

# Report from the NU Budget Model Planning Team

June 5, 2009



# Table of Contents

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	Page
Transmittal Memo.....	1
Executive Summary.....	3
Elements of the Recommended Budget Model.....	5
- Responsibility Centers	
- Attribution of Revenue	
- Allocation of Central Costs	
- University Contribution	
- Current Fund Allocation	
- Governance	
Implementation Plan and Schedule.....	14
- Implementation Schedule	
- Data Needs	
- Training and Communication	
- Business Process Changes	
Appendix A Team Charge and Membership.....	16
Appendix B RCM Cost Allocation Worksheet.....	18
Appendix C FY10 Implementation Timeline.....	19
Appendix D Budget Template.....	25
Appendix E Data Needs.....	26



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**MEMORANDUM**

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Subject: Report from the Team

Date: June 5, 2009

As requested in your memo of November 17, 2008 (see Appendix A), we have developed a proposed hybrid budget / management model for Northeastern University which we believe can be put into effect as of July 1, 2010. The model and supporting documents are attached for your review.

In fulfilling the assignment that you gave us, we were frequently faced with our different individual priorities, philosophical principles, and internal allegiances. While it was not possible for us to reach full consensus on some components of the plan we are presenting, we are in agreement that our report as submitted provides a good start-up option for the hybrid budget model at Northeastern. We expect that as our recommendations are more broadly understood and implementation details are fleshed out, you will benefit from suggestions to improve our plan.

We look forward to assisting you in whatever additional way you think appropriate with the implementation of the new budget model.

Attachments

## Executive Summary

The NU Budget Model Planning Team recommends the implementation of a hybrid budget model effective with the 2010-2011 fiscal year. The model incorporates the basic features of Responsibility or Revenue Center Management (RCM) as they pertain to revenue attribution and cost allocation.

Responsibility Centers (RCs) are the key decision making units in the new budget model. A total of 18 RCs are proposed, with ten of them being academic units. Revenue is to be credited to the RCs as follows:

- Revenue from grants and contracts, gifts, endowment and non-credit activities that currently flows directly to individual RCs would continue to do so.
- Graduate / professional tuition would flow to the instructing unit; financial aid follows the student.
- Undergraduate tuition (except Study Abroad) would be divided 50% - 50% between the RC offering the instruction and the RC of enrollment. Financial aid provided by the Office of Financial Aid should be calculated as an average discount on the tuition of all undergraduate day students.
- Revenue recovered from externally funded grants and contracts for the reimbursement of indirect costs should be assigned to the RC(s) in which the grant or contract is located.

With regard to the allocation of central costs, we recommend that they be grouped in seven categories, with four of these allocated to RCs based on the Center's proportionate share of University operating expenses. With regard to research infrastructure costs, they are to be allocated to RCs on the basis of their research revenues from external sources. Space costs are allocated based on occupancy / utilization.

The proposed model includes a "University Contribution" in the form of a percentage of all revenues except direct grant funding and gift / endowment income. It also includes a "Current Fund Allocation," which will reflect the Provost's judgment about the appropriate balance between an RC's revenues and the cost of its activities.

If implementation of the new budget model is to occur on 7/1/10, the University must move expeditiously in the next few months to address staffing and data / information needs. The larger planning team should be replaced by a smaller, highly focused implementation team that would deliver "budget planning packets" to the RCs in October of 2009.

The team believes its recommended budget model constitutes a good starting point for a new approach to budgeting / planning at Northeastern University. It will encourage entrepreneurial activities and will achieve a better alignment of resource generation and allocation and provide resources for strategic investment. We fully expect the plan will evolve and be improved as senior administrators become more knowledgeable about the model.

# How the Hybrid Budget Model Will Be Structured at Northeastern Elements of the Recommended Budget Model

## 1. Responsibility Centers

Responsibility Centers are the foundation of the hybrid budget model. These are the units of the University that bring in significant activity-based revenues which cover an appreciable portion of the unit's operating costs. RCs may be schools/colleges or research centers/institutes (i.e., academic RCs) or auxiliary/other operating units (i.e., auxiliary support RCs).

Academic and non-academic RCs need to be coherent units for purposes of strategic decision making and budget/resource planning and management. Consistent with the experience of other universities that have hybrid budget models, departments and units within the schools and colleges at Northeastern should not be designated as RCs.

The following list identifies proposed RCs at Northeastern:

### **Academic Responsibility Centers**

Bouve College of Health Sciences  
College of Arts & Sciences<sup>1</sup>  
College of Business Administration  
College of Computer & Information Science  
College of Criminal Justice<sup>1</sup>  
College of Engineering  
College of Professional Studies  
School of Law  
Study Abroad Program  
Barnett Institute

### **Other Responsibility Centers**

Student Center  
Parking  
Intercollegiate Athletics  
Intramural / Campus Athletics  
Center for the Study of Sport in Society  
(pending an update on CSSS' financial underpinnings)  
Health Center

### **Auxiliary Responsibility Centers**

Residence Halls  
Warren Conference Center, Henderson  
House and Broad Street Conference Center  
Renaissance Park

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<sup>1</sup> Pending decision on restructuring.

## 2. Attribution of Revenue

An activity-based hybrid budget is developed using a set of rules for the attribution of revenue and costs. This section details the methodology that the planning team recommends be used to allocate revenues to the responsibility centers.

### Attribution of Revenue: Tuition

#### 1) Undergraduate Day Tuition

- Attribute to each enrolling college
  - Net of University discount rate, e.g., financial aid
  - Rationale / Assumptions
    - *Centralized management of admissions/aid awarding*
      - Limited ability for RCs to influence Discount Rate
    - *Athletics and merit scholarship enrollments*
      - Student driven, limited control

#### 2) Undergraduate Day Tuition

- Cross-College Tuition Revenue Attribution (including CPS Language Courses)
  - *Net of discount*
  - *Distribution*
    - 50% Instructing College, 50% Enrolling College (for each credit hour taken in another college, the enrolling college will receive 50% of 1/16<sup>th</sup> of FT ug tuition)
  - *Rationale/Assumptions*
    - Should incent limited duplication of courses
    - Closest to covering cost
    - Finance Office does revenue distribution *from Enrolling College to Instructing College* each term after term audit

#### 3) Undergraduate Day Tuition and Associated Academic Fees

- Other Considerations
  - Double, multiple, or dual major
    - *“Enrolling College” revenue split between enrolling colleges*
    - *At point (term) of enrollment in second major*
  - Team taught courses
    - *Pro rata split of “Instructing College” Revenue*
  - Transfer to new major
    - *At point (term) of enrollment in new major*

#### 4) Graduate, Law and CPS Tuition and Associated Academic Fees

- Attribute to each Instructing College
  - Net of actual (by student) discount rate
    - *Tuition Waiver: charged to Instructing College (per course)*
    - *Stipend: charged to Awarding College/Grant*
  - Rationale/ Assumptions

- *Capacity Flexibility*
  - *De-centralized (RC) admissions/aid awarding decisions*
- 5) Graduate, Law & CPS Tuition and Associated Academic Fees
- Other Considerations
    - Double, multiple or dual program enrollment
      - *Revenue follows College of Instruction*
    - Team taught courses
      - *Pro rata split of “Instructing College” Revenue*
- 6) Study Abroad Revenue (tuition only; travel / housing 100% to Study Abroad)
- 75% Study Abroad, 25% Enrolling college
    - After discount
    - Regular Study Abroad
    - Faculty Led Programs
  - Rationale/Assumptions
    - Incremental cost is location/site dependant and highly variable
    - Faculty Led Program: Fixed and variable costs tend to be high
    - Want to incent Study Abroad

### **Attribution of Revenue: Research & ICR**

#### Research Revenue

- Grant & Contract Related
  - Grants and contracts
    - *100% to Revenue Center(s) associated with the grant*
  - Indirect Cost Recovery (ICR)
    - *100% to the unit, split when necessary*
- Patent / Licensing Fees
  - Keep current policy (30% PI: 30% Unit: 40% Central) for initial implementation but revisit thereafter

### **Attribution of Revenue: Gift & Endowment Funds**

- Annual Giving
  - Designated to the RC
  - Undesignated to the Central Fund
- Endowment earnings
  - Unrestricted endowment earnings to the Central Fund
  - Designated endowment earnings to the RC
- Short term investment earnings
  - Central Fund

### **Attribution of Revenue: Other Fees / Charges**

- To Central Fund: Late Fees, Vendor Fees (if not attributable to an RC)
- To Colleges (RCs): Graduate Application Fees
- To Enrollment Management: Undergraduate Application Fees, Parent Orientation Fees
- To Health Center (RC): Health Center Fees
- To Instructing College: Other Academic Fees such as private music lessons
- To Library: Library Fees/Fines
- To Parking (RC): Parking Fees
- RCs: Forfeited Deposits (Residence Halls, Tuition), Vendor Fees (if not attributable to an RC)
- To Residence Halls (RC):
  - Conference Fees (with residence)
  - Dorm Damage Fees
  - Housing Charges
  - Meal Plan Changes
  - Laundry Fees
- To Residential Student Association (RSA): Residence Activity Fees
- To Student Athletics: Recreation Fees
- To Student Center, Blackman & Fenway Center (RC): Associated fees
- To Student Government Association (SGA): Student Activity Fees

### **Year End Adjustment of Financial Performance**

At the end of each fiscal year, revenue and direct expenses should be trued up to actual. If a RC over-estimated, it will owe funds back to the University. If it generated more revenue than originally projected, the RC will receive the additional funds from the University. The University Contribution (discussed later) will be applied to the revenue adjustment.

### **3. Allocation of Central Costs**

The budgets of central cost centers are not activity based but rather are set so they are sufficient to allow the unit to accomplish the activities and tasks that comprise their support of the academic enterprise.

The planning team was asked to recommend a methodology for distributing central costs that is:

1. Reasonably simple
2. A reasonable proxy for comparative use
3. Transparent
4. Allows for effective cost containment strategies
5. Allows for differential growth of different cost types

The Central Costs that need to be allocated can be grouped in 7 cost centers as outlined in the table below.

Cost Center	Components and Comments
General Administrative Costs	Executive Affairs, Advancement, Institutional Research, Diversity & Affirmative Action, Finance, Investments Management, University Counsel, Business Office, Purchasing, External Affairs, Risk Management, Insurance, Internal Audit, Environmental Health and Safety, Public Safety, Human Resources, Facilities Admin, IS Admin (administrative svcs, general svcs and general management )
Student O/H Expense	Enrollment Management, Financial Aid, Student Affairs, Registrar, etc.
Academic Infrastructure	Academic Affairs, Academic IS Svcs, Faculty Senate, Ed Tech, etc.
Library	All library costs (personnel, operations & acquisitions). Alternatives include bundling Snell and Law or allocating Law totally to Law School (preferred).
Research Infrastructure	DSPA, Tech Transfer, VPR
IS	Admin svcs (included in Admin above) Network infrastructure (included in Space, below, except ResNet to the Res Hall RC) Academic IS (included in Academic Infrastructure, above) Specific services: on contract/usage basis with RCs & CCs
Space	Utilities, lease costs, depreciation, facilities admin, ops & maintenance, custodial; IS non-residential networks; related central costs
Debt Service / Capital Projects	Include in space charges

### **Allocation of Central Costs (General Admin, Student, Academic, Library, some IS)**

- The actual amount of costs attributable to these cost centers should be calculated and summed.
- These total costs should be divided proportionately among the RCs based on each RC's own operating expenses as a percentage of total University operating expenses, using a prior two year rolling average for the years last closed out.
- The expense base used for Allocated Central Costs should exclude student financial aid, capitalized equipment (over \$1500) and construction / renovation expenses.
- After Year One: For the first few years of the budget model we do not believe it is necessary to recalculate allocated central costs annually. Initially, there should be a presumptive annual rate of growth (e.g., 2-3%) to facilitate planning. Thereafter the base for central allocated costs would be reset every 3 years and adjusted annually by a rate (to be determined) less than the rate of price inflation as measured by the Consumer Price Index.

### **Allocation of Research Infrastructure Costs (DSPA, Tech Transfer, VPR)**

Research infrastructure costs should be allocated based on the RC's share of total NU sponsored project grant expenditures, again using a rolling historical average, e.g., last two fully reported years.

### **Allocation of Costs: Space**

Facility-Related Costs (including network costs) should be allocated at follows:

1. Auxiliary RC space: Cost per square foot = total costs for relevant space / total square feet. Allocate the costs of auxiliary space to the appropriate auxiliary RC.
2. Non-auxiliary space (including classrooms): Cost per square foot = total actual costs / divided by total assignable square feet of this space. These costs will then be allocated as follows:
  - Costs of space assigned to RCs will be allocated to the RC.
  - Classroom space assigned by the Registrar will be allocated to users based on the Registrar's data (share of SCH's taught in Registrar – controlled classrooms) from previous complete year.
  - Costs of space attributable to central units will be included in their total costs and then reallocated to RCs.

- Common space costs other than classroom space assigned by the Registrar will be folded into the assignable square foot charges.

### **Allocation of Costs: Debt & Large Capital**

- Attribute debt service for auxiliary RCs directly to the auxiliary (e.g., ResLife)
- Include present and future debt service on academic projects in the overall sq ft charge to academic and related (non-auxiliary) RCs and cost centers

A summary of how all of these costs would be allocated to the various RCs and cost centers is included at Appendix B.

### **Other Features of Cost Allocation Methodology**

- Space costs should be allocated to cost centers and then these costs should be allocated as the cost center's cost to RCs. (The same incentive structure regarding space needs to be universal.)
- An incentive should be developed to encourage units to turn back unneeded space to the University.
- The use of inside vendors is presumed unless an exception is approved. Use of outside vendors which would damage the provision of services to others or reduce the efficiencies that the University achieves through bundled services should not be allowed.
- When an RC has significant duplication (e.g., spends \$100K or more) of a centrally provided service due to the unique nature of the RC, then the RC may request that it not be charged for the central service at the same rate as other RCs.

## **4. University Contribution**

This is a charge assessed to all RCs; it can be thought of as a “membership tax.”

University Contribution assessments flow into a central pool that enables the President and Provost to award funding for “subvention” and/or strategic initiatives that support NU’s priorities. They may also constitute a spending reserve. Rather than following the prevailing convention of assessing a “Participation” Tax, we recommend that it be called a “University Contribution.”

The University Contribution (UC) should be a charge against revenues in all RCs. The benefits of this approach include:

- it makes it clear that all RCs have an obligation to contribute to the support of high priority activities that cannot support themselves.
- it makes it clear that all RCs are members of the larger University community and receive a benefit from the membership.
- by tying the tax to revenue in all RCs, the resulting pool of fungible resources will keep up with the overall growth of the University.

The University Contribution (UC) should be calculated on an RC's total adjusted revenues. The Planning Team recommends applying the UC to all revenues excluding direct sponsored research revenues (do not exclude ICR) and gift and endowment revenue. These exclusions are intended to incentivize seeking revenue from external sources.

The rate for the University Contribution must be informed by discussions with the Provost and President.

A higher UC would be applied to the academic RCs versus other RCs.

## **5. Current Fund Allocation**

The “Current Fund Allocation” (in lieu of “subvention” terminology used elsewhere) is the funding allocated selectively to RCs by the Provost to balance their budgets (cover the planned difference between revenue and expense) and to fund strategic initiatives and institutional priorities.

- Revenue sources that would flow to the Current Fund Allocation pool include University Contribution funds from RCs, unrestricted gifts, unrestricted endowment earnings, all short-term interest on University funds and other unassigned revenues.

The recommendation is that all short-term interest earned on balances invested for 12 months or less in market instruments be assigned to the Current Fund Allocation pool (rather than calculated for/distributed to the holders of individual accounts). This is based on 1) it is a simpler, less costly (time and staff-wise) approach and 2) it ultimately reduces the overall tax rate that RCs will have to pay. Further consideration needs to be given to the crediting of interest on balances / reserves held for longer time periods. In

general the team believes that interest should follow the principal on investments longer than one year.

A key operating principle of the new budget model is that Current Fund Allocations should never be provided to cover deficits incurred by the RCs in excess of plan.

Although the Provost will be responding to many factors in setting a RC's Current Fund Allocation, it is recommended that he commit to a minimum annual value of that allocation for more than a single year. Ideally a RC might receive a tentative commitment of the value of its CFA for the next two to three years in order to encourage longer term planning.

## **6. Governance**

The Planning Team considered the need for some sort of advisory board to the Provost on such matters as:

- what kind of entrepreneurship in the academic RCs should be matters of concern?
- duplication of courses or restrictions of students to courses in their home units.
- expansion of activities that do not further the University's mission, or are inconsistent with it.
- restrictions on faculty participation in interdisciplinary programs and research.

The Planning Team recommends that the Council of Deans should be the forum in which such issues are discussed and resolved.

With regard to addressing the need for changes in the budget model and its supporting infrastructure and for assessing the model's effectiveness, the team recommends that the Provost appoint an Advisory Committee to assist on these. The membership of this Committee should span the various constituencies on campus while at the same time have members who have a broad understanding of both the existing University budget system and the new model.

## **Implementation Plan and Schedule**

The Budget Model Planning Team believes that with aggressive effort, the hybrid budget model can be implemented at Northeastern by July 1, 2010 (i.e., become effective for fiscal year 2011). To this end the planning team has produced several materials:

- An outline of a plan to accomplish this objective is included at Appendix C.
- A sample budget template for RCs is included at Appendix D.
- Considerable time has been spent by a subgroup of the planning team on data / information systems needed to support the new budget model. The hybrid budget model imposes significant new demands for data of all types and Northeastern will need to follow a phased strategy to provide this data. The full report of the data subgroup is included at Appendix E.

The recommendation is that FY10 be a transition year in which current budget practices and a simulated hybrid budget model will be monitored by the Budget Office / Provost's Office with periodic budget updates provided to the RCs.

### **Training and Communication**

The Budget Model Planning Team and the Data Subgroup have serious concerns about the staff expertise / skill sets needed to manage the RCs successfully. Currently budget managers in the schools / colleges (with the exception of Law and CPS) are responsible for direct expenditure budgets. Managing a RC requires understanding of the Center's business model; one must be able to predict and budget tuition (understand enrollment patterns). The manager must also understand indirect cost recovery on grants and contracts and the cost allocation rules in the model. The Deans must be supported by professional financial officers; administrative assistants who have moved up to budget managers generally won't have the skills needed to be successful operating in the hybrid budget model.

A critical next step is the assessment of current staffing profiles and the development of plans for each RC that address training / development plans and, where indicated, the addition of new staff positions. Training programs and assessment protocols should draw on the experience of other universities that have operated with hybrid budget models for several years.

An expansive Communication Plan is needed to support implementation plans. The team recommends that once a final plan is approved, a website be created so that all members of the University community can begin to understand the new budget model.

### **Business Process Changes**

The planning team recommends that the Provost and CFO charge the appropriate work groups to address several changes in business process that are dictated by the new budget model. These include but are not limited to:

- Cost savings (e.g., fringe benefits, space) stay with the RC
- Existing “deals” (revenue/expense) will go away
- Incrementing / decrementing of vacant Office Support / Technical staff positions will change; schools / colleges will set salaries within HR approved ranges
- Schools / Colleges will manage grad tuition waiver budgets (right now University covers any over-expenditures)
- Fringe benefit rate increases will have to be covered within approved operating budget as will merit / promotional increases
- Central allocation of ICR funds to PIs / Departments / Units ends; schools / colleges decide how to handle
- Growth in faculty and staff positions will primarily come from revenue growth or reallocation within school / college budgets

# Appendix B

## RCM Cost Allocation Worksheet

Cost category	Academic RC	Other RC (e.g. athletics)	Auxiliary RC (e.g. parking, res life, conference ctrs)	Cost Center Allocation
<b>Administration</b>	share of actual calculated total of cost center costs, divided proportionately based on RC's share (%) of operating expenses based on prior two year rolling average	same	same	n/c
<b>Student Overhead Expense</b>	Same	n/c	n/c	n/c
<b>Academic Infrastructure</b>	Same	n/c	n/c	n/c
<b>Library</b>	Same	same	n/c	n/c
<b>Research Infrastructure</b>	% of funded research	n/c	n/c	n/c
<b>Space + debt service</b>				
(1) Assignable space - non-classroom (includes adjacent common space such as hallways, bathrooms, etc., using a reasonable approximation)	/sq ft (all space except high cost research space and auxiliary RC space is the denominator for calculating cost; the total distributed costs include all costs associated with facilities; this is the "basic sq ft calculation")	/sq ft	/sq ft (auxiliary space is the basis, and will need to be broken down further)	/sq ft using "basic sq ft calculation"
(2) Classrooms	/sq ft same as above but charged based on usage using registrar's data (% of usage)	n/c	n/c	n/c
(3) Other common spaces (e.g. Raytheon)	roll into basic sq ft calculation	roll into basic calc	n/c	roll into basic calc
(4) Debt service - non academic (previously incurred & future debt)	n/c	assign debt service for sole use space to nonacademic RCs	assign debt service for sole use space to nonacademic RCs	n/c
(5) Debt service - academic space (previously incurred & future debt)	include in basic /sq ft calculation	/sq ft (same as academic RCs)	n/c	n/c
(6) IS network NUNet	include in basic /sq ft calculation	/sq ft (same as academic RCs)	n/c	n/c
<b>IS: note inclusion of network and admin charges in space &amp; general admin costs</b>				
fee based and usage charges: database housing/consulting; network storage; web hosting for NU orgs; telephone and ACD; security breach incidents; new enterprise application development	direct usage charge	direct usage charge	direct usage charge	direct usage charge
IS network ResNet	n/c	n/c	direct charge to residence halls	n/c

## Appendix C - Northeastern Hybrid Budget Model FY10 Process Timeline

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### **Assumption: A phased approach will be taken to the ultimate goal of 'all funds' budgeting**

- For FY11 the budget process will address operating funds and unrestricted/designated funds (Ledgers 1, 2 & 3); the integration of other budget ledgers will follow in FY12.

### **Planning Preparation Steps Over the Summer (Led by a Hybrid Budget Planning Support Team)**

- Create/update the planning templates to be used by all RCs and CCs
- Create/update the planning 'starter kit' for each RC and CC
  - Academic RC information
    - ✓ Prior year enrollment and financial actuals (revenues, expense, & indirect costs)
    - ✓ Historical information for enrollments and indirect costs
    - ✓ Working assumptions to be confirmed/adjusted by the RCs through the planning process
      - Tentative tuition (undergrad and grad) increase assumptions
      - Tentative merit, benefits increase assumptions
      - Tentative participation, central fund, and space rates and charges per unit
      - 'Pre-committed' or multi-year central fund allocation assumptions, if any
      - Current space allocation and any other assumed cost center unit charges
  - Auxiliary RC Information
    - Prior year financial actuals (revenues, expense, and capital/depreciation)
    - ✓ Historical financial information
    - ✓ Working assumptions to be confirmed/adjusted by the RCs through the planning process
      - 'Pre-committed' or multi-year central fund allocation assumptions, if any
      - Current space allocation and any other assumed cost center unit charges
  - Cost Center Information
    - ✓ Prior year financial actuals
    - ✓ Revenues, expense, and capital/depreciation

- ✓ Historical financial information
- ✓ Working assumptions to be confirmed/adjusted by the RCs/CCs through the planning process
  - Annual 'cost of doing business' percentage increase (generally between 2-3% depending on CC)
  - Cross RC/CC charge rate assumptions, if any
  - Current space allocation and any other assumed cost center unit charges
- Establish the 'Data Team' to assist all RCs/CCs during the planning process
  - Participants from Finance, Enrollment Management, Institutional Research, IS DBA, etc
  - Concept: A "Human Data Warehouse"
    - ✓ Reporting and unit query support (including initial 'starter kit' information per unit)
    - ✓ Evolve requirements for the subsequent data warehouse and business intelligence systems projects

## Appendix C - Northeastern Hybrid Budget Model FY10 Process Timeline

	<b>Current Budget Process</b>	<i>Academic RCs</i>	<i>Auxiliary RCs</i>	<i>Cost Centers/Administration</i>	<i>Provost/CFO Offices</i>
<b>2HSep</b>					<i>'Starter Kits' delivered to RCs/CCs</i>
<b>1HOct</b>	<b>Enrollment Census: current term Initial planning assumptions set Aggregate enrollments Tuition increase Salary and benefits increase</b>	<i>Begin working with RC starter kit</i>	<i>Begin working with RC starter kit</i>	<i>Begin working with CC starter kit</i>	<i>Enrollment Census: current term enrollments to academic RCs Data Team support for RCs/CCs</i>
<b>2HOct</b>	<b>Initial budget model created</b>	<i>Continue</i>	<i>Continue</i>	<i>Continue</i>	<i>Starter kits updated Fall enrollment data Actuals to date</i>
<b>1HNov</b>	<b>SLT &amp; Finance iterate the model Working with Deans and VPs Add strategic adjustments</b>	<i>Unit projections for next year Revenue and expense Central fund candidates</i>	<i>Unit projections for next year Revenue and expense Central fund candidates</i>	<i>Unit projections for next year Expense, rates, etc Central fund candidates</i>	

<b>2HNov</b>	<b>Continued</b>	<i>Unit reviews with the Provost</i>	<i>Unit reviews with senior mgmt</i>	<i>Unit reviews with senior mgmt</i>	
<b>1HDec</b>	<b>January Board presentation drafted/revised</b>	<i>Continued</i>	<i>Continued</i>	<i>Cost confirmation with RCs</i>	
<b>2HDec</b>	<b>Continued</b>	<i>RC rollup to the Provost</i>	<i>RC rollup to senior mgmt</i>	<i>CC rollup to senior mgmt</i>	
<b>1HJan</b>	<b>Continued</b>	<i>RC adjustments as required</i>	<i>RC adjustments as required</i>	<i>CC adjustments as required</i>	<i>RC/CC rollup &amp; review with SLT</i>
<b>2HJan</b>	<b>Initial Board budget presentation Pending Fall enrollments Tuition/discount assumptions Merit/market assumptions Contractual increases Including benefits Room, board, fee assumptions</b>				<i>Feb Board presentation drafted/reviewed/adjusted with RCs &amp; SLT</i>

1HFeb	SLT & Finance iterate the model Working with Deans and VPs	<i>Feb Board presentation reviewed/adjusted per unit</i>	<i>Feb Board presentation reviewed/adjusted per unit</i>		<i>Initial Board budget presentation Pending Fall enrollments Tuition/discount assumptions Merit/market assumptions Contractual increases Including benefits Room, board, fee assumptions <u>Endowment payout</u> <u>Projected revenue &amp; expense</u></i>
2HFeb		<i>RC plans adjusted per board</i>	<i>RC plans adjusted per board</i>	<i>CC plans adjusted per board</i>	<i>RC/CC rollup &amp; review Starter kits updated Winter enrollment data Actuals to date</i>
1HMar	Board budget review/approval Students informed of pending increases, etc	<i>RC rollup to the Provost</i>	<i>RC rollup to senior mgmt</i>	<i>CC rollup to senior mgmt</i>	<i>Final RC/CC rollup and review with SLT</i>

<b>2HMar</b>	<b>Unit budget packages created</b>				<i>Board budget review/approval Students informed of pending increases, etc Unit budget packages created Salary review process launched</i>
<b>1HApr</b>	<b>Unit budget packages available</b>	<i>Unit budget packages available</i>	<i>Unit budget packages available</i>	<i>Unit budget packages available</i>	
<b>2HApr</b>	<b>Line mgmt budget reviews</b>	<i>Provost budget reviews</i>	<i>Line mgmt budget reviews</i>	<i>Line mgmt budget reviews</i>	
<b>1HMay</b>	<b>Continue budget reviews</b>	<i>Continue budget reviews</i>	<i>Continue budget reviews</i>	<i>Continue budget reviews</i>	<i>Salary review process completed</i>
<b>2HMay</b>	<b>All budget packages due Packages aggregated</b>				<i>All budget packages due Packages aggregated</i>
<b>1HJun</b>	<b>Final budget reconciliation</b>				<i>Final budget reconciliation</i>
<b>2HJun</b>	<b>System loaded</b>				<i>System loaded</i>
<b>1HJul</b>	<b>Fiscal year budget operational</b>				<i>Fiscal year budget operational</i>

## Appendix D Hybrid Budget Model Template

(in thousands)

	<u>Academic Unit</u>	<u>Auxiliary Unit</u>	<u>Non-Academic Unit</u>
<b>Revenue</b>			
Tuition			
Undergraduate Majors	63,449	-	-
Undergraduate Courses In	639	-	-
Undergraduate Courses Out	<u>(14,852)</u>	-	-
Gross Undergraduate Revenue	49,236	-	-
Undergraduate Financial Aid	<u>(15,263)</u>	-	-
Net Undergraduate Revenue	33,973	-	-
Graduate Revenue	22,900	-	-
Graduate Financial Aid	<u>(2,724)</u>	-	-
Other Tuition Revenue			
Net Tuition Revenue	54,149	-	-
Indirect Cost Recovery	2,037	-	-
Other Revenue	-	7,372	2,516
Designated Revenue	1,190	-	453
Gift & Endowment Revenue	1,007	-	1,009
University Contribution (20%)/(10%)	(11,475)	(737)	(297)
<b>Current Fund Allocation</b>	<b>9,227</b>	<b>3,653</b>	<b>18,775</b>
<b>Total Revenue</b>	<b>56,135</b>	<b>10,288</b>	<b>21,447</b>
<b>Expenses</b>			
Direct Expenses			
Direct Salaries & Benefits	23,978	-	5,000
Direct Other Expenses	<u>4,460</u>	<u>9,499</u>	<u>4,223</u>
Total "Operating" Expenses	28,438	9,499	9,223
Designated Expenses	2,197	-	1,462
Allocated Expenses			
General Administrative Costs	11,352	789	3,857
Student Overhead	3,677	-	-
Academic Infrastructure	2,079	-	-
Library	2,423	-	-
Research Infrastructure	940	-	-
Classrooms	641		
Space	<u>4,388</u>	-	<u>6,905</u>
Total Allocated Costs	25,500	789	10,762
<b>Total Expenses</b>	<b>56,135</b>	<b>10,288</b>	<b>21,447</b>
Difference	-	-	-

# **Appendix E**

## **NU Budget Model and Planning Team**

A report from the Data/Information Systems/Operating Rules subgroup

James Brand  
John Harris  
David Luzzi  
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Nancy Ludwig  
James Sarazen

May 29, 2009

## I. Introduction

The Data/Information Systems/Operating Rules subcommittee was initially charged with examining several data-related areas for the hybrid budget model implementation. Specifically, the charge was to answer the following questions:

1. What data elements are necessary for hybrid budget model implementation and operation? Which are available and which not?
2. How do hybrid budget model data needs line up with plans underway to improve the University's data systems?
3. What data if any should be forecast as opposed to fixed based on actual experience? If on actual, how often should data be updated?
4. What access restrictions need to be considered re: hybrid budget model data?

The subcommittee presented its findings to the larger hybrid budget model team in a report dated February 2009. As a follow-up to the initial charge, this subcommittee was asked to continue working on gathering information regarding the data needed to implement a hybrid budget model. At this point, the hybrid budget model had taken shape and was being refined. This subcommittee approached their new charge by trying to document data needed for the hybrid budget model. An additional task included documenting some of the available data elements requested by a group of deans; these data elements represented what was called the "dean's wish list."

## II. Data Elements necessary for the Hybrid Budget Model

As noted, the hybrid budget model had been developed and was being refined when this subcommittee began its work. The table below presents the hybrid budget model and the data sources. The right-hand column includes notes regarding the availability of the data.

<b>Hybrid Budget Model Input Descriptions And Data Needs</b>	
<b>Revenue:</b>	
<b>Undergraduate Majors</b> – FY2009 budgeted revenue, students enrolled in that college, for Study Abroad this is the percentage of budgeted revenue that can be associated with tuition and not travel or housing related.	This is student data available through the Enterprise Warehouse. Paper reports are also available from the Registrar.
<b>Undergraduate courses in</b> – 50% of 1/16 <sup>th</sup> of a semester's tuition for every credit hour a student from a different college takes in the host college, data provided from the registrar's database clientele reports. For Study Abroad Terms 1/4 <sup>th</sup> of a semester's tuition (the tuition component, not housing or travel) is credited to the home college of the student.	This is student data available through the Enterprise Warehouse. Paper reports are also available from the Registrar.
<b>Undergraduate courses out</b> - 50% of 1/16 <sup>th</sup> of a semester's tuition for every credit hour a student from the host college takes in another college, data provided from the registrar's database clientele reports. For Study Abroad Terms 1/4 <sup>th</sup> of a semester's	This is student data available through the Enterprise Warehouse. Paper reports are also available from the

tuition (the tuition component, not housing or travel) is credited to the home college of the student.	Registrar.
<b>Undergraduate Financial Aid</b> – Based on the University budgeted discount rate. Applied to all undergraduate revenue.	Deans will need the percent discount being used for the planning year.
<b>Graduate Revenue</b> – FY2009 budgeted revenue.	Deans will need budgeted revenues for the prior year (from Finance).
<b>Graduate Financial Aid</b> – Budget tuition remission within each college. Centrally budgeted aid is applied across colleges based on the discount rate that this aid budgeted to equal.	Deans have this.
<b>Indirect Cost Recovery</b> – Actual FY2008 recovery increased by 3%.	Deans will need this data from Finance.
<b>Other Revenue</b> – Budgeted operating revenue that is not undergraduate or graduate tuition.	Deans will need data from Finance
<b>Revenue Tax</b> – The applied percentage (20% academic/ 10% auxiliary) of all revenue net of financial aid and excluding Gift & Endowment Revenue.	This is a given/predetermined factor.
<b>Designated Revenue</b> – Actual FY2008 designated revenue (ledger 3 & 6) not coded as endowment income or gifts.	Deans will need data from Finance
<b>Gift &amp; Endowment Revenue</b> – Actual FY2008 revenue (ledger 3 & 6) coded as endowment income or gifts.	Deans will need data from Finance
<b>Expenses:</b>	
<b>Direct Salaries &amp; Benefits</b> – FY2009 budgeted salaries in benefits in the unit.	Human Resources/Benefits currently supplies colleges with monthly reports, however the format is paper; a more useful format is needed (e.g., Excel).
<b>Direct Other Expenses</b> – FY2009 budgeted non-salary expenses plus allocation made to academic units by the Provost's Office (this includes salaries of individuals budgeted within Central Accounts).	Deans have this.
<b>Designated Expenses</b> – The total of Designated Revenue and Gift & Endowment Revenue.	Deans will need this from Finance
<b>General Administrative Costs</b> – FY2009 Budget for administrative areas identified in the appendix to the report of the committee, including the space assigned to those units. The expenses are allocated based on a units percentage of total expenses averaged for the two year time period FY2006 & FY2007 excluding grant expenses, financial aid and directly charged space expenses.	Deans will need this from Finance
<b>Student Overhead</b> – FY2009 budgeted EMSA non-financial aid, non-RC unit expenses plus associated space. Allocated to units that have student enrollments based on a units percentage of total expenses averaged for the two year time period FY2006 & FY2007 excluding grant expenses, financial aid and directly charged space expenses.	Deans will need this from Finance
<b>Academic Infrastructure</b> – FY2009 budgets for Academic central units as identified in the appendix to the report of the committee, including the space	Deans will need this from Finance

assigned to those units. Allocated to Academic Responsibility Centers based on a units percentage of total expenses averaged for the two year time period FY2006 & FY2007 excluding grant expenses, financial aid and directly charged space expenses.	
<b>Library</b> – FY2009 budgeted Central Library expenses, including space. Allocated to academic on campus Responsibility Centers, except the Law School which funds its own library, based on a units percentage of total expenses averaged for the two year time period FY2006 & FY2007 excluding grant expenses, financial aid and directly charged space expenses.	Deans will need this from Finance
<b>Research Infrastructure</b> – FY2009 Research administration budgeted expenses, including space. Allocated to all units with sponsored research based on the units average directly charged grant expenses (ledgers 4 & 5) averaged for the two year time period FY2006 & FY2007.	Deans will need this from Finance
<b>Classrooms</b> – Based on total space charges allocated to classrooms. The costs are allocated to units based on actual credit hours of courses offered in Registrar controlled classrooms for fiscal year 2008.	Deans will need this from Finance
<b>Space</b> – Based on FY2009 budget facilities expenses, including debt service, depreciation, insurance and network expenses. Allocated based on actual assignable square footage for each area in the University. This includes support areas who have had their space expenses added into direct expenses for allocation. Units with uniquely identified space are charged directly for those areas. This includes Residence Halls, Parking, Conference Centers and Renaissance Park. The Residence Halls are charged for direct network charges incurred by central IT.	Deans will need this from Finance

### III. Additional Data Elements Requested by the Deans

The table presented in Appendix A was informed by input from three deans. The deans created a “wish list” of data elements that they indicated would assist them in managing their unit. The subcommittee examined the dean’s list and attempted to document data items that are currently available. The idea was to document in some way what data might now be available that could be compiled as resources for the deans in the early phase of the hybrid budget model implementation. It was apparent from this exercise that quite a lot of data are already available. Also apparent was that these data come from many different sources, exist in several forms, and may currently only be available on an “on demand” basis. In addition, it seems that as a whole, the data do not map easily across sources.

#### IV. Key Concerns

The concerns highlighted in the February report were broad-based and took a long-term view. Of those documented concerns, the issues that are of immediate concern to the implementation of the hybrid budget model for the FY11 budget cycle include:

- 1. The University does not have a data warehouse with all the elements needed for the hybrid budget model implementation.** As a result, easy access to data is limited. Although the data needed to implement the hybrid budget model are available, these data may not be available in an analyst-friendly electronic (e.g., Excel) format, often they are produced only “on demand,” and it is difficult to map data across information systems.
- 2. Lack of skilled staff within each RC:** Successful implementation of the hybrid budget model will hinge on having highly skilled analytical, business, and perhaps technical staff in each RC.

#### V. Preliminary Recommendations

The recommendations from the February report have been reexamined. Here again, the recommendations made in the earlier report were broad-based and took a long-term view. Presented below are recommendations that may be feasible before the start of the FY11 planning cycle and which address the above noted concerns:

- 1. Develop Core Reports:** In lieu of a data warehouse, a core set of reports should be developed and managed by central administration; these reports should draw on the core data areas and include the elements essential for the hybrid budget model implementation. The reports should be developed now in preparation for July 1 as they will be the main source of data for the RCs.
- 2. Develop Core Datasets:** In lieu of a data warehouse, companion datasets for the Core Reports should be developed and made available to the RCs. Providing the RCs with datasets that support the Core Reports will give them at least the minimal tools necessary to begin hybrid budget model implementation.
- 3. Scope:** The Reports and Datasets noted in recommendations 1 and 2 above can be categorized into three areas: reports and data that support budget creation and projection; reports and data that support quarterly and/or end of year “true up” activity; and reports and data that are needed for RC management (i.e., the “dean’s wishlist.”). To aid in the prioritization of report and dataset availability, it may be useful to phase in reports and data based on the three categories noted above so that the items which can help resolve the most pressing needs are implemented first.

- 4. Centralized technical support, tools, and training:** Central administration should make available support, training, and perhaps technical tools to the RCs which will enable them to use data and information to support the hybrid budget model implementation.

## **VI. Summary**

At the outset of the original charge, this subcommittee intentionally approached its task by considering at least two perspectives: that of the RC leader in his/her interactions with central administration, and that of the RC leader and staff who must now be self-managing. Those two perspectives helped guide the subcommittee's understanding of the fullest data needs in a hybrid budget model environment. As the subcommittee progressed through its second task, it was clear that the data needs for the hybrid budget model and the dean's internal data needs both overlap and diverge. One dean referred to it as looking at the forest vs. the trees, and that seems to be an apt description. Specifically, the items needed for hybrid budget model implementation are high-level aggregate data and the items the dean's would like for internal planning are more granular as that level of detail would be necessary for their internal planning. For the current analysis, this subcommittee attempted to document the data needed for hybrid budget model implementation as well as the sources for these data. At the bare-bones minimum, the RCs will need the data elements that are core to the hybrid budget model. Those core data and their sources are documented in Section II of this report. Also included in this report is a first-pass at documenting data elements that the deans feel would support their internal planning operations. This documentation is less complete, but may serve as a planning document for future data warehouse/repository efforts.

As noted in the February report, institutions that operate under a hybrid budget model typically make data available to responsibility centers through standard reports and sometimes even through datasets that are prepared for them by central administration. In addition, institutions that operate under a hybrid budget model usually have an institutional data warehouse. Providing standard reports and datasets and the presence of a data warehouse serve to: (a) standardize data across the institution, (b) make data accessible to users, and (c) enable the building of historical data resources. Currently, Northeastern has a limited data warehouse. In addition, data items not in the data warehouse are not always available in an analyst-friendly format, and may not be produced on a standard cycle. The Northeastern data environment is a challenge, especially for an institution planning hybrid budget model implementation. A long-term goal for the University should be to develop a self-serve data access and reporting platform that brings together data from each functional area within the University.

**APPENDIX A**

<b><u>Available Items from Dean's Wish List</u></b>								
<b>Category</b>	<b>Requested Item</b>	<b>Source(s)</b>	<b>Format</b>	<b>Date range of data available</b>	<b>Available for entire university?</b>	<b>Frequency can be provided</b>	<b>Key fields or link to other data/systems</b>	<b>Of Note</b>
<b>Teaching</b>	Enrollments by course, broken down by enrolling unit	<ul style="list-style-type: none"> <li>▪ EW<sup>1</sup> class file – can create listing of courses by college</li> <li>▪ Generic Tally report</li> </ul>	Warehouse: CSV, Excel extracts Report: paper or electronic copy	2002-present for warehouse; paper reports back to 90s	Yes	By term	Course #, Altkey, and College. Faculty NUID	Class file provides record of summary information for each class
	Faculty teaching load (courses taught)	<ul style="list-style-type: none"> <li>▪ EW class file – can create listing of courses taught by faculty and would include enrollment, student credit hours, course type, term</li> </ul>	Warehouse: CSV, Excel extracts	2002-present for warehouse;	Yes	By term	College. Faculty NUID	Data are imperfect due to issues in joining HR system with course data, and primary/secondary employee roles; faculty NUID not always present
	Enrollments from other colleges in college courses	<ul style="list-style-type: none"> <li>▪ EW enrollment file - can create summary of enrollments by course cut by in-college students and out-of-college students</li> <li>▪ Clientele report</li> </ul>		2002-present for warehouse;	Yes	By term		
	Enrollments by home college students in other college courses	<ul style="list-style-type: none"> <li>▪ EW enrollment file - can create summary of enrollments by students in a specific college, grouped by the college in which they are taking courses</li> <li>▪ Clientele report</li> </ul>		2002-present for warehouse;	Yes	By term		
<b>Human Resources</b>	Personnel costs by employee	<ul style="list-style-type: none"> <li>▪ Detailed payroll transaction data and reports are available</li> </ul>						Assume that benefit and salary expense data are part of the transaction data; need to check with payroll regarding what is available

<sup>1</sup> EW has historic data back to fall 2003

**Available Items from Dean's Wish List**

Category	Requested Item	Source(s)	Format	Date range of data available	Available for entire university?	Frequency can be provided	Key fields or link to other data/systems	Of Note
	Faculty demographics	<ul style="list-style-type: none"> <li>EW human resources file – can create headcount reports with various demographic fields</li> </ul>	Warehouse: CSV, Excel extracts	2002-present for warehouse;	Yes	By term		This was not requested but colleges may need faculty headcount data
	Staff demographics	<ul style="list-style-type: none"> <li>EW human resources file – can create headcount reports with various demographic fields</li> </ul>	Warehouse: CSV, Excel extracts	2002-present for warehouse;	Yes	By term		This was not requested but colleges may need staff headcount data
<b>Admissions</b>	New students by term, freshmen and transfer <i>Full-time undergraduate</i>	<ul style="list-style-type: none"> <li>EZBRIO historic admissions data files.</li> </ul>	CSV, Excel extracts	At least 10 years	Yes	Fall, spring	Student ID	These files date back to the 80s and contain rich admissions information. Requested data needs to be defined more precisely.
	New students by term, by program and level <i>Graduate</i>	<ul style="list-style-type: none"> <li>Recruitment Plus and/or Apply Yourself</li> </ul>						These systems are maintained by Provost's office; it is unclear how much data are available
<b>Students</b>	Student retention rates within college and within university if transferred out of college	<ul style="list-style-type: none"> <li>Tracking Studies Reports</li> <li>Fact Book</li> <li>EMSA</li> </ul>	Summary data, Excel or paper reports	At least 10 years	Yes	By term	College	Canned reports are available from the registrar (Tracking studies) and these data have been summarized in the Fact Book. These data are available for new freshman cohorts and transfer cohorts entering in the fall. EMSA also has detailed retention data.
	Graduation rates within the college and within the university if transferred out of college	<ul style="list-style-type: none"> <li>Tracking Studies Reports</li> <li>Fact Book</li> <li></li> </ul>	Summary data, Excel or paper reports	At least 10 years	Yes	By term	College	Canned reports are available from the registrar (Tracking studies) and these data have been summarized in the Fact Book. These data are available for new freshman cohorts and transfer cohorts entering in the fall.

**Available Items from Dean's Wish List**

<b>Category</b>	<b>Requested Item</b>	<b>Source(s)</b>	<b>Format</b>	<b>Date range of data available</b>	<b>Available for entire university?</b>	<b>Frequency can be provided</b>	<b>Key fields or link to other data/systems</b>	<b>Of Note</b>
	Credit hours enrolled in college	<ul style="list-style-type: none"> <li>EW enrollment file – can create data listing/report along these lines. This is similar to the information asked under “teaching” category.</li> </ul>	Warehouse: CSV, Excel extracts	2002-present for warehouse;	Yes	By term		
	Majors headcounts	<ul style="list-style-type: none"> <li>EW headcount file – can create data summaries/listings by student level, needed by term.</li> <li>Major counts reports</li> </ul>	Warehouse: CSV, Excel extracts	2002-present for warehouse;	Yes	By term		
<b>Space</b>	SF/PI Cost/SF Space utilization	<ul style="list-style-type: none"> <li></li> </ul>						Source would be Space Planning database.
<b>Gift &amp; Endowment Revenue</b>	Revenue by type of gift (Scholarship, Endowed Chairs, Unrestricted)	<ul style="list-style-type: none"> <li></li> </ul>						Source might be DIS (Development Information Systems)
<b>Research</b>	Principal Investigator Overhead Rate Salary Expense Fund Number Grant Code Banner Index Travel Capital Equipment Subcontracts Start Dates End Dates Organization Project Description Awarding Agency Budget Amount Sponsor ID number	<ul style="list-style-type: none"> <li>Banner – would need to extract and write reports using the Data warehouse</li> </ul>	CSV, Excel extracts Report - Paper	Banner FY2008	Yes	On demand  Monthly Quarterly Annually		Data reports would need to be written Using the data elements listed