveraging of government or donor opportunities</td>
</tr>
<tr>
<td>Brock</td>
<td>Reference to ‘subvention’ funds (similar to Hold Harmless) but no details available</td>
</tr>
<tr>
<td>Trent</td>
<td></td>
</tr>
<tr>
<td>Waterloo</td>
<td></td>
</tr>
<tr>
<td>WLU</td>
<td>Referred to as ‘Unit Subventions’ planned to be temporary. Long term subvention will be considered by Budget Committee as needed.</td>
</tr>
<tr>
<td>Windsor</td>
<td>Faculties ‘held harmless’ for 85% of net position based on actual 2015/16 (increases/decreases in base budgets will equal 15% of each Faculty’s net position (revenues less expenditures). Faculties with surpluses receive ‘incremental base budget. Those with deficits experience base reductions and required to find cost savings or identify new revenue growth opportunities.</td>
</tr>
<tr>
<td>York</td>
<td>Hold Harmless payments available and will be calculated with respect to 2013/14 fiscal year results. No indication if they are to be phased out.</td>
</tr>
</tbody>
</table>

**Note:** Hold Harmless provisions are generally based on ‘budgeted’ amounts in a ‘shadow year’ rather than the ‘actual’ amounts recorded in the University’s financial statements.

* University in bold type identifies where ABB model has already been implemented.
Table 5: ‘Central Fund’ or ‘University Fund’

<table>
<thead>
<tr>
<th>University*</th>
<th>Financing of ‘Central Fund’ (‘University Fund’)</th>
<th>Purpose of Central Fund</th>
</tr>
</thead>
</table>
| McMaster    | 8% of revenues to University Fund (excluding indirect costs of research) 1% of revenues to Research Infrastructure Fund (although allocated back to Faculties based on their proportionate share of Research). In April 2016, differential tax rates for the RIF were introduced. Faculties with high tuition (eg Business and Engineering) and Arts and Science will pay a 3% tax rate whereas other faculties will continue to pay 1% tax rate. | - Strategic Priorities  
- Finance ‘Hold Harmless’ payments  
- Contribution to Capital Reserve  
- Established 2 other funds (Research Excellence Fund & Strategic Alignment Fund)  
- Fund ‘Unfunded Priorities’ for new initiatives from all areas of university (if funds available)  
- ‘Other Priorities’ (for unforeseen events) |
| Queens      | UF receives ‘Other income’ (includes net income from ancillary) and investment income plus Unrestricted donations. ‘Tax’ on ‘attributed revenue’ (gross revenues minus cross-teaching adjustment). Tax rate for each faculty was 3.25% of attributed revenue (in 2015-16) | Funds transfers from operating budget to capital, Hold Harmless payments, infrastructure renewal, classroom renewal, strategic initiatives and contingency funds. |
| UOIT        | 15% of ‘net tuition’ flows to Central Fund (10% to cover tuition set aside (TSA) and 5% for an Academic Quality Fund  
Central Fund also receives 100% of operating grants (to cover non-academic unit costs) and non-faculty specific grants | Central Fund includes tuition set aside (TSA) and Academic Quality Fund  
Central Fund also covers non-academic unit costs |
<p>| U of T      | Contribution to University Fund is calculated as 10% of total attributed revenue from operating grant, tuition fee, investment income and other income. | Support academic planning and funds ‘Allocations’ to divisions |
| Brock       |                                                   | One of the Responsibility Centres is the ‘Global University’ centre (within the ‘Global Responsibility Centre). Appears to be responsible for allocation of revenues and have similar objectives to other universities |
| Trent       |                                                   | |
| Waterloo    | No specifics yet but appears proposal is to tax gross revenues | Variety of purposes: Strategic plan, ongoing Committed Agreements, Temporary |</p>
<table>
<thead>
<tr>
<th></th>
<th>Two sources of funds:</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLU</td>
<td>1) UF ‘tax’ on gross Revenues has not been set yet (initially the rate was referred to as LINC, “Laurier Institutional Contribution”, but it has been replaced with ‘UF Contribution’)</td>
</tr>
<tr>
<td></td>
<td>2) Revenues that are not directly attributable to a unit (eg. Includes unrestricted donations, investment income, application fees and late registration fees)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Commitments, Salary &amp; Benefit increases, Initiatives Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WLU</td>
</tr>
<tr>
<td></td>
<td>Funds institutional costs (eg contingency funds, debt service costs, insurance, institutional memberships, foreign exchange and other reserves, senior citizen tuition waivers, Special Pension Arrangement), strategic priorities and unit subventions, Hold Harmless payments, or new fixed faculty supplement (as needed), shared services and contributions to capital fund</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>York</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Faculties will contribute and it appears the contribution rate will be based on gross revenues of the faculties.</td>
</tr>
</tbody>
</table>

|   | Funds Hold Harmless payments, Strategic initiatives and Contingency fund. |

* University in bold type identifies where ABB model has already been implemented.
Partial List of Concerns with ABB models

1. Transition to ABB models is easier when enrolment is rising. Faculties experience increased exposure to risk from external economic factors (i.e., demographic effects on enrolments, government policies) under ABB model. Funds for Deferred Maintenance and for Employee Retirement benefits can be passed down to Faculty budgets as well as Special Pension Payments. These will also squeeze Faculty budgets.

2. Is process significantly different? What has changed? If administration controls the ‘Central Fund’ (including the financing decisions), then they can still direct expenditures. As well, if they control Faculty surpluses, it limits the attractiveness of ABB models. Does ABB models put more, or less, financial power in the hands of Administration relative to the incremental budgets that existed before ABB?

3. Academic mission and ABB models – Are budget decisions driving academic decisions? Will the Central Fund have sufficient funds to properly pursue university priorities (including faculty renewal)? ABB models could be viewed as instilling ‘corporate values’ rather than academic values. In ABB models the emphasis is on revenue attribution (especially undergraduate enrolment), has this come at the expense of the research mission of universities?

4. ABB models require detailed data sharing and may require a (slight) change in the skill set of Administrators in Faculties. Is the inter-faculty teaching formula (sharing tuition and/or grant revenues) appropriate and creating the correct incentives? Are there any ‘checks’ on budgets of Support Units (both with respect to costs and the services provided)? Is the share of costs assessed to faculties a reasonable share?

5. If Hold Harmless payments are available, with full top-up, do Faculties ‘grow’ out of the need for Hold Harmless transfers, or become perpetual recipients? If full top-up, then if Faculty receives new revenues, their Hold Harmless payment could fall dollar-for-dollar. Therefore, there is a reduced incentive to grow revenues, or cut costs, in Faculties receiving Hold Harmless payments. At the same time, full top-up for those faculties receiving Hold Harmless transfers means they are protected from the impact of an increase in shared costs. Other faculties would not have such protection. If Hold Harmless payments are to be phased out, does this mean the ‘tax rate’ to fund the Central/University Fund will drop?

6. Governance issues: Is there a separate Committee mechanism in place to make decisions regarding control of the ‘Central Fund’ (and if so, who does this Committee report to)? setting the ‘tax rate’ for the Central Fund? How much faculty representation is there on both the Committees developing and reviewing the ABB model?
7. Collective Bargaining issue: If revenues generated by Faculties do not include a share of all revenue sources, then it may affect the potential success of collective bargaining – for example, at Windsor the Faculties receive tuition revenues only (which are controlled by the government) in which case the Faculties may be strapped to finance negotiated wage increases. ABB could push universities even more in the direction of increased use of part-time faculty, increased teaching loads, eliminating programs with low enrolment, larger class sizes.

8. Impact on students from ABB model is unclear. There is an incentive now for faculties to add new sections of courses (retain the money), it may also encourage faculties to put their best teachers into lower level courses to attract and retain students. It could also increase student services (to increase retention). But, on the other hand, it could also reduce student choice if they are restricted to take courses only in their ‘home’ unit. In addition, will the ABB model influence the method of instruction – i.e., now that ‘space’ costs are measured by NASM (net assignable square metres), does this increase the incentive to provide online courses?
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Appendix C

Executive Summary, Review of Queen’s New Budget Model January 2016

1) Executive Summary

In 2015, the Provost and Vice-Principal (Academic) appointed a NBM Review Committee ("Committee") to conduct a third-year review of Queen’s activity-based budgeting model, referred to as Queen’s “new budget model” ("NBM"), and the associated processes. The Committee’s mandate was to review the principles, objectives, and processes of the NBM and provide a report of recommended modifications to be incorporated into the fiscal 2017-2018 budget. More specifically, this review addresses the following questions:

- What are the strengths and weaknesses of the NBM?
- Does the NBM adhere to the agreed principles and objectives?
- What incentives and disincentives have emerged?
- Is the NBM effective for stakeholder engagement and informed resource allocation?

The Provost’s Office also contracted the services of Huron Consulting Group ("Huron") to complete an objective third-party assessment of the strengths and weaknesses of both the NBM itself and the associated processes to assure that they support each other and meet the originally agreed objectives. Huron’s external review was intended to supplement the larger internal NBM review tasked to the Committee.

Given that Queen’s is only in its third year of implementation of the NBM, Huron did not recommend that any wholesale changes be made until the end of the formulaic hold harmless period. However, Huron did identify a few small adjustments that could be incorporated into the NBM and budget process in the short and near term, so Queen’s can address stakeholder concerns and strengthen the NBM.

Overall, the Committee feels that the NBM is working effectively as designed in meeting the established objectives and principles. The Committee agrees with the recommendation by Huron to not make any wholesale changes at this time and to perform a further review of specific components of the NBM (i.e. bins and drivers and cross teaching), after the formulaic hold harmless period ends. Although the Committee has not identified a need for any immediate significant changes to the NBM at this time, the Committee recommends the following adjustments to the NBM and action items to address some noted weaknesses and disincentives:

1. **Adopt a revised set of principles and objectives for Queen’s NBM.**
2. **Include all research overhead, non-MTCU grants, and admission fees revenue in the NBM on a go forward basis.**
3. **Invest in an enterprise-wide budgeting tool, when appropriate, to better facilitate budget modeling, planning, and forecasting.**
4. **Develop a funding mechanism that supports the costs of research.**
5. Establish a working group to review and standardize service level agreements.
6. Perform a review of internal chargebacks over and above the budget allocation for Shared Service units to determine when these chargebacks are appropriate.
7. Improve the communication to Shared Service units of funding decisions that are made during the budget cycle.
8. Maintain sufficient discretionary funding in the University Fund to provide future case by case support to faculties and ensure university priorities are adequately funded.
9. Review all bins and drivers after the end of the hold harmless attenuation period to reduce the complexity of the NBM.
10. Perform a review of the cross teaching formula after the end of the hold harmless attenuation period.
11. Develop policy levers to control the duplication of courses by multiple faculties due to the cross teaching formula.
12. Maintain the current arrangement for interdisciplinary teaching at the graduate level.
13. Develop a policy for common space.
14. Perform a review of the university’s enrolment management process at the graduate level.

By implementing these recommendations, the university will address some key stakeholder concerns and strengthen the NBM in the short term. In addition, the Committee has made recommendations that can inform a NBM review at the end of the hold harmless attenuation period.