HARVARD Kennedy School
JOHN F. KENNEDY SCHOOL OF GOVERNMENT

MLD-412

Greater Boston Applied Experiential Learning Lab / Bloomberg Field Projects
Spring 2024

(Draft 1/16/24 - check Canvas and Google Calendar regularly for updates)

Class Sessions in R 306:
Mondays, 4:30pm – 7:00pm (occasionally the class may run late due to speaker's schedules)
Wednesdays 4:30pm- 6:30pm approximately (clinics and team time, unless otherwise indicated)
Fridays, optional review session

Required Field Trip on Friday, Feb 2nd
(Snow date: February 9th)
Plus project team and client meeting times
course online application and lab schedule

MLD-412 Students talking to Congressman Seth Moulton in Lynn, MA arts center.

Teaching Team

Linda J. Bilmes
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Office Hours: Signup on Canvas. Most weeks it will be TBA, mixture of in-person + Zoom

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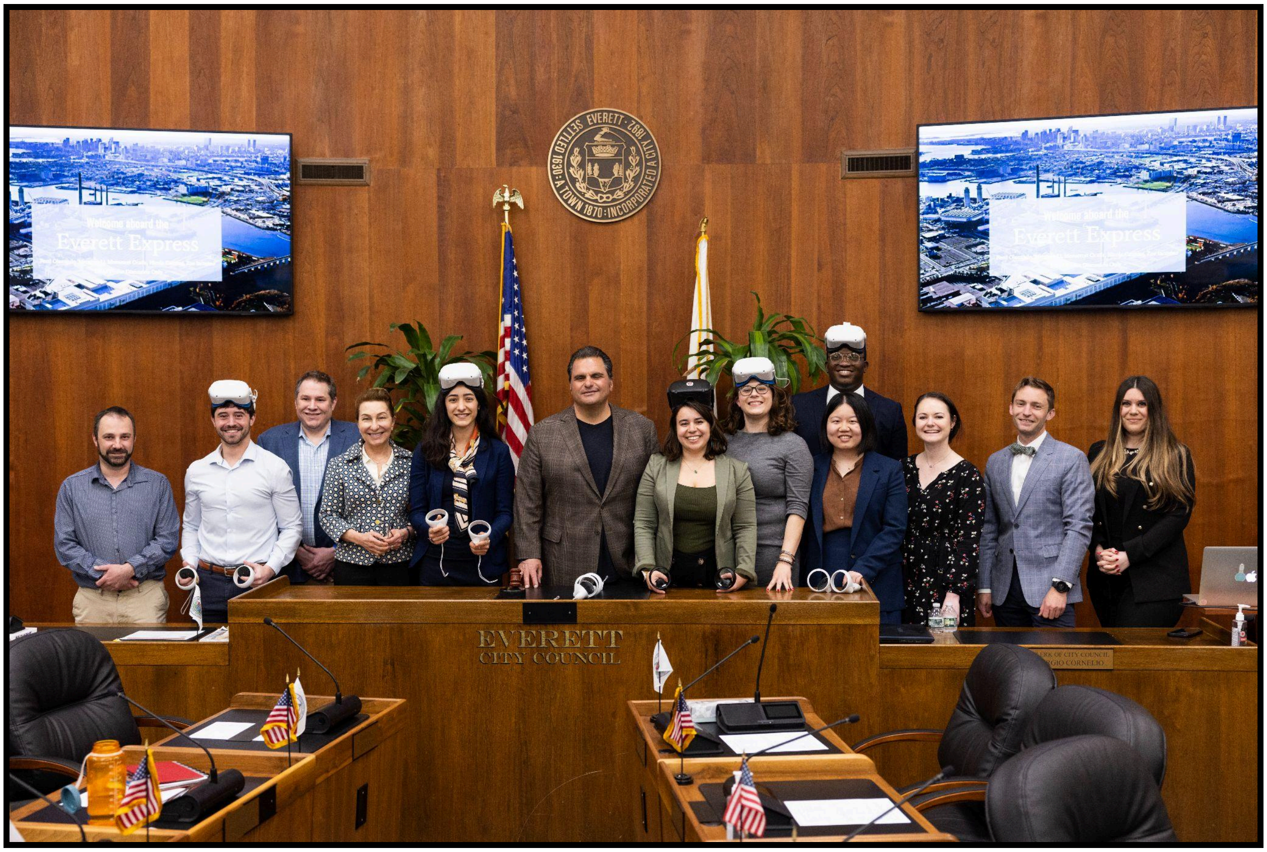

MLD-412 students in Everett MA with Mayor Carlo DeMaria, May 2023, wearing virtual reality headsets

Course Overview

The *Greater Boston Applied Field Lab (MLD-412)* was established in 2005. Since its inception, the course has provided an innovative academic program that partners with local governments to provide real-world experience to students and a pathway for the next generation of innovative civic leaders. The program is supported by the Rappaport Institute for Greater Boston, the Bloomberg Harvard Cities initiative, and the Taubman Center for State and Local Government.

Professor Linda J. Bilmes leads the teaching team with support from a number of faculty and senior fellows, including Adjunct Lecturer Brian Iammartino and Assistant Professor of Public Policy Justin de Benedictis-Kessner, Professors Edward Glaeser, Jeff Liebman and senior administrators including Program Director Maja Niksic, Bloomberg Cities executives Pascha McTyson and David Margalit, and Rappaport Institute Director Kathryn Carlson.

The skills taught in this course include the following: fiscal decentralization, state and local budgeting and capital budgeting, state and local financial statements, project management, designing financial spreadsheets, capital budgeting, data analysis using Stata, R, Geospatial modeling, and visual data presentation. This course also fulfills field distribution requirements at Harvard Graduate School of Design.

Course Application Information

For questions, please contact the Program Director, Maja Niksic or the Teaching Fellow, Bran Shim (MC'24) and to apply please complete the **course online application** **by January 19, 2024 at 11:59 pm**. The Field Lab is always oversubscribed so be sure to send your application for consideration.

Professor Bilmes and MLD-412 students in Austin, Texas, on February 29th, 2020 (Pre Pandemic Era)

MLD-412 is a joint effort between HKS and local communities and cities. It provides real-world experience for students to apply the skills they have learned in budgeting, finance, accounting and operations management classes in a real-world setting. It delivers tangible benefits to the participating cities and municipalities. And it provides a pipeline of talented people who go on to form the core of the next generation of leadership in local government.

Many former students who are now working in Greater Boston and elsewhere become core members of our partnership teams, working closely with students on specific projects. The program is sponsored through the generosity of the Phyllis & Jerome Lyle Rappaport Foundation and the Bloomberg Harvard City Leadership Initiative.

More than 600 students have participated in the MLD-412 class over the past eighteen years. Students have undertaken dozens of complex management projects in the fields of budget and finance, public-private partnerships, economic development, operations management, and systems efficiency in the Greater Boston area and throughout North America. The projects are both varied and challenging. We have worked in many areas of local government, including finance, public infrastructure, public works, urban planning, education, public utilities, fire and police, youth and recreation, flood mitigation, debt collection, emergency services, Hubway bike-rides, snow plowing, recycling, trash pick-up, street lighting, and ferry services, among others.

This is an *intermediate-level* course that requires some familiarity with public management skills including: variance analysis, cost accounting, activity-budgeting, capital budgeting, performance budgeting, and financial modeling. *Students may enroll only by permission of the instructor.* The course will introduce advanced concepts and refresh knowledge of the core subjects, but it is designed for intermediate level students who want to apply their skills in a clinical environment. Students who enroll will learn how to handle large volumes of data, to use advanced analytical tools and will gain hands-on experience working in a local government or large private non-profit budget environment.

Summer Fellowships

Funding is available for students to continue working on these projects throughout the summer of 2024. This may be direct assistance with the "client" partner organization or working on developing case materials and publications based on the research you have conducted.

Mount Vernon NY Mayor Patterson-Howard (center) with her Field Lab team, June 2021

Course Description

This is an *experiential field-based* course, where the main focus will be financial and budgeting projects that students undertake to assist the local community. Students will work in teams (4 members, typically) and will work directly with the staff of these cities. Teams will work on specific topics for the entirety of the course. The work is often confidential so you may not discuss it in detail with anyone outside of class, unless given permission. Your client partner may ask you to sign a non-disclosure agreement.

The class involves meeting on Mondays and Wednesdays as well as field work. In most weeks, the main lesson is on Mondays, and the Wednesday is either a clinic (for practice or teamwork) or in the field. Due to the unpredictability of mayors and city officials we work with closely, we will need to be prepared to adjust schedules as needed. The majority of Wednesday sessions in the second half of the semester are reserved for teamwork. Overall, you should expect to devote a substantial amount of time to this course, both in the field and working with your team. Please check the schedule on CANVAS, and announcements because the course schedule will evolve during the semester.

The full class meets in Rubenstein 306. Rubenstein also has advanced web-based conferencing systems that will enable our client partners and guests to engage in video conversations with the class.

Class sessions will consist of a combination of project-based classes, skills training and clinics, instruction on sub-national topics, and traditional course work. The class utilizes lectures, table-top exercises, and tutorials in applied budgeting techniques such as using pivot tables and advanced Excel functions, using data analytics such as Stata, R, and GIS, and work meetings to refine the group projects. The objective is to introduce a series of concepts, ideas, and skills that are relevant and valuable in state/local government.

Students should expect to spend at least one afternoon per week directly engaging with project partners onsite, as well as additional hours working with their teams. The actual schedule for project site work is likely to vary each week, and every team will need to accommodate its client. The syllabus is updated as additional client project dates, guests and deliverables are finalized. Plenary classes, review sessions and skills classes will be recorded; confidential guest/partner discussions will not be taped.

MLD412 Students with Mayor of Somerville, Katjana Ballantyne, May 2023

Summary of Projects for Spring 2024 (See Detailed Project Scopes)

The projects this spring relate to critical needs in capital budgeting, financing sustainable infrastructure, housing, transportation, and economic development. Teams will be created for specific projects based on a survey of student schedules, skills and preferences. There is no guarantee that you will work on a particular project, but we will try to provide students with one of their top three ranked choices.

The projects vary in emphasis but in all cases, they include some financial and cost modeling and analysis. Other skills depending on the project include cost-benefit analysis, regression analysis, econometric analysis, GIS mapping, process-mapping, benchmarking, activity-based costing, interviewing stakeholders, literature reviews and more. Project scopes and direction may change, as directed by Professor Bilmes.

MLD-412 Students Visiting Building Developers models in Somerville, MA as part of a project on retaining small businesses in the city.

<u>Greater Boston Applied Field Lab Projects</u>

We have worked in many Boston area communities, and at this point there are alumni of the course working in many of the cities who help sponsor the projects. You will need to spend a fair amount of time with your project partners in person, as well as working on your project in the field, which is typically a great experience. Paid summer fellowships for follow-on work are available as Rappaport Summer Public Finance Fellows and Bloomberg Summer Fellows.

The projects have been scoped carefully in advance to ensure that each project provides a challenging, interesting experience, reports to the top decision-maker and that there is a specific individual at the "client partner" who is designated to assist the HKS student team. In each case, the Mayor (or Member of Congress of senior official) has committed to being personally involved with the project.

Projects this semester include: (See Detailed scopes/descriptions attached at the end of this syllabus)

City/Partner	Main Client	Project Category	Project Description	Likely analytical tools
Long Beach, CA **Femi Olamijulo (CA)** ***Jeanney Liu (CA)**** Helen Cashman Mary Treacy Ruthie Gottesman Paul Garbarino	Mayor Rex Richardson	Economic development	Analyze revenue potential and requirements for restoration of Queen Mary ship for tourism, potential site development expansion.	Financial analysis, GIS analysis, economic analysis, interviews.
Hayward, CA **Faith Ambrose (CA)** Joon Park Paola Benavente Alberto Rodriguez Winston Tang	Mayor Mark Salinas	Capital/Operating budgeting	Estimate impact of major new capital project (public safety facility) on city's operating budget. Potential related project on subsidized housing.	Budgetary analysis, interviewing, benchmarking.
Providence, RI **Faith Ambrose (CA)** Steven Li Emily Orenstein Roderick Taylor Hadar Sachs William Stevenson	Mayor Brett Smiley	Tax reforms /Distressed Property	Analyze tools for reducing vacant properties/distressed housing, and impact of tax policy.	Economic and financial analysis, GIS modeling, benchmarking, interviews.
MA-6th District **Femi Olamijulo (CA)** Peter Willenborg Jebb Ricketts Michael Whelan Amanda Stiebris Gloria Korpas	Congressman Seth Moulton	Transport (rail)	Estimate economic impact of constructing North-South Rail Link vs. economic impact to that of expanding South station.	GIS modeling, financial and econometric analysis, interviewing.
Newburyport, MA **Grace Martin (CA)** Nora Cahill Willie Powell Nikki Zheng Astha Soni Ella Hanson	Mayor Sean Riordan	Affordable Housing	Assist the city to evaluate ways to make it financially attractive for local developers to build affordable housing near the MBTA train station, under different development/occupancy scenarios.	Financial, economic, and GIS analysis, interviewing, working with community groups.

Everett, MA **Femi Olamijulo (CA)** Rebecca Lin Kotomi Odate Rob Benner Othmane Ouhaddach	Mayor Carlo DiMaria	Climate infrastructure	Cost benefit analysis for coastal flood barrier, Storm Surge Control Facility, related to food security, energy, and transportation.	GIS modeling, climate finance, financial and economic analysis.
State of MA **Grace Martin (CA)** Samya Mishra Jonathan Jayes-Green Pragun Aggarwal Yasmina O'Sullivan Nathania Silalahi	Quentin Palfrey, MA Director of Federal Funds +Infrastructure	State Infrastructure Bank (Finance)	Assist in design and evaluation of potential mechanisms for a new State Infrastructure Bank to support localities that have faced unsuccessful outcomes in their applications for state and/or federal funding.	Benchmarking, interviewing, financial modeling; budget analysis, process mapping/ engineering.

Office Hours

Professor Bilmes will provide overall guidance to each team about how to approach each project, determine the best analytic tools for the work, and ensure that we obtain the best data for the analyses. Appointments will be in-person for white-boarding and using Zoom where appropriate. Contact faculty assistant for appointments. Most in-person office hours will be on Wednesday afternoons, but other conversations (by phone, Zoom, and sometimes in person) are available throughout the semester. Faculty are very involved and will be traveling with the teams to site visits on many occasions.

Enjoying great food in Dearborn, Michigan, March 2023, as part of a project for a new recreation center.

Requirements and Evaluation

The course will require that students complete the assigned team project (providing a preliminary and mid-term presentation in class, a final presentation with the project partner, and handing over the specific deliverables – which may include an Excel model, process maps, or other materials). In addition, students will have two homework assignments and a final short essay. Teams will draft a transmittal memo to the client partner to explain the key findings and deliverables.

Grading will be based on:

- Class participation and homework assignments (20%)
- Team project – project plan and interim presentation (15%)
- Team project – final presentation and deliverables (50%)
- Peer and client evaluations (15%). Peer and client evaluation frameworks will be posted on the course website
- Deliverables include: Team Presentation, Final Transmittal Memo, and spreadsheets, maps, diagrams, videos, regressions, etc. depending on the project.
- Short reflection memo (not graded) required on completion of course.


MA Lieutenant Governor Kim Driscoll with Everett MA Team, May 2023

Expenses and Reimbursement

For all travel and project needs, please coordinate with the Program Director and your dedicated CA regarding expenses.

Local Travel: All basic expenses (taxis, Uber, Lyfts, Zipcars, mileage for cars, parking in pay lots, tolls etc.) are reimbursable. However, this must be done in accordance with normal Harvard reimbursement policies. At the start of the semester, all field lab students will establish a Buy2Pay account through which they will be reimbursed. Please keep records of small expense receipts and forward them to Maja for reimbursement. Harvard *will not* reimburse anything after 45 days and it cannot reimburse parking tickets/violations/fines, etc.

MLD-412 students With Mayor Wu, April 2022

Non-local Travel: Projects at a distance will have significant expenses for travel, food and lodging and incidentals. The major expenses (airline travel, hotels) will be paid for upfront by the teaching/admin team so you won't need to be reimbursed. Food and incidentals may be reimbursed or prepaid, arrangements need to be made with the Program Manager before travel.

Class Times

This is a field class so times will vary. Generally, you can expect to spend at least 1.5 hours on Mondays in lectures, workshops and training sessions. There will be classes on some Wednesdays, but most will be available for team/client partner meetings, especially after spring break.

Review Sessions

There will be review sessions for the skills taught in class on some Fridays at [TBD]. Teaching Fellow Bran Shim and Course Assistants, all of whom participated in MLD-412 last year, will lead these sessions, and all will be taped.

Mayor DeMaria checks out the VR simulation set during Everett MA presentation, May 2023

Skill Training and Guest Workshops

There are a number of skills that will be developed during the course. The project teams will work with Professor Bilmes and assisting faculty to determine which analytical approaches are best suited to analyze the problem presented in that city. These may include operational and capital budgeting, operations management, performance mapping, Geospatial and environmental analysis, benchmarking, survey analysis, economic and financial modeling, conjoint analysis and interviewing, as well as customized data gathering. Each team will utilize a customized set of tools.

In addition, the course will introduce the following skills, in order to help level the playing field among students and ensure that all students can participate in a variety of approaches. These include:

- Pivot Tables for data analysis
- STATA/R for data analysis
- Project management CPM
- Building financial spreadsheets
- Capital Budgeting
- GIS analysis
- Visual presentation design

These skills will be taught by a combination of the teaching team and guest experts, using in-class workshops. There is one big assignment, the "Parkrose" capital budgeting project, which is done by each team and serves as a team-building effort.

2023 Field Trip, It was the Coldest Day of the Year, and We are Just Getting Started!

IMPORTANT! We are coordinating with the schedules of our partners – mayors, city council members, city managers, etc. The schedule is subject to change and *will* change.

Current Schedule: Check HERE (for the up-to-date schedule and check CANVAS for updated materials/readings. (Please contact the TT if you find a discrepancy).

Updated Weekly! **[Master Schedule - ALL Reading links and details on CANVAS!!]**

Class	Date	Pre-class	During Class	After
1	Monday, January 22 Bilmes	Read 2 readings on fiscal decentralization	1. Class Overview 2. Introduction to Fiscal Decentralization	Fiscal decentralization Assignment due on Monday, Jan 29th
2	Wednesday, January 24 Bilmes/Shim	Review pivot table material; Review Everett	1. Mayor DiMaria (Everett) 2. Pivot Table intro and explanation	Sign up for a slot to show mastery of pivot tables (slots with TT posted on CANVAS)
3	Monday, Jan 29th ALL	Review background materials for 3 projects Make sure you are signed up for pivot table demos *Fiscal Decentralization HW due today	Project Overviews from: 1. State Infrastructure Bank (Quentin Palfrey) 2. Hayward CA (Mayor Mark Salinas) Pizza Break 3. Providence, RI (Mayor Brett Smiley)	Do pivot table demo
4	Wednesday, Jan 31st ALL	Submit forms for field trip (lunch, allergies, non-disclosure, etc) Read background materials on projects	Project Overviews: 1. Congressman Seth Moulton 2. Newburyport Mayor Sean Reardon **3.** Mayor Rex Richardson of Long Beach, CA	Follow instructions for field trip preparations
	Friday Feb 2nd		FIELD TRIP -ALL DAY	**Submit Project Preference forms by 3pm Saturday**
5	Monday, Feb 5th Iammartino	Bring laptops to class *All must have completed pivot tables Read Fos Park case	1. Building Effective Financial Spreadsheets and Fos Park case	
6	Wednesday, Feb 7th	*Fos Park HW due	1. Create Team Bios 2. Meet Faculty in Teams	Agree Team Norms
7	Monday, Feb 12th	Read Parkrose case and readings *Team Bios Due	1. Introduction to Parkrose and in-class workshop	Work with team on Parkrose and complete 1st portion of assignment
8	Wednesday, Feb 14th	Parkrose Day 2	1. Parkrose in-class workshop on financing (in class with team on 2nd portion of assignment)	Complete Parkrose assignment and prepare for submission on Wed 21st

	Monday Feb 19th	NO CLASS PRESIDENTS DAY		
9	Wed, Feb 21st*	Complete Parkrose and finalize	Parkrose Due in Class Short summary of key concepts from PR and discussion Examples of projects (Linda) and start work on 4 pagers	**All teams meet client partners**
		Possible travel this week		
10	Monday, Feb 26th Iammartino	Review materials on State and local financial statements and work on 4-pagers	State and Local Financial Statements (Brian) Team Building (Jeannie)	**Do Project Mgmt tutorial** Team 4-page presentations sign-up)
11	Wed Feb 28th ALL	Review Project Library	Start work on 4 pagers	**Meet client partners**
12	Monday, March 4th Iammartino	4 page presentations	4 -pagers present (B)	**All teams must have met with client partners**
13	Wednesday, March 6th	Review financial statements and budget materials for your client	Review fin statements and budgets with Bran, Brian and Linda to identify major issues	
	SPRING BREAK	SPRING BREAK NO CLASS		
14	Mon March 18th	Download all GIS materials BEFORE class Bring laptops + mouse Watch video beforehand ;	GIS Training, Jeff Blossom from Harvard GIS center will teach 3 exercises in class (See directions on CANVAS). **Summer Fellowships Deadline to Apply**	**OH and assignment**
15	Wed March 20	Work on GIS assignments	Teams meetings and review of GIS assignments for each project	**Friday Review session on GIS**
16	Mon March 25	Read Materials from Ed Glaeser (2 readings)	Guest: Ed Glaeser, Triumph of the City (**4:30-5:30 PM**) Linda review interim presentations for 30-40 minutes Jdbk/Team Time	
17	Wed March 27		Team Time - Preparation for Interim Presentation	

18	Mon April 1st		Interim Presentations: **South Station (NSRL)** **Newburyport** **Providence**	**PAE Due April, 2nd**
19	Wed April 3		Interim Presentations: **Infrastructure Bank** **Everett**	
20	Mon April 8	Read materials on climate, natural capital accounting for ecosystem services	Guest speakers on Climate issues facing local govt: 1. Mauricio Rodas (Quito, Ecuador Mayor) 2. Mayor Kostas Bakoyannis (Athens, Greece) 3. Sanjay Seth	
21	Wed April 10		Team Time: Interim Presentation: **Long Beach** **Hayward**	
22	Mon April 15 15 JDBK	Readings	Local Political Decision-making Professor JDBK	**Professor Bilmes in NYC**
24	Wed April 17		Teams	**Professor Bilmes in NYC**
25	Mon April 22	Prepare presentations	Final Presentations Preparations and Instructions for them	**Spring Exercises April 15-26**
26	Wed April 24	Prepare Presentations	Final Presentations Preparations and Key Takeaways	

	Mon April 29th - Friday May 3rd		**Final Presentations and Deliverables due based on specific schedule of your team. All final deliverables must be sent to TT. Do not send materials to the client partner.**	

LINKS ARE NOT ACTIVE BELOW: CHECK CANVAS

Class 1: Course Introduction and Local Public Budgeting
Date: Monday, January 22, 2024, 4:30pm- 6:30 pm EST

Topic: Class Intro and Fiscal Decentralization

Prof. Bilmes will first introduce the course, the faculty and teaching team and will provide an overview of the semester's projects, expectations and how the course is run. This will be an in-depth kind of shopping session. We will review the logistics of field projects, including team support, travel, project management, relationships with the client partners, check-ins, team building, financial responsibilities, confidentiality, reimbursements, team ethics, client partner and peer-reviews.

Second, we will introduce and discuss: "**fiscal decentralization**". That refers to - why do some public services get delivered at the national level, whereas others are delivered and paid for at regional, state or local levels? How do we optimize spending money - and providing services - most effectively? What is the optimal amount of funding that should be raised at subnational levels, and how much should be raised at the national level and transferred to subnational levels? Countries around the world grapple with these issues and approach these decisions differently.

Please do the readings below and come prepared to discuss. The main reading is examining fiscal decentralization in Asia so we can discuss it conceptually, not just in terms of local/state/federal government in the US.

There is an assignment **due on Monday**, which you should do with at least one other student in the class. Additionally, there will be two project introductions.

Required Readings: See CANVAS Page 1

Assignment 1 : Thinking about decentralization - this will be due NEXT Monday Jan 29th.

Review Social Development Notes:A Framework for the Assessment of Fiscal Decentralization System
Then, using Table A-2 from the reading as an example, fill in *3 copies of worksheet Table A-5* (as best as you can) for each of one of these three levels of government. This means you need to make 3 copies of the worksheet!

1. National: USA or anot
2. Regional/State: State of MA, Rhode Island or CA
3. Local: Boston, Everett, Somerville, Newburyport, Salem, Gloucester
4.

Please work with at least one other student in the class. We will discuss this next Monday as we turn to municipal finance.

Here is the worksheet with three blank copies of Table A5 you should fill in and upload: Table A-5 Worksheet

Each student should submit a copy of their worksheets on Canvas by Monday, Jan 29 at 4:00pm ET and bring it to class to discuss.

Submit your answers here on Canvas: *Assignment #1: Fiscal Decentralization Worksheets Due Monday, Jan 29 at 4:00pm ET* [link to Canvas] include an assignment that assesses the learning from the week before that include

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Class 2: Pivot Tables and Everett Project
Date: Wednesday, January 24, 2024, 4:30pm ET – 6:30pm ET

Mayor Carlo DeMaria: City of Everett (in person)
https://www.mass.gov/doc/everett-transit-action-plan-final-report/download
https://cityofeverett.com/city-hall/departments/mayors-office/
https://cityofeverett.com/city-hall/departments/planning-development/transportation-planning-division/
https://www.bostonglobe.com/2022/08/21/business/developer-unveils-plans-everetts-massive-fuel-tank-farm/?event=event12
https://www.bostonglobe.com/2023/01/08/business/sale-everett-power-plant-site-could-set-tone-citys-future/?p1=Article_Inline_Text_Link&p1=Article_Inline_Text_Link

Pivot Tables Use of Pivot Tables
Topic: Introduction to use of Pivot Tables for municipal data analysis, and final project introductions

Pivot Table Training: Bran Shim, Teaching Fellow, will demonstrate Pivot Tables and advanced Excel functions that are invaluable when analyzing large datasets.

Required Readings: [INSERT TITANIC DATA SET]
Complete on-line pivot table tutorial (posted on CANVAS) and assignment. All students must sign up for one of three sessions and review homework unless you have exempted from it. Assignment must be submitted on CANVAS.

Assignment:
Pivot Tables: Sign up for group pivot table practicums. [link to Canvas]
Students are asked to create pivot tables with a given data set. Please note: For this assignment, you do not submit via Canvas, INSTEAD you will be demonstrating your completion *during* a required pivot table review session.

- **Assignment: Pivot Tables. Sign up for group pivot table practicums**

Class 3: Project Pitches
Date: Monday, January 29, 2024, 4:30pm ET – 7:00pm ET (including break) [Readings on CANVAS]

4:40pm – 5:15pm Infrastructure Bank Presentation Quentin Palfrey (in person)

5:20pm – 5:50pm Mayor Mark Salinas of Hayward, CA (zoom)

6:00pm – 6:20pm Pizza Break!

6:25pm – 7:00pm Mayor Brett Smiley of Providence, RI (in person)

Topic: Preparation for Field Trip – Discussion of field trip logistics, expectations and project process**.** Time permitting, we will continue discussing municipal finance.

Class 4: Project Intros
Date: Wednesday, January 31, 2024, 4:30pm ET – 7:00pm ET [Readings on CANVAS]

4:35pm – 5:10pm Congressman Seth Moulton (zoom)

5:15-5:50 Newburyport Mayor Sean Reardon

5:55pm – 6:30 pm Mayor Rex Richardson of Long Beach, CA (zoom)

Friday February 2, 2024 – All Day Field Trip **Team preferences questionnaire (on [CANVAS]) must be submitted by 12 noon on Saturday, February 3rd** Teams will be assigned on the basis of preferences, background, and schedule availability.

Class 5: Financial Spreadsheets and Fos Park case [check CANVAS for prep materials]
Date: Monday, February 5, 2024, 4:30pm ET – 7:15pm ET

Topic: Prof. Iammartino will teach this class. This will be a full workshop dedicated to creating financial spreadsheets that are clear and easy to follow. This is a skill that all teams will require. The workshop will use the **Foss Park case**. **Read the case before class.**

Class Preparation:

1. **Required Reading: "Foss Park" case**. You do not need to prepare anything in advance of class, but you should be familiar with the background, key variables, assumptions, and the goals of the financial analysis (including the "In-Class Questions" noted below). CASE: Foss Park Case_2019.02.04 - FINAL.pdf
2. **Download the following file:** 01) FTIR Model.xlsx

(There is no need to review in advance of class. In fact, it would be better if you did **not** review.)

In-Class Workshop: We will review best practices in Excel, and then we will work together to create a financial model as an in-class workshop exercise. **Bring a computer with Excel for use in class, as well as a print-out of the case for reference.**

In-Class Questions: After we have prepared the financial model, you will work in small groups – with the assistance of the teaching team – to answer the questions below. Again, you do not need to answer these questions in advance of class, but you should review and be familiar with them.

1. What number of members is needed for the facility to "break even"?) Given the information provided in the case and looking at local YMCA figures, are these membership numbers reasonable?
2. As part of his "Shape Up Somerville" campaign, Mayor Curtatone asks Bill Murphy to cut membership rates by 10% in the hopes that more citizens will join the YMCA and thereby become more active. In this scenario, what level of membership would be required to break-even? What additional demands would this place on the YMCA? What arguments could be made for the City to subsidize the YMCA even if break-even **cannot** be achieved?
3. A local dance group has approached the City seeking to rent 3,000 sf of space for rehearsals and performances. The City has determined that this additional space could be constructed at $178 psf and rented at $20 psf annually.

    1. Would you recommend this course of action? Why or why not?
    2. At what rental rate would the facility break even (keeping the other assumptions constant)?
4. What impact would the following scenarios have on your model? How, if at all, would you adjust your proposed facility to compensate for potential risks like these?
    1. The YMCA raises only half of the expected amount in its capital campaign.
    2. Membership numbers are 20% lower than anticipated.

- Total *hard costs* exceed expectations by 15%. Somerville unexpectedly faces higher borrowing costs, increasing the interest rate on the loan to the YMCA from 4% to 4.75%.

Team will be announced and will meet to begin preparing team bios and travel arrangements.

Class 6: Team Bio Work and meetings with faculty
Date: Wednesday, February 7, 2024, 4:30pm ET – 6:30pm ET

This is team meeting time. Students may meet in the classroom or elsewhere, or schedule time with their project partners in the field. The faculty and teaching team will be available in the classroom to assist with early project issues.

Assignments:

- **Assignment: Team Bios, Due Monday Feb 12 at Noon ET** [link to Canvas]

Students with Mayor Craig outside a homeless shelter in the rain (Manchester, NH)

Class 7: Capital Budgeting: City of Parkrose
Date: Monday, February 12, 2024, 4:30pm ET – 7:15pm ET

Topics: Parkrose introduction and Capital Budgeting (Prof Bilmes)
Case: Capital Budgeting in the City of Parkrose

This is a realistic and challenging case requiring each team to (a) set priorities, (b) assess cash flows of projects, (c) determine borrowing constraints and (d) issue debt to finance a 5-year Capital Improvement Plan within certain financial constraints.

This is a team exercise. First, teams need to complete the cash flows for each of the capital items in the case. Today Prof. Bilmes will introduce the case and discuss and review a few tricky items, and how to do the financing, focusing on bonds and repayments. The class on Wednesday will be a "clinic" with all the teaching team providing assistance and checking that your team is on track. There will be a review session and further drop-in clinic on Friday and over the weekend to provide assistance. The assignment materials due are explained in the instruction. There is a prize for the best Parkrose project submission!

The remaining teams will present their short project overviews.

Materials for Parkrose Team Assignment:
- Parkrose Instructions
- Parkrose Template for Class

Required Readings for the Parkrose Project:
- State and Local Borrowing
- Municipal Bonds 101: Start Here to Invest in Your Community
- Life Cycle of a Bond
- How Should States Respond to Recent Federal Tax Changes
- How do Municipal Bonds Work?

Assignment:

Assignment: Parkrose due Tuesday, March 5th at 8:00pm ET

Class 8: Wednesday, February 14, 2024 4:30pm ET – 6:30pm ET
Parkrose Day 2 assignment

Friday: Parkrose clinic OH

Monday, February 19, 2024 – Presidents' Day Holiday: No classes meet

Class 9: Wednesday, February 21, 2024, 4:30pm ET – 7:00 pm ET (longer sessions because of Monday holiday)
Parkrose due and brief presentations

Overview of Project Library and Sample Projects and Team meetings (Bilme)

Assignments:
- Assignment: Team Project 4-5 PagersET

Project Team Presentations SIGN UP ON CANVAS for Part A (first half) or Part B (second half). You must be present throughout your section to listen and provide feedback to 3 other teams.
Date:

Class 10: Team presentations
Date: Monday, February 26, 2024, 4:30pm ET – 7:15pm ET
Class 11: Date: Team Presentations + ,team meetings w faculty
Wednesday, February 28, 2024, 4:30pm ET – 6:30pm ET
Topic: This will be an in-class clinic

Assignments Due Today:

- Assignment: Team Project 4-5 Pagers Due Wed Feb 21 at 3:00pm ET

Topic : Team Presentations

Each team should prepare a 4-5 page presentation to deliver a short (no more than 10 minute) presentation to the class about your project. The purpose is to introduce the preliminary approach, to get feedback, and as the project unfold, everyone will get to experience all of them to some extent.

These presentations must include the following 4 slides:
1. What is the key question your team answer? (And sub-questions if you have developed them)
2. What analytics will you use to find the answer?
3. What data sources will you rely on for the analytics?
4. What is your initial project management plan?

Topics:

- Project Management/CPM

Project Management:

It is helpful to understand the basics of project management. Each team should work through the Harvard Manage Mentor project management module.

Start with the "Key Concepts" which takes about 20 minutes. Not every task applies to you, but identify the tasks that do, and then go through the relevant sections. You should try to get through this during class. Once you have met with your project partner, you will be able to adapt this into the 3-5 page synopsis for presentation (and back-ups for the team).

HBSP Tutorial: Harvard ManageMentor: Project Management

It is also helpful to note the concept of "Critical Path Method" (CPM). CPM is a method for modeling projects where you input all the required factors involved in your project and output the optimal timeline for completing it. Factors to input in your model include: time estimates, task dependencies, deliverables and deadlines. The foundation of critical path analysis and CPM is the idea that you cannot start a task until a previous one has been finished. When you string these dependent tasks together from start to finish you get your critical path, which enables you to optimize which tasks must be done in sequence, and which ones can be done simultaneously.
This is a 6 minute very clear youtube explanation: https://www.youtube.com/watch?v=rxGcV0tuxRU

Assignments:

- Assignment: Team Project 4-5 Pages Due Wednesday, Feb 21 at 4:00pm ET

Class 12: State and City Government financial statements
Date: Monday, March 4, 2024, 4:30pm ET – 7:00pm ET
Topic: State and City Government financial statements

State and provincial governments are first-level sub-nationals, existing in between the federal and local level. One of the challenging aspects of state governments is that they must balance their budgets and attempt to create a more equitable outcome in local jurisdictions in education, health care, transportation

and other sectors. This class will look at these governments from a political/policy/financial and accounting perspective.
Taught by Prof. Brian Iammartino

Readings on State Budgeting and Financial Management:
1. State Strategies for Maintaining a Balanced Budget (2018). (Links to an external site.)Links to an external site.
(Links to an external site.)Links to an external site.https://www.pewtrusts.org/-/media/assets/2018/06/sfh_non-recurring_revenue.pdf (Links to an external site.)Links to an external site.
2. Assessing Fiscal Capacities of States (Links to an external site.)Links to an external site.
://www.taxpolicycenter.org/sites/default/files/publication/149186/sustainable-budgeting-in-the-states_1.pdf (Links to an external site.)Links to an external site.

Readings and Background For Government Financial Statements:

Slides: MLD-412 Government Financial Statements_2019.03.25 - FOR CLASS.pptx

These quick readings build upon one another, so please read in the order presented. Class discussion will assume basic familiarity with the topics covered in the readings, so they are critical to a productive class. If you have a knowledge of private-sector financial statements (US GAAP under FASB), you may choose to skim readings 1-3, but readings 4-7 provide information about the unique nuances of government accounting,

01) Beginners' Guide to Financial Statements.pdf
02) Introduction to Financial Accounting Pp 52-56.pdf
03) Not-for-Profit Accounting Made Easy Pp 35-40.pdf
04) Govt Accounting Made Easy Pp 23-29.pdf
05) GASB What You Should Know E1-E15.pdf
06) GASB An Analysts Guide 277-305.pdf
07) A Tale of Two Governments.pdf

MLD-412 Students with Congressman Seth Moulton, at Lynn Arts Center

Class 13: Teams?
Team meetings with faculty
Date: Wednesday, March 06, 2024, 4:30pm ET – 6:30pm ET

SPRING BREAK: SATURDAY MARCH 9, 2024 – SUNDAY MARCH 17, 2024

Class 14: Cities and Global Climate Finance (and pre-work for GIS workshop)
Date: Monday, March 18, 2024, 4:30pm ET - 7:15pm ET

Guest Lecture: Mayor Mauricio Rodas, former Mayor of Quito, Ecuador and chair of Global C40 Mayors
https://global.upenn.edu/perryworldhouse/expert/mauricio-rodas
https://www.atlanticcouncil.org/expert/mauricio-rodas/

Mayor Rodas is a dynamic figure who is one of the leaders of the efforts to secure funding for climate adaptation, particularly for the world's South, and island nations. He will discuss COP27 and in particular the "loss and damage" issues related to climate finance, as well as the current efforts at the World Bank and IMF to fund climate-related projects in cities.

Class 15: GIS Workshop: Jeff Blossom, Director
Date: Wednesday, March 20, 2024, 4:30pm ET – 7:00 pm ET
Topic: GIS Training Workshop

Class 16: Urban politics (Prof Justin De Benedictis-Kessner)
Date: Monday, March 25, 2024, 4:30pm ET - 7:15pm ET

Class 17: Teams Time
Date: Wednesday March 27, 2024, 4:30pm ET – 6:30pm ET
The teaching team will be in class to help answer any questions and consult with you

Class 18: Interim Findings - Student Presentations
Date: Monday, April 1, 2024, 4:30pm ET - 7:15pm ET

Class 19: Interim Findings - Student Presentations
Date: Wednesday, April 3, 2024, 4:30pm ET – 6:30pm ET

Class 20: Data Visualization and Teams Time
Date: Monday, April 8, 2024, 4:30pm ET – 7:15pm ET
Hong Qu, HKS Lecturer, to work with teams on slides. (tentative)
The teaching team will be in class to help answer any questions and consult with you

Class 21: Teams Time
Date: Wednesday, April 10, 2024, 4:30pm ET – 6:30pm ET
The teaching team will be in class to help answer any questions and consult with you.

Required Readings:
Kingsley, Christopher. Smart Cities Performance Stat at 15..pdf
Bob Behn Performance Stat Oxford Handbook.pdf
The PerformanceStat Potential_Chapter 1_Robert D. Behn.pdf

Book Review of Bob Behn's book on Performance Stat https://www.brookings.edu/book/the-performancestat-potential/ (Links to an external site.)Links to an external site.

In Class Slides:
042219 Principles of Performance Management Harvard Kennedy School Class.pptx

Class 22: TBA
Date: Monday, April 15, 2024, 4:30pm ET – 7:15pm ET
Guest Lecture: Professor Ed Glaeser
Topic: What's happening in urban economics? This will be a thought-provoking lecture by **Edward Glaeser,** who is one of the leading thinkers on cities in the world and widely considered the heir to Jane Jacobs in his passionate advocacy for dynamic city centers. Chapters from Ed's best-selling book *The Triumph of the City* are *assigned below.*

Ed is a memorable speaker and you will enjoy his lecture. His research focuses on the determinants of city growth and the role of cities as centers of idea transmission. He has published dozens of papers on cities, economic growth, and law and economics. He is the author of *Cities, Agglomeration, and Spatial Equilibrium* (Links to an external site.)Links to an external site.(2008); *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier* (Links to an external site.)Links to an external site.(2012); and coauthor of *Rethinking Federal Housing Policy: How to Make Housing Plentiful and Affordable* (Links to an external site.)Links to an external site. (2008)**.** He is a senior fellow at the Manhattan Institute, a contributing editor of *City Journal*, and the Fred and Eleanor Glimp Professor of Economics at Harvard University, where he has taught since 1992.

He has served as Director of the Taubman Center for State and Local Government, and Director of the Rappaport Institute for Greater Boston.
I have attached link to Ed's TED talk below.

Required Readings:
Glaeser, Edward. *Triumph of the City*. The Penguin Press, 2011. Chapters 1, 2, 9,
Triumph of the City, Chapter 1..pdf
Triumph of the City, Chapter 2..pdf
Triumph of the City, Chapter 9..pdf
In Class Slides:
Urbanization and its Perils_2.pdf
TBA

Class 23: Teams Time
Date: Wednesday, April 17, 2024, 4:30pm ET – 6:30pm ET
The teaching team will be in class to help answer any questions and consult with you.

Class 24: Final Discussion
Date: Monday, April 22, 2024, 4:30pm ET – 7:15pm ET
Topic: Discussion of key learning from the Projects and Framework for presentations, transmittal memos and other deliverables.

Required Readings: Please look at the sample transmittal memos
Sample Transmittal Memos and Final Deliverables:

Example 1: Phoenix Heat Project
1. Transmittal memo_051218.docx
2. 03_Cost-Benefit Model-20180815T195624Z-001.zip
3. 04_Schematic Strategies for Edison Eastlake-20180815T193412Z-002.zip
Phoenix_Final Presentation_rev2 (4)-1.pdf

Example 2: MA-6/Newburyport FEMA Flood Mitigation
1. Transmittal Memo: The Community Rating System in Massachusetts' 6th District Newburyport Case Study (4)-1.pdf
2. Contact List Project Contacts.pdf
3. Process Map: CRS Process Map.pdf
4. Appendices:
Appendix VI. Cost-Benefit Analysis and CRS Data for Massachusetts' 6th District and Newburyport.xlsx
Appendix V. Path to the First 500 Points.pdf
Appendix IV. CRS Process Map & Considerations.pdf

Example 3: Long Beach Bulky Waste
Transmittal Memo: Transmittal Memo (002).pdf
Final class presentation.pdf

In Class Materials:
Final Everett deliverable 5.14-1.pdf
Final Presentation MBTA example of problem definition.pdf
Late Night Final Presentation to Mayor-1.pdf
Stadium Team Presentation 08 May 2014.pdf
Boston 311 Presentation to Mayor - v10.pptx
MAYOR Parking meter presentation.pptx
MBTA SOGR Introductory 3April2017_v2.pptx
NSRL Final Presentation. Model example.pptx

In Class Slides:
Final 412 Presentation 4.29.19-1.pptx

Class 25: Teams Time
Date: Wednesday, April 24, 2024, 4:30pm ET – 6:30pm ET
Topic: The teaching team will be in class to help answer any questions and consult with you**.**

Week of April 29, 2024: Team Final Presentations with Partners

Assignment: Team Project Peer Review due May 9 or 2 days after your presentation

Please fill in the following **three** confidential course/team feedback evaluations **after** you have completed your final presentation. This will allow you to provide comprehensive feedback for all of your peers.

The **peer feedback information** is confidential. Prof. Bilmes will provide constructive feedback to individual students. Please complete the peer reviews no later than 2 days after your client presentation. Furthermore, we have supplemented the **regular HKS Course evaluation** with a **course-specific evaluation** that fits best the special nature of MLD-412.

1. Peer Reviews: Please fill in a separate form for each member of your team. Google survey link: https://forms.gle/iqtWWg2p55xFyH5e6Links to an external site. Note that each student will have to fill it out 2-3 times depending on the number of team members (Filling it out individually as compared to all team mates in a single survey will ensure confidentiality).

2. HKS Course Evaluation: This is the regular HKS course evaluation. Please follow the instructions below.
• Log into Canvas and navigate to the course site for the course
• Within your course site, click the “HKS Course Evaluation” link on the left navigation
• Complete the evaluation for the course
• Check your responses carefully; evaluations may not be edited after submission

3. Supplemental Course-specific Evaluation: Because the regular form is generic, we would kindly ask you to also fill in this short survey. https://forms.gle/ksacUdDpifovApHg6 (Links to an external site.)Links to an external site.

Assignment: Transmittal Memos Due 2 Days After Presentations

Due Date: Wed May 8, 2024 5:00PM

Transmittal memos should be sent to project partners (including memo with the main messages and instructions to any models, + the model). You need to hand over the data models and a memo to the project partner outlining your findings 2 days after the presentation. This means that it needs to be drafted prior to the presentation, but following comments and feedback from project partners, you can modify it slightly depending on questions asked or explanations required during the presentation.

Assignment: Reflection Memo on Team Projects due by May 10 at 5PM

Due Date: Wednesday, May 8th, 2024 5:00PM

You must write a short memo to Prof. Bilmes reflecting on your experience in this field course. This is your opportunity to provide us and the city with advice, recommendations, and feedback -- both about the course and about your project. You can comment on your interaction with your clients, the overall course structure, your team experience, etc. We use the memos to gauge student interest in this type of course and to improve the course over time. Please email the memo to Prof Bilmes and Program Manager by May 8th; in the subject write "MLD-412 2021 Reflection Memo: (YOUR FULL NAME)."

DETAILED PROJECT SCOPES

Executive Office of Administration & Finance, Commonwealth of MA:
Building an Infrastructure Bank

Client: Quentin Palfrey, Director of Federal Funds and Infrastructure [need to confirm]; Matthew Gorzkowicz, Secretary of Administration and Finance [need to confirm]
Project: Building a framework for an infrastructure bank
Internal Contact: Bob LaRocca, Deputy Director of Federal Funds and Infrastructure

Description: The Healey-Driscoll Administration created the Federal Funds & Infrastructure Office (FFIO) to enhance the Commonwealth's ability to compete more effectively for federal funding. The primary directive for the Office is to coordinate, discover, and disseminate information on federal grant opportunities for municipalities, cities, nonprofits, and other entities, to support grant application development, and to help advocate for federal grant dollars on behalf of the Commonwealth. The FFIO is also responsible for leading the creation of an infrastructure bank proposed by the Governor.

In October 2023, Governor Healey filed legislation that included a proposal for $50 million in initial funding for the infrastructure bank, which is slated for the legislative docket in the upcoming year (2024). The bank is expected to serve as a financing mechanism for local infrastructure projects; for example, by providing matching grants to make a community's application for federal dollars more attractive, or by offering a loan to a community that has been denied funding. However, the specific mandate, structure and operations of the bank are not currently defined.

Field lab students will work alongside Bob LaRocca, Deputy Director of Federal Funds and Infrastructure, to help define the mission and mechanics of the infrastructure bank. This may include identifying sample projects the bank could support, determining the financing mechanisms to be offered, specifying the eligible parties for funds, scoping potential sources of other seed funding, and outlining the technical capabilities required to implement the bank.

Main Question: How can the Commonwealth establish alternative financing mechanisms through an infrastructure bank to more effectively support localities that have faced unsuccessful outcomes in their applications for state and/or federal funding?

Sub-Questions:

- When have local governments and/or regional partners unsuccessfully received state funding?
- What types of projects are the 31 existing state infrastructure banks across the country funding? What financial mechanisms are they deploying?
- Where do gaps exist in funding sources for local governments? What types of projects are already covered by the climate bank and other grant / funding tools?
- How can the $50 million in initial funding be optimized to establish the bank and fund pilot programs that demonstrate the effectiveness of the bank?

Data: Students will undertake a needs assessment to better understand the gaps in infrastructure funding. Students will engage with A&F and other agencies within the Commonwealth for information on grant applications that have been approved or denied, as well as interview local government stakeholders. Following this initial analysis, students will conduct research on best practices nationwide via both publicly available information about other states' programs and interviews with staff in other states. Lastly, the students may model the different types of financing mechanisms that could be provided to local governments through the initial seed funding / pilot program.

Readings: Press Release

Potential Deliverables:

- Needs assessment of local governments and/or regional partners
- Best practices of similar infrastructure banks
- Summarized insights and takeaways of the infrastructure bank's mandate, vision, and financing mechanisms
- High-level implementation plan for launching an infrastructure bank and providing financing for pilot projects

Prospective Work Plan:

Step 1	Obtain data and conduct interviews with Commonwealth staff and local stakeholders to better understand infrastructure funding needs.
Step 2	Develop preliminary mandate and vision for the infrastructure bank based on insights.

Step 3	Conduct interviews with peer state agencies that have implemented an infrastructure bank with similar requirements as identified.
Step 4	At interim presentation, present on takeaways from research conducted thus far on best practices and financing mechanisms. Obtain client input on most promising options.
Step 5	Develop a high-level implementation plan for an infrastructure bank based on the prerequisite criteria identified.

Long Beach: The RMS Queen Mary

Client: City of Long Beach Project: Financial Analysis and Strategic Plan for the RMS Queen Mary Internal Contacts: Paul Barragan-Monge, Policy Director at Office of Long Beach Mayor; Johnny Vallejo, Deputy Director, Economic Development Department; Lucius Martin, Deputy Mayor of Economic Development

Description: problem statement in bold.
The City of Long Beach currently owns the USS Queen Mary, a retired ocean liner that sailed from 1936 to 1967 and is now permanently moored at Queen Mary Island in Long Beach. The City of Long Beach purchased the ship to serve as a tourist attraction with restaurants, a hotel, and a museum. While owned by the city, the ship was under private management for decades. It has recently been returned to city ownership, but deferred maintenance has led to high capital needs. In addition, the pandemic severely damaged the financial outlook of the hotel, and the city is concerned about the financial prospects of the ship as a whole. At the same time, the city's economic engine is shifting from oil production to arts, culture, and tourism and the Mayor and his team are seeking mission-aligned revenue sources to continue to provide high-quality services to residents.

The Queen Mary is an essential part of transitioning Long Beach's economy and, iIn spite of these challenges, the City of Long Beach hopes that the Queen Mary can be a catalyst for economic development in its neighborhood, and a source of revenue for city operations. In addition to the ship itself, the team will consider the man-made island around the ship (Queen Mary Island), which includes a helicopter operation, cruise terminal zone, parking garage, and charter boat service. The rent collected from these entities, which are part of the Queen Mary lease area, is used to financially support the Queen Mary.

The HKS team will work with the City of Long Beach Economic Development Department to develop a long-term financial plan for the USS Queen Mary. **The city is seeking strategies to maximize the asset as a source of economic development and revenue for the city, including but not limited to partnerships with other organizations or remodeling of the space. To successfully pitch potential partners, the City needs a plan that includes a long-term financial plan to cover the ship's capital needs and a financial analysis of potential avenues for growth.**

Main Question: How can the City of Long Beach maximize the value to the community of the RMS Queen Mary?

Sub-Questions:

- What is the financial outlook for the RMS Queen Mary using present revenue trends?
    - What is the long-term capital need, and is the current revenue sufficient to support it?
    - What is the projected impact of different avenues for growth?
- What are the potential avenues for growth, and what partnerships could effectively deliver that growth? For this question, consider both long-term (5-10 years) and short-term opportunities that can support longer–term goals.
- What have other cities with ship assets done to maximize their value-add?

Data:

[please insert data that can be made available to students]

Readings:

- Queen Mary Task Force Background Documents (to be shared)
- Map of Queen Mary Island (to be shared)
- 2022 Memo from City Manager regarding the reopening plan for the RMS Queen Mary
- 2020 Economic Impact report on the RMS Queen Mary
- Public website where the Economic Development department consolidates all updates/developments regarding the RMS Queen Mary

Potential Deliverables:

- **Project Plan:** A document listing the major activities that will be conducted during the project and their expected timelines.
- **Benchmarking:** An overview of cities with similar assets and what strategies they have used to convert the ship to an engine for revenue and economic growth.
- **Financial Analysis:** An analysis of long-term capital need and projections related to possible avenues for growth.
- **Potential Areas of Growth:** A menu of options for the city to consider. These do not need to be fully developed but rather suggestions for future growth. These suggestions should be aligned with the economic development mission of the city, including climate resiliency and sustainability, and arts, culture, and tourism.

Prospective Work Plan

Step 1	Establish financial standing and long-term projections under current operations for the RMS Queen Mary. Analyze the funding gap (if existing) and describe how it may change over time or under different conditions.
Step 2	Benchmark other cities with ship assets and compile best practices in partnerships, strategic

	operations, and capital planning for local governments dealing with a ship asset.
Step 3	Conduct interviews with City of Long Beach staff and other stakeholders to assess perceptions of the RMS Queen Mary and general community needs.
Step 4	Develop a menu of options for growth based on Long Beach's needs and context, drawing from benchmarked best practices and current financial outlook.
Step 5	Project financial outlook for each option and provide recommendations.

Congressman Seth Moulton, 6th District of Massachusetts:
Evaluating South Station Land Development

Client: Congressman Seth Moulton
Project: Evaluating South Station expansion and Widett Circle land development
Internal Contact: Liam Morehead, Transportation Policy Advisor

Description: Rail interconnectivity in Massachusetts relies on two train systems with stub-ends at the North and South Stations. North Station services Amtrak lines to Maine and the northern division of the MBTA, and the South Station services Amtrak's Northeast Corridor intercity transit to New York City and the MBTA's southern division. There have been proposals to create a true regional transportation system through a North-South Rail Link (NSRL). However, at the current point in time, the Commonwealth of Massachusetts is considering an alternative option - expanding South Station (SSX) in lieu of pursuing the NSRL.

Either building the NSRL or expanding South Station will have significant land-use, real estate, and economic development impacts on the surrounding areas, most notably to Widett Circle and the neighboring USPS site at Fort Point. Widett Circle is an 83-acre parcel with promising development opportunities, ranging from rail layover for the MBTA to a mixed-use development rivaling the Seaport district. Widett Circle has a variety of landowners, namely the City of Boston and the Commonwealth, additionally the MBTA purchased the 24 core acres in 2023. The USPS site is owned by the US Postal Service.

Field lab students will conduct an economic analysis and develop financial models to assess the land value surrounding South Station. Their focus will be on the trade-offs (i.e. economic, rail capacity, etc) associated with the decision to either build the NSRL or expand South Station. Additionally, students should also be able to identify the key stakeholders who may be impacted by specific determinations related to land use at Widett Circle and the USPS site at Fort Point.

Main Question: What are the implications of either creating a North-South Rail Link or expanding South Station in terms of its impact on economic development and subsequent rail operations?

Sub-Questions:

- What are the trade-offs to land value, tax revenues, and economic growth from either scenario?
- How does each scenario contemplate the capacity needs of the regional rail system in Massachusetts?
- Which stakeholders need to be engaged, and which communities will be directly impacted?

Data: Students will conduct an economic impact analysis that assesses the impact of the two scenarios on the local and regional economy. This analysis will heavily utilize financial modeling to determine the costs and benefits. The components may include (and not limited to) estimating land and property value, incremental tax revenue, investment required for the infrastructure, and operational capacity of the rail system.

Readings:

- Urban Land Institute Report
- North South Rail Presentation

Potential Deliverables:

- Descriptive plans of the two scenarios
- Land-use and economic impact analysis of building the NSRL and expanding South Station
- Summarized insights and takeaways of the tradeoffs

Prospective Work Plan:

Step 1	Research previous proposals, impact assessments, and studies related to the NSRL and the surrounding properties
Step 2	Define the two scenarios 1) building the NSRL and 2) expanding South Station
Step 3	Collect data from relevant resources and data sources for the economic analysis and financial modeling
Step 4	At interim presentation, present on takeaways from research conducted. Obtain client input on most promising options.
Step 5	Summarize the key trade-offs against the Healey-Driscoll Administration and Congressman's economic and political goals

Newburyport, MA: Storey Avenue Village Rezoning

<u>Client</u>: City of Newburyport, MA
<u>Project</u>: Storey Avenue Village Rezoning
<u>Internal Contact</u>: Andrew Levine, Chief of Staff or Andrew Port, Planning Director

Description:
Newburyport, a coastal city north of Boston, is seeking assistance with zoning and planning for the Storey Avenue Village Center. Newburyport has approximately 4 village nodes that are central gathering spaces: downtown Newbury port, the Smart Growth District (near the MBTA stop), the business park (industrial), and the Storey Avenue Village Center - a commercial area. They also have a historical section in which character should be generally preserved. While some areas of the city already have long term development plans rooted in MBTA guidelines (for the Smart Growth District), historical preservation, or other city-wide strategic plans, the Storey Avenue Village Center does not. The City of Newburyport received a planning grant of $50,000 to develop a zoning strategy for Storey Avenue, which they will use to make text changes to the zoning, including details like height allowances, in the coming months.

Generally, the commercial area (Storey Ave) will be rezoned for mixed-use and multi-family redevelopment, replacing the current all-commercial and strip mall landscape. The city is looking to revitalize the area by creating more housing, particularly affordable housing, and mixed-use buildings. There is a large vacant building that was formerly a Kmart which is ready for redevelopment into a housing complex or mixed-use space. Following zoning changes, the city will use the same permitting process for Storey Avenue as they currently use for their Smart Growth District - as of right permitting with review by the planning board.

The student group will support this effort by working on three aspects of the redevelopment: a feasibility analysis of different affordable housing allocations (10%, 15%, 20%) from the perspective of private developers, a schematic rendering/visualization of the new mixed-use area for public engagement purposes, and a capacity analysis for the water, sewer, and utilities departments to capture the resources needed to successfully supply utilities to the growing commercial center. These deliverables will be created with an eye towards public engagement, and the city plans to share its vision for Storey Avenue Village Center with residents.

Main Question:
What is the expected result of as-of-right permitting in the Storey Ave. Village Center Zoning? What does it mean to prepare Newburyport for the future development of Storey Avenue?

Sub-Questions:
- What is the proforma feasibility of developing affordable housing to include 10%, 20%, or 25% affordable within their projects, as required by local requirement?
  - Is 25% affordable units reasonable for a developer?
- What is a reasonable/desirable mix of unit count/buildout mix for the city?
  - What are the implications for schools, tax base, and other city services?
  - What are the implications for utilities, and does the utilities department have the capacity to support expanded needs?
- How can Newburyport best publicize its vision for Storey Avenue?
  - What visuals are easiest and most comprehensive for public use?
  - How can Newburyport effectively "tell the story" of the future of Storey Avenue?

Data: The city of Newburyport will provide the following data:
- Geospatial data: topography, building footprints, and other geospatial data points
- Financial records: current regulation on affordable housing, tax levels, other financial data.
- City services (current level): school population, utilities usage, other city services

Readings:
- News article on Storey Avenue Village Center rezoning
- Storey Avenue Village Center - Liveable Streets Overview

Potential Deliverables:
- Schematic site plans/3D modeling or renderings depicting the new vs. existing pattern of development (e.g. sketchup over our GIS layers; extruded building heights based on our proposed building height allowances, etc.; smart growth/urban design vs. the traditional isolated "strip mall" land use patterns the village has today)
- Analysis regarding the proforma feasibility of developers to include 10%, 20% or 25% affordable units within their projects as a local ordinance requirement (e.g. the current "MBTA Communities legislation/mandate vs. something more akin to our 40R Smart Growth District at the MBTA train station; having an economically feasible/financeable project vs. the suggestion that market rate units simply absorb the cost of the affordable units, since the developers are never interested in a reduction to their profit margins)
- Analysis regarding anticipated housing unit count/buildout/mix (e.g. studio, 1, 2, 3 or more bedrooms) and commercial/mixed use space to be maintained and the potential "fiscal impact" of this new village center zoning/district at full buildout (*e.g. based on a projection for the number of school age children they might expect, and other related community "impact" costs they might consider*).

Prospective Work Plan

Step 1	Obtain data and conduct interviews with Newburyport staff and local stakeholders to better understand Storey Avenue vision and community needs
Step 2	Define redevelopment scenarios in collaboration zoning consultants & city staff
Step 3	Analyze financial data to determine anticipated housing unit count/buildout/mix
Step 4	At interim presentation, present on takeaways from research conducted. Obtain client input.
Step 5	Use anticipated unit mix to determine potential fiscal impact for potential developers and city services.
Step 6	Summarize findings in presentation form and as a visual for public engagement purposes.

Incentivizing housing development in Providence, RI

Client: Mayor Brett Smiley (Providence, RI)

Project: Evaluation of tax policies used to reduce vacant land

Internal Contact: Courtney Hawkins (Chief Operating Officer)

Description:

The City of Providence, RI is approximately 20 square miles and is home to nearly 190,000 residents across 68,000 households. Like many urban U.S. communities, there is significant demand for new housing development which is a key focus area for the Smiley Administration. One potential strategy to be examined focuses on disincentivizing property owners from holding vacant properties that could be utilized for productive use.

This project aims to:

1. Assess the effectiveness of the previously implemented non-utilization tax, focusing on understanding its potential costs and benefits, and exploring opportunities for enhancement.
2. Benchmark Providence's housing development against similar cities to determine if its development rate aligns with typical expectations.
3. Conduct research on case studies to identify tax incentives or other supportive measures that can encourage development and increase the housing stock.

Background on current Non-Utilization Tax: In October 2018, then-Mayor Elorza repealed the sunset provision of the city's non-utilization tax (NU-tax), with a signed ordinance 463, chapter 2018-18 leading to the implementation of this tax imposed in 2020. The implementation of Providence's NU-tax requires several steps of investigation and validation. The Tax Assessor's team must work with the Department of Inspection & Standards to validate that the property meets the established criteria.

In 2018, a total of 69 properties qualified for additional taxation under the NU-tax. SInce then, no additional properties have been assessed with this tax in subsequent years.

These 69 properties were assessed at $100.00 per $1,000 of value, per ordinance resulting in a total potential collection revenue of $1,114,660. To date, $ 180,943 from 12 properties has been collected with $441,850 discharged based on forgiveness criteria and $491,867 uncollected.

Main Question: Is a Non-Utilization tax the right policy for Providence to disincentivize property owners from holding vacant and abandoned property?

Sub-Questions:

- What is the cost/benefit of Providence's NU-tax as it's currently structured?
- Should the city change policies to a different approach or make improvements/additions to the current one?

- What improvements could be made to the current NU-tax policy and operational implementation? What financial results might those recommendations yield, and at what cost?
- What other tax models should the City explore? What would be the benefits of these alternative models?
- Data: Tax assessment data from current city parcels
- Data on construction permits/ rate of development in the city, Inspections & Standards data regarding vacant properties (incomplete), collections data from current NU-tax
- Readings:

Potential Deliverables:

- Cost-benefit analysis and comparison of current NU-tax against other potential taxes

  - Benchmarking - how are other cities addressing blight and vacant properties? Are their development rate and NU-taxes at a similar level?
  - Equity assessment - who will this affect and to what degree?

- Memo or other report detailing tax policies used in other cities to reduce vacant property.

Prospective Work Plan:

Step 1	Identify stakeholders and map out benefits and implications of the current tax policy for these stakeholders
Step 2	Benchmark Providence's development rate against similar cities to determine if its development rate aligns with typical expectations
Step 3	Obtain data and conduct interviews with City officials and local stakeholders to understand the time, resource and other requirements in NU-tax process.
Step 4	Research and estimate the costs/ benefits of other incentives the city can explore to support housing.
Step 5	Present a range of policy options the city can explore in the short, medium to long term.

City of Everett: Island End River Flood Resilience Project

Client: Mayor Carlo DeMaria
Project: Funding the Island End River Flood Resilience Project
Internal Contact: Matthew Lattanzi, Director of Planning and Development

Background:
The Island End River (IER), a tributary to the Mystic River, is bordered by the Cities of Everett and Chelsea. The region, densely developed with much impermeable surfaces and inadequate stormwater infrastructure, houses critical facilities such as the New England Produce Center, Massachusetts General Hospital's Chelsea location, schools, and multi-family housing. As a result, the IER Flood Resilience Project, a collaborative effort between the two Cities, is constructing a coastal flood barrier, Storm Surge Control Facility, and related amenities. The impacted area – or, flood plain – consists of over 500 acres of land, houses over 5,000 residents and 800 buildings. Equally critical, the area serves as the home to the largest concentration of produce distributors in New England and the Canadian Maritimes, major power plants and LNG storage facilities, natural gas production facilities, and an FBI training facility. The flood plain also consists of major transportation corridors which transport hundreds of thousands of people and millions of dollars of products annually.

Key to promoting the project and engaging our stakeholders is truly understanding the economic impact of *not* building the storm surge barrier wall. While a FEMA Benefit Cost Analysis ("BCA") was conducted as part of our BRIC Grant application (attached), an in-depth look at economic loss to the region in key areas is a need that should be addressed to better promote and understand the project.

Main Question:
Beyond the physical loss of property in the floodplain, what is the economic loss to the region, specifically in the areas of food security, manufacturing and commercial enterprises, energy production and storage, transportation of peoples, goods and products, and damage to critical facilities, (schools, police stations etc.)?

Sub-Questions:
Beyond economic loss to the region, what are some of the potential social benefits that can be derived through the construction of this project?

Data:
- Cities of Chelsea and Everett Island End River Flood Resilience Project-FY2022
  - BRIC: Benefit Cost Analysis (Attached)
  - Narrative (Attached)
- Boston Region MPO Freight Planning Action Plan Update (bostonmpo.org)
- CTPS Technical Memo (bostonmpo.org)
- Route 16 Priority Corridor Study, Chelsea and Everett, Massachusetts (bostonmpo.org)

Readings: Island End River Flood Resilience Project Website

Potential Deliverables:

Prospective Work Plan:

Step 1	Obtain data on food distribution facilities within the floodplain and confirm dollar value of annual sales for this subset.
Step 2	Research MADOT transportation categories of major roadways within floodplain and MAPC study(s) on urban freight corridors and extrapolate dollar value of goods and services transported.
Step 3	Obtain data on manufacturing facilities within the flood plain and determine annual sales for this subset
Step 4	Obtain data on commercial business within the flood plain and determine annual sales for this subset..
Step 5	Obtain data from energy companies on economic loss to region from a flood related shutdown of facilities.
Step 6	Compile data and report out on total daily economic loss to region without flood protection based on 2070 1% Storm Event.

Hayward, CA: Operating Impacts of Major Capital Projects

Client: Mayor Mark Salinas
Project: Public Safety Capital-Operating Planning
Internal Contact: Mary Thomas

Description:

In June 2014, Hayward voters approved Measure C, which raised Hayward's Transaction and Use (Sales) Tax by a half-cent for a 20-year period. This tax increment currently generates about $20 million a year in revenue that is dedicated for municipal purposes. It is used to support debt service for facility construction, pay-go capital improvements, and operating expenses associated with increased staffing at the Hayward Police and Maintenance Services Departments.

Notably, this funding has supported the construction of a new 21st Century Library (opened in September 2019) and a new Regional Fire Training Center (opened in June 2023). The City of Hayward is exploring an early extension of this measure next November to help support a new public safety building.

Large capital projects like these can have significant impacts on future operating budgets that are not fully considered when making investment decisions. There may also be opportunities to make relatively small tradeoffs with major savings that are missed if the capital and operating budget processes are not better coordinated. **Hayward is looking for an operating cost model for the public safety building, both to incorporate into fiscal planning directly and serve as a proof-of-concept for integrating capital and operating planning generally.**

Main Question: How can Hayward make capital investment decisions that are sustainable to operate and maintain in the longer term?

Sub-Questions:

- What types of capital projects have similar operating cost drivers?
- What are major drivers of operating costs for the public safety building?
- Which cost drivers are under the City's control? Which have a disproportionately large operating cost impact?

Data: Operating budget and expenditure data before and after major capital projects.

Readings:

- Adopted FY24-33 Capital Improvement Program
- Adopted FY24 Operating Budget
- [Anything from Hayward?]

Potential Deliverables:

- Operating cost model for the public safety building
- Report outlining a checklist or process for modeling operating costs of a capital project given set parameters, by major capital project category

Prospective Work Plan

Step 1	Review Hayward's CIP to identify categories of projects with similar operating cost drivers.
Step 2	Analyze budgeted and unbudgeted costs associated with major capital projects.
Step 3	Research best practices of capital-operating coordination in other municipalities and comparable entities.
Step 4	Conduct interviews with staff from the Maintenance Services Department, Public Library, and Fire Department to refine and iterate on preliminary findings in Steps 1-3.
Step 5	Develop operating cost model for the public safety building.