Brooklyn Technical High School

Delivery, Capability, Alignment

Brooklyn Technical High School

Brooklyn Technical High School is one of the most prestigious high schools in the country. Every year over 30,000 8th and 9th graders take the 3 hour exam to gain admittance. Only 1,900 - 1,950 are admitted each year.

Founded in 1922, this school has a large assortment of unique *Hall of Fame* members who have contributed significantly to the sciences, technology, engineering, or mathematics fields.

This school was built on site at US$6M, is 12 stories tall, and covers over half a city block. It houses 2 gyms, a running track, a weight room, a pool, several specialized workshops and labs, a radio studio with its own transmitter, a recital hall, and many, many more amenities.

Needless to say, this school needs continual upkeep. This financing for this upkeep is what we will highlight in this presentation.

Brooklyn Technical High School

When managing a project of such large scope, the following areas will need to be addressed to ensure the alignment and capability

- risk management
- procurement
- organisational design and development
- execution strategy
- governance
- requirements
- asset management

Brooklyn Technical High School Initiation

Row Labels	Count of Project Phase Name
Complete	**10**
SCA CIP	**3**
Design	1
Scope	2
SCA CIP RESOA	**6**
Design	3
Scope	3
SCA IEH	**1**
Construction	1
In-Progress	**8**
DOE - Skilled Trades	**2**
Construction	2
DOE- RESOA	**1**
Construction	1
SCA CIP	**3**
CM, F&E	1
Construction	1
Design	1
SCA IEH	**2**
Construction	2
Grand Total	**18**

The initiation of this project was a joint venture between the Department of Education and Brooklyn Technical High School school board.

The project items were identified and listed to put to a vote for approval.

A pivot sheet was used to analyze the breakdown of phases for this project. Shown is the breakdown of completed and in progress projects for the school.

A table of vocabulary terms is also included so identify what organization is working where.

Vocab	
SCA	School construction authority
CIP	Capial improvement program
RESOA	Resolution A
CM	Construction mgmt
DOE	Dept. of Education
IEH	Industrial Environmental Hygiene
F&E	Furniture & equipment
DOER	Dept. of Education, Resolution A
DOES	Dept. of Education, Skilled trades

Brooklyn Technical High School Delivery Model

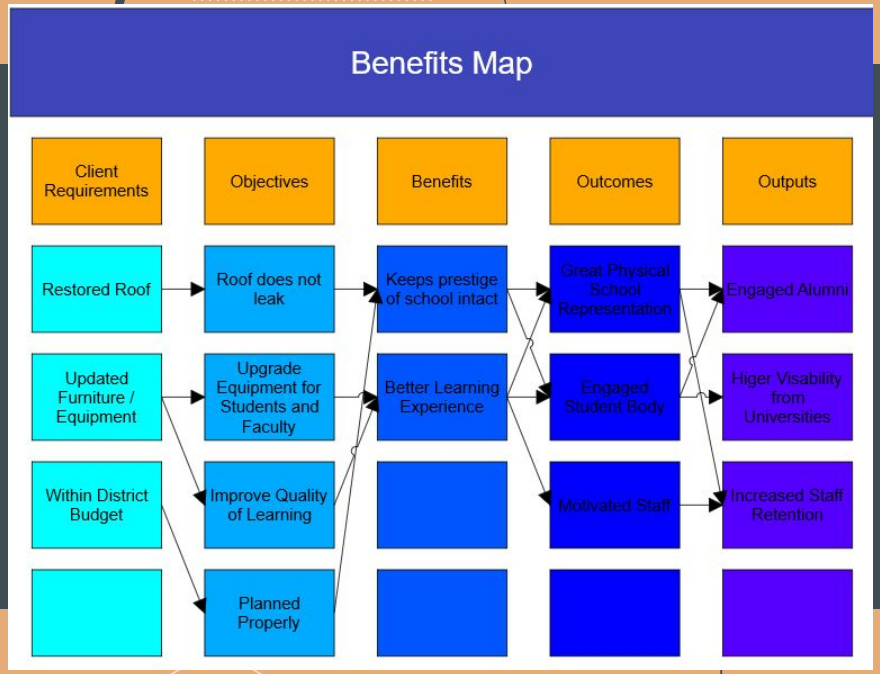
The parties involved in this project is listed above and previously listed in the financial status breakdown.

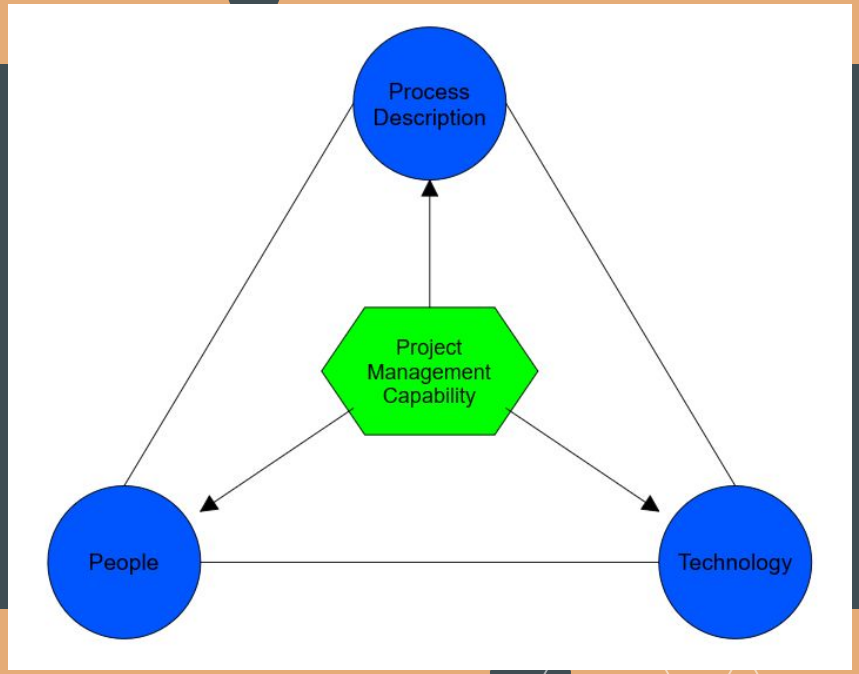
In a school project, many different invested parties and contractors exist, ranging from: Department of Education, local school boards, the community, teachers, and most importantly, the students.

Contractor selection for these types of projects are determined through local government funding and selection through the school board. The scope of the project must be laid out, estimates must be made, and a clear plan of construction must be given.

In this case, the School Construction Authority has much of the investment and involvement in renovating the school. They contracted out to local construction firms and completed the tasks given.

Project Management Capability And Alignment





Project Management Capability And Alignment

As listed previously in the benefits map and the Capability Matrix (defined below), there are many parties intertwined to make sure that this project is a success.

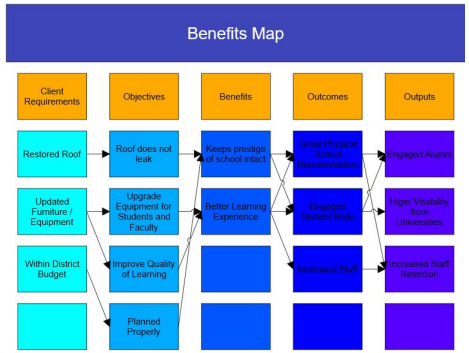
The benefits map speaks for itself and shows the end goal outcomes from some of the items listed as inputs.

The Capability matrix shows how the project is tailored using PMI management techniques (Process Description), how people such as DoE executives, school boards, PMs, PMOs, will manage the project (People), and how technology such as scheduling software, Excel, or a combination of many of those can be applied to this project (Technology).

Pros / Cons
Benefits Map

The Benefits Map breakdown shows the inputs vs the outputs of the client requirements and how they could represent an end goal.

There are some key takeaways from this map.



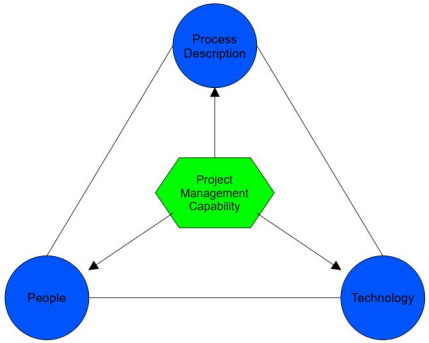
Pros: This map gives a clear look at how inputs can bloom from the start of a project to the end. It gives a place to start.

Cons: This is almost a dream sheet. The outputs will take years to realize.

Capability and Alignment

This capability and alignment diagram shows the intertwined relationships that will foster this project to fruition.

There are some key takeaways from this chart.



Pros: As previously mentioned, this chart breaks down the types of people, processes, and technology needed for this project.

Cons: This chart may end up being heavily reliant on one corner and the dependencies will not be properly spread.

Pros & Cons

The pros of this breakdown show the basics of what is needed in an educational construction project.

The cons are that these are only the basics. Much knowledge, reachout, proaction and reaction will be needed and this is not talked about at much length in this presentation.

Lessons Learned

The project structure for building improvements within school districts and school zones is very bureaucratic.

Due to the nature of these projects, you must meet local, state, and federal guidelines for estimation, contract awarding, and financial end goal reporting.

Different agencies from within each school district are then responsible for project tracking through each individual contractor.

The state of New York makes this data openly available.

Lessons Learned

School construction projects have continued to grow throughout the United States.

As per the United States Census Bureau, the amount of educational construction work done in the U.S. in 2018 was US$98.9B , with the speculation that this would only be increasing over the next few years.

However, with the COVID-19 pandemic in full effect in the United States, the amount of physical room within schools may now come into question.

The remote classroom is the new now, both at the primary, middle school, junior high, high school, and collegiate levels.

The key takeaway from all of this analysis is that future educational spending on construction in the near future will need a different style of project management, outlook, delivery, and capability model.

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