



THE UNIVERSITY OF  
**MAINE**  
College of Engineering

**FERLAND  
ENGINEERING  
EDUCATION AND  
DESIGN CENTER**  
*A BUILDING FOR  
MAINE'S FUTURE*

March 2020



E. James Ferland '64 & Eileen Ferland

**Dr. Dana N. Humphrey**  
Dean of Engineering  
Saunders Professor of Engineering  
Leadership and Management



# Outline

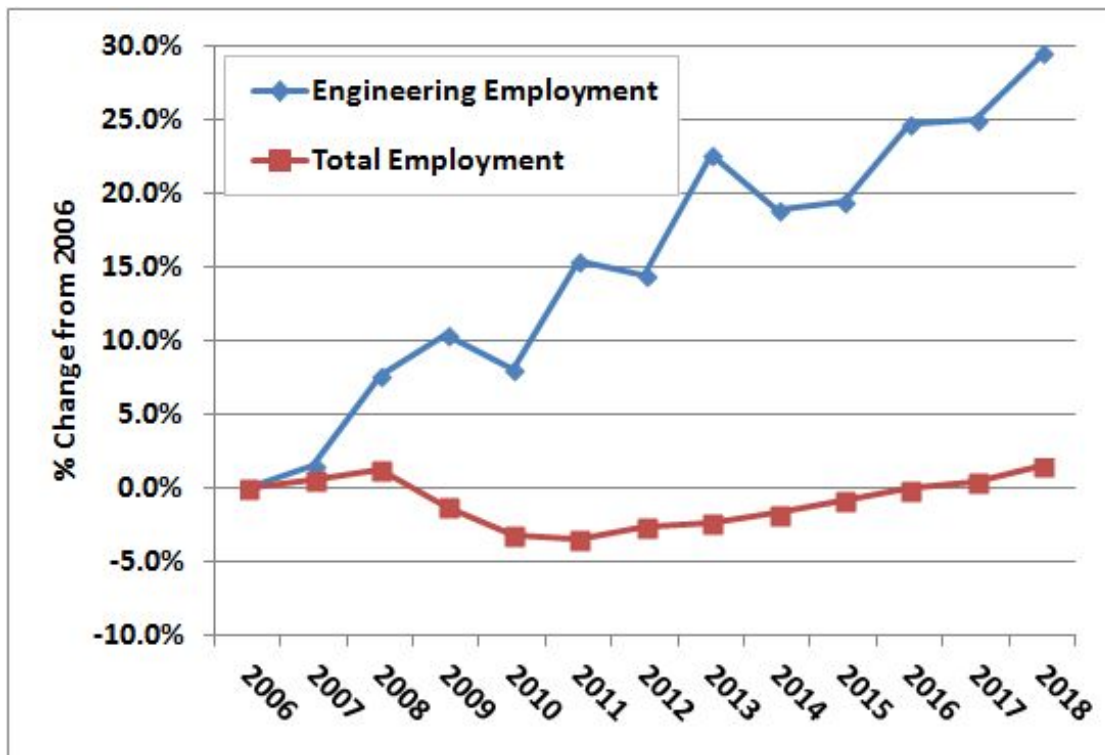
[engineering.umaine.edu](http://engineering.umaine.edu)



- Context - Why Engineering Education and Design Center is needed
- Ferland Engineering Education & Design Center
- Project Timeline
- Funding Commitments

## Strong job growth

- 30% increase 2006-2018
- Added 1,510 engineering positions



Data Source: US Dept. of Labor State Occupational Employment and Wage Estimates



Summer intern **Allie Hayford** of Cape Neddick at Pratt & Whitney in North Berwick



# Maine's Engineering Workforce is Aging

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**27%** of Maine's  
engineering  
workforce is age  
55+

**1,840** replacement  
engineers needed  
in next decade!



Based on data extracted from <http://ledextract.ces.census.gov/> for the third quarter of 2017; the category "Professional, Technical and Scientific" includes engineers, scientists, and related technical professionals; data for engineers alone is not available.



# Projected Shortfall of Engineers in Maine through 2029

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New Positions

1,510

Replacements for  
Retirements

1,840

Plus replacements  
for engineers who  
leave profession

?

Total Needed:

= 3,350 +

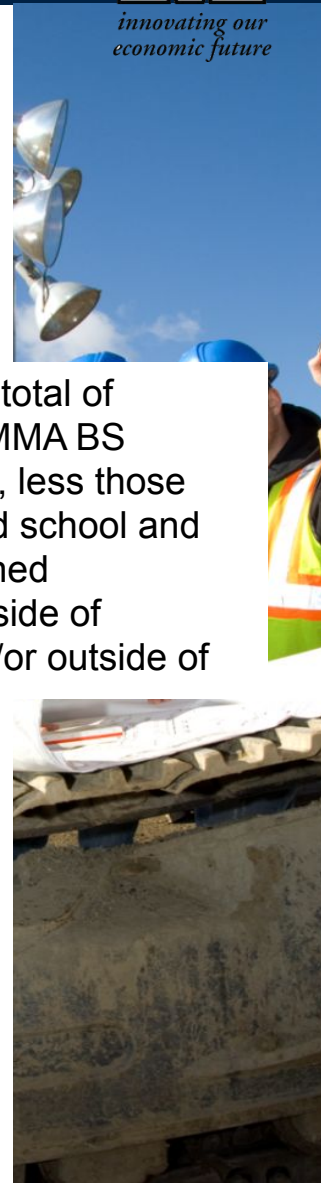
1,600

Available  
Graduates\*

\*Projected 10 yr total of  
UMaine+USM+MMA BS  
degrees granted, less those  
who went to grad school and  
those who obtained  
employment outside of  
engineering and/or outside of  
Maine.

1,750+

Shortfall



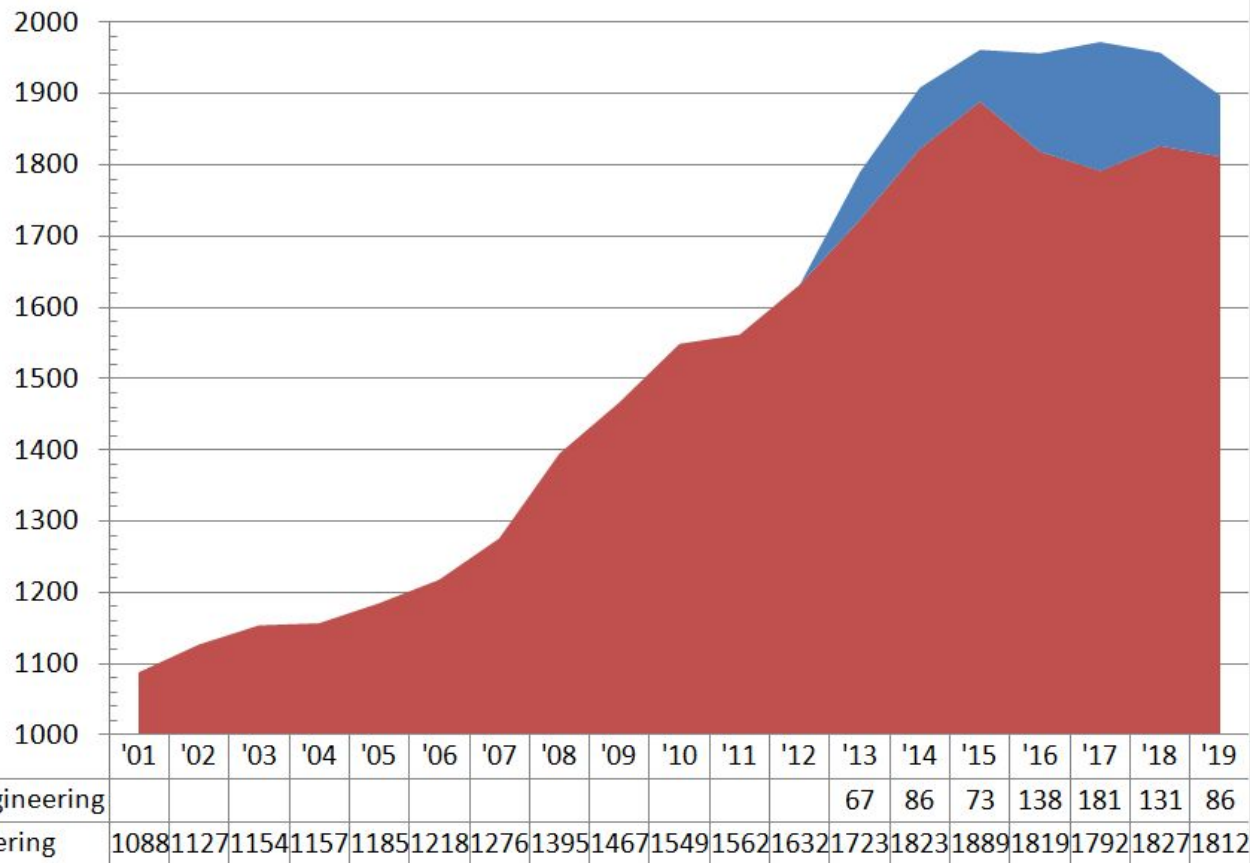


# Significant & Sustained Growth in Engineering Enrollment at UMaine

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UMaine College of Engineering  
Undergraduate Enrollment 2001 to 2019



Fall'19  
**500** 1<sup>st</sup> year and  
transfer students

*Factoid*  
UMaine grants  
**93%** of eng. BS  
degrees & **100%** of  
eng. graduate  
degrees in UMS

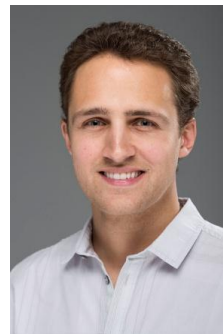
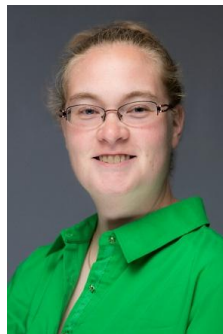
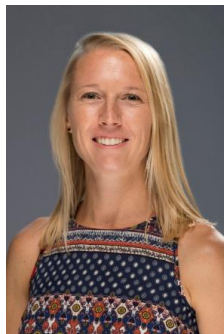
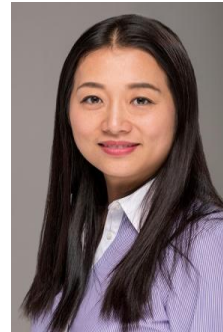


# 24 New Faculty in 4 Years

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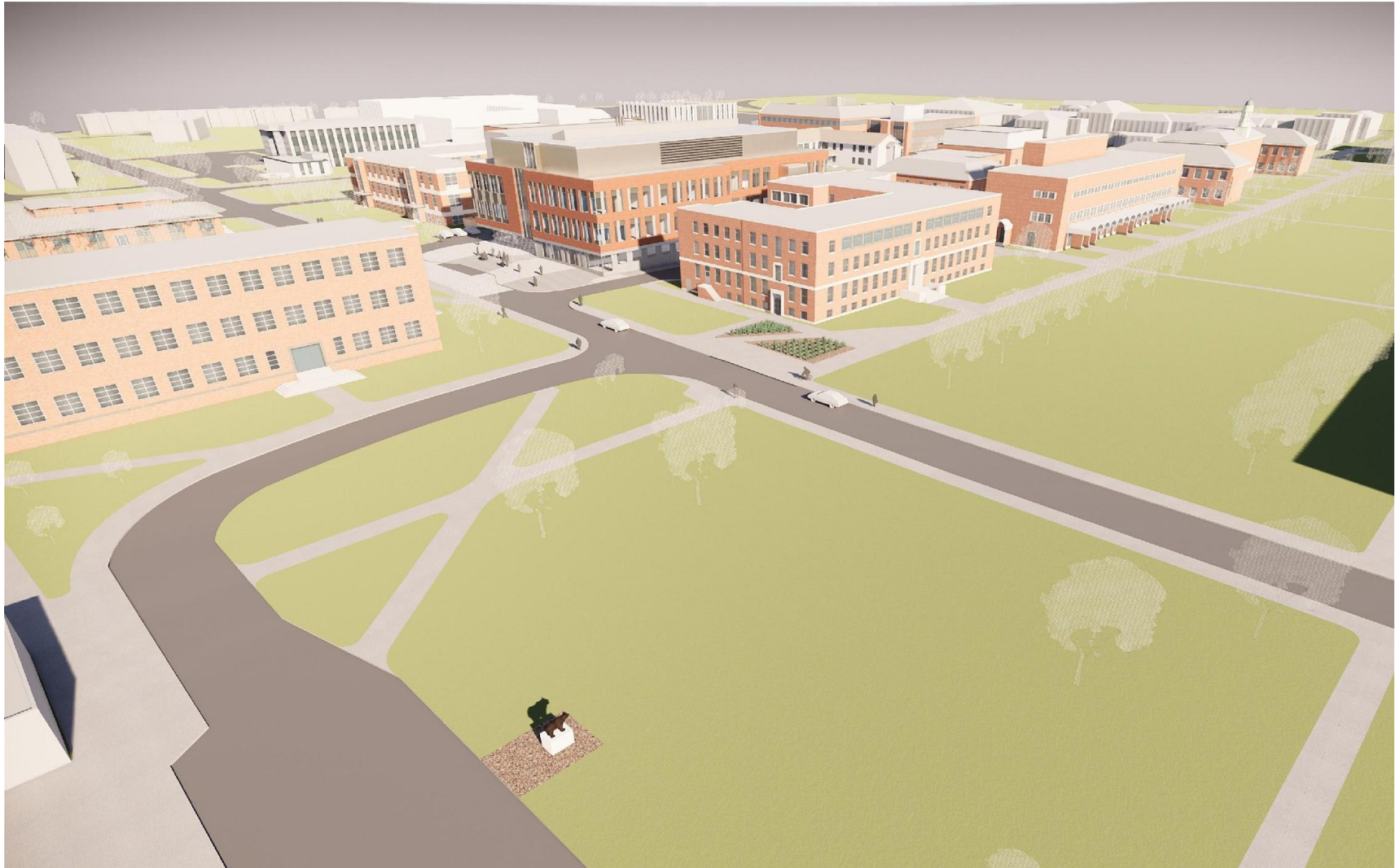


# Engineering Education and Design Center

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# Engineering Education and Design Center

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# Ferland Engineering Education and Design Center

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# Cloke Plaza Entrance

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# Design Option – Bridge to Boardman

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# PCA Commons

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*Team meeting rooms in background; View up to 2<sup>nd</sup> floor commons.*





# PCA Commons from Cloke Plaza Entrance

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*WBRC Grand Staircase to the right.*





# Maine Street from Long Road Entrance

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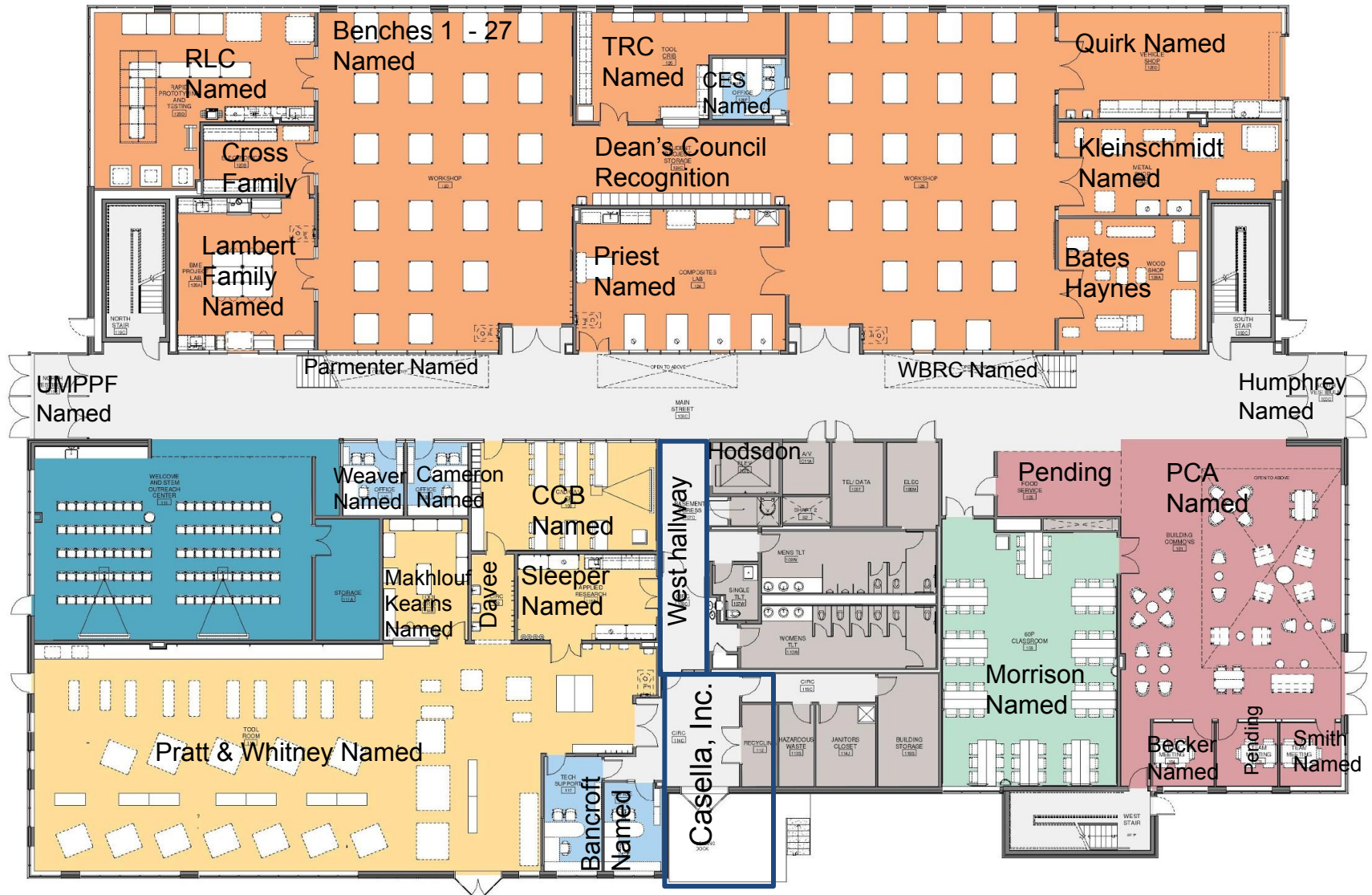
*Campus Welcome and STEM Outreach Center visible to the right.*





# Level 1 Floor Plan – Student Project Suite STEM Welcome Center

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# Student Project Design Suite

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# 2<sup>nd</sup> Floor Looking North

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# Level 2 Floor Plan

## Mechanical Engineering

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# Mechanical Engineering Teaching Lab

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# Collaborative Classroom

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# 3rd Floor Looking South

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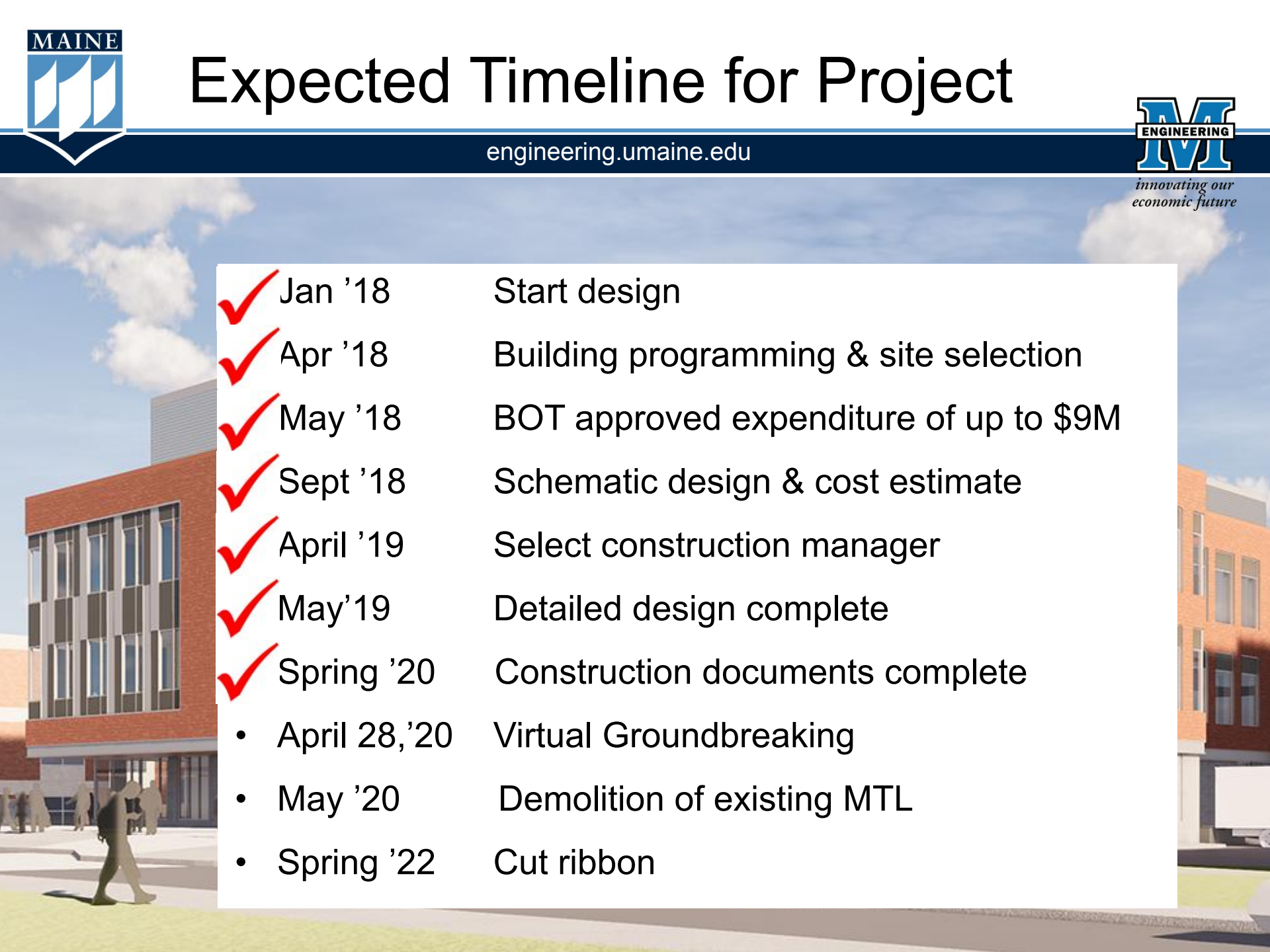




# Expected Timeline for Project

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- 
- |                 |  |
|-----------------|--|
| ✓ Jan '18       | Start design                           |
| ✓ Apr '18       | Building programming & site selection  |
| ✓ May '18       | BOT approved expenditure of up to \$9M |
| ✓ Sept '18      | Schematic design & cost estimate       |
| ✓ April '19     | Select construction manager            |
| ✓ May '19       | Detailed design complete               |
| ✓ Spring '20    | Construction documents complete        |
| • April 28, '20 | Virtual Groundbreaking                 |
| • May '20       | Demolition of existing MTL             |
| • Spring '22    | Cut ribbon                             |



# Funding Commitments

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Source		Amount
\$50-M state debt service		\$47.8-M
UMaine reserves		\$1.0-M
UMaine debt service paid back at \$250k/yr for 30 years		\$5.2-M
Ferland naming gift		\$10.0-M
Packaging Corporation of America gift		\$1.0-M
Abbagadasset Foundation		\$1.0-M
Gustavus and Louise Pfeiffer Research Foundation		\$1.5-M
Pratt & Whitney		\$1.0-M
Other private gifts		\$4.9-M
Pending gifts		\$5.9-M
TOTAL TO DATE	In total, there are more than 500 private donors	\$79.3-M

**Estimated total all-in cost: \$78 to \$80-M**



# Giving Levels

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Gift Size	Number Needed
\$10,000,000	2
\$1,500,000	1
\$1,000,000	3
\$500,000	2
\$300,000	4
\$250,000	8
\$100,000	20
\$50,000	30
\$20,000	40
\$10,000	20
\$5,000	40

***UMaine's College of Engineering produces the graduates and technology to move our economy forward.***

For more information about giving, please contact:

Patricia Cummings, Senior Director of Philanthropy  
Diane Woodworth, Philanthropy Officer

**The University of Maine Foundation**

207-581-5100, 800-982-8503

[patricia.cummings@maine.edu](mailto:patricia.cummings@maine.edu)

[diane.woodworth@maine.edu](mailto:diane.woodworth@maine.edu)

Pledges may be payable  
over four years  
(2019-2022)

Visit our website for available naming opportunities and interactive floor plans:

<https://umainefoundation.org/eedc-naming/>



# Thank you, donors!

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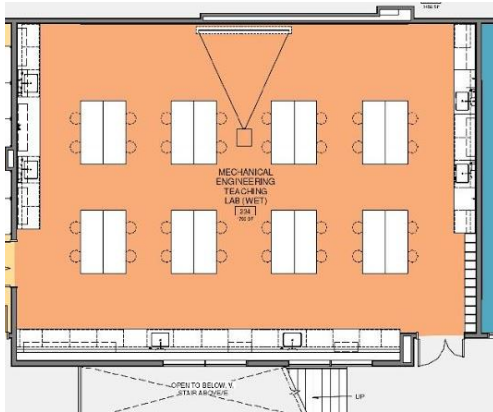


# Sample Naming Opportunities

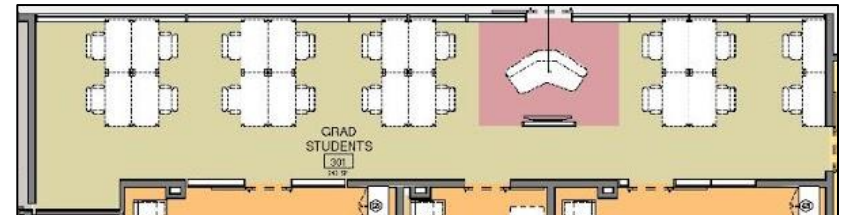
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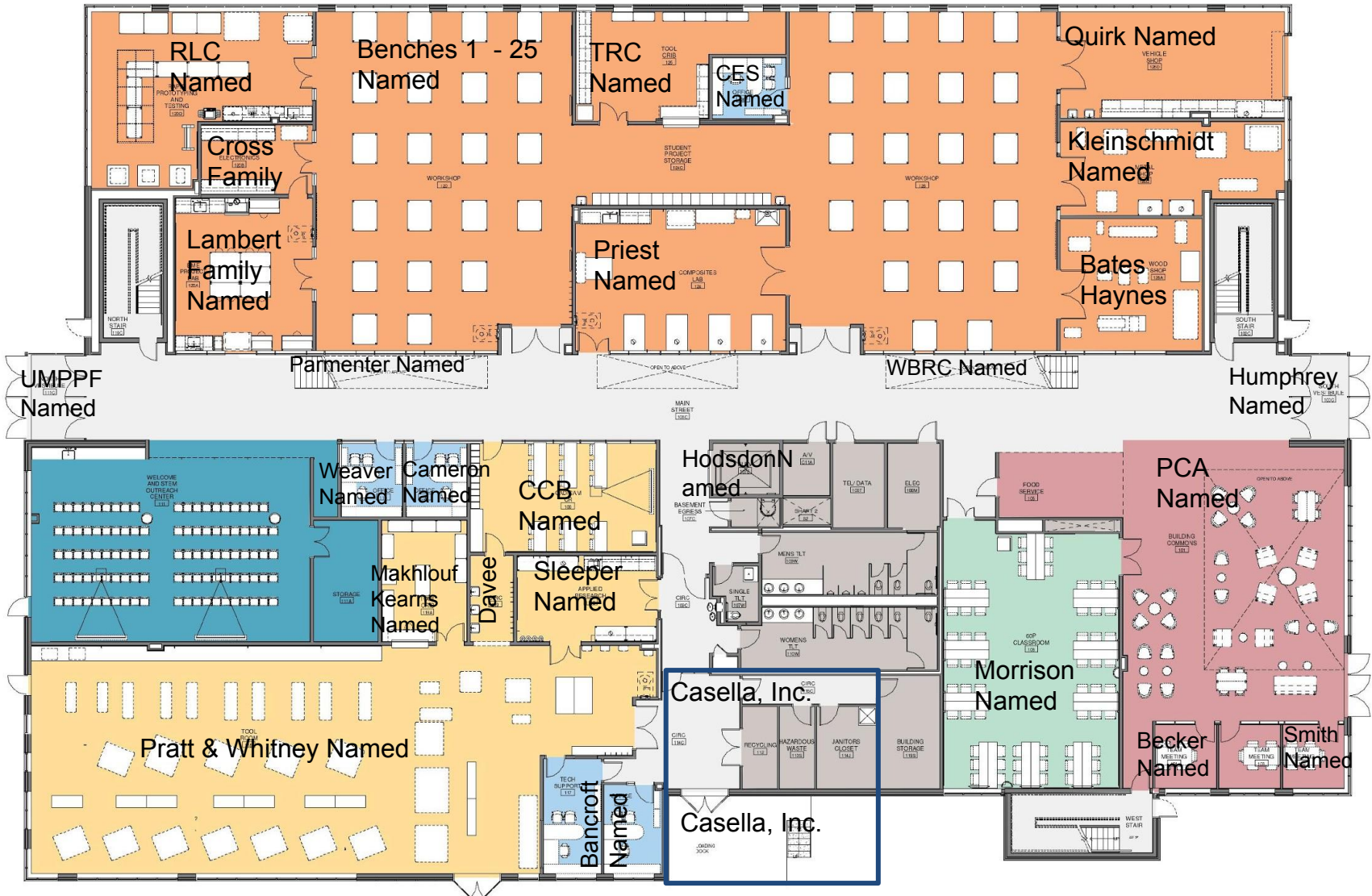
Mechanical Engineering  
Dry Lab  
Level 2  
\$300,000



Biomedical Engineering  
Graduate student Suite North or South  
\$100,000  
Level 3



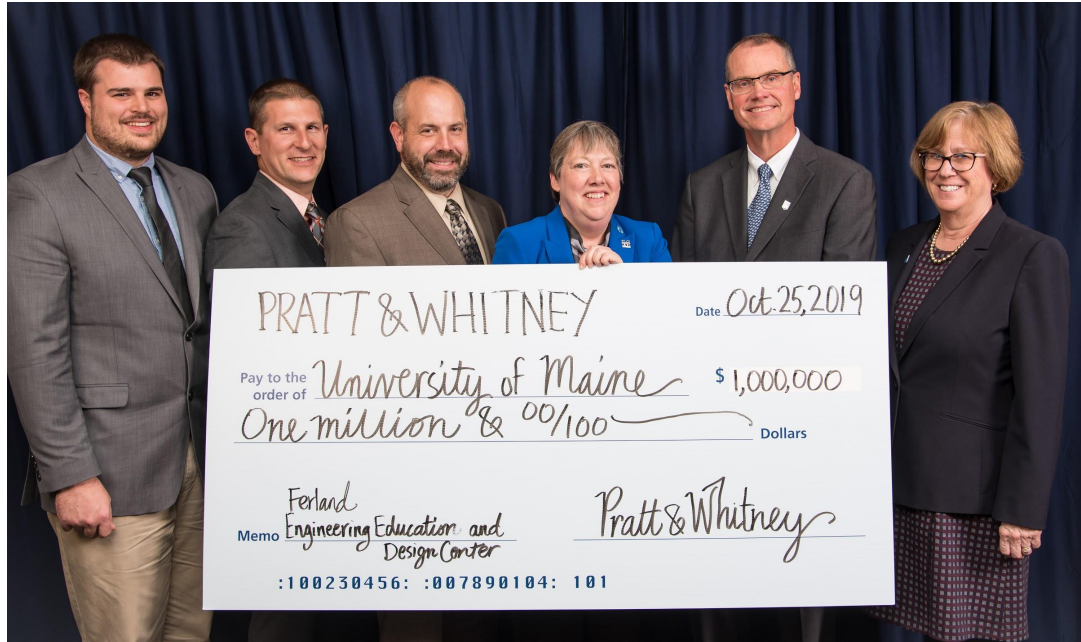
MEE or BME Faculty Corner Office  
\$25,000  
Level 2 & 3





# Pratt & Whitney \$1 Million

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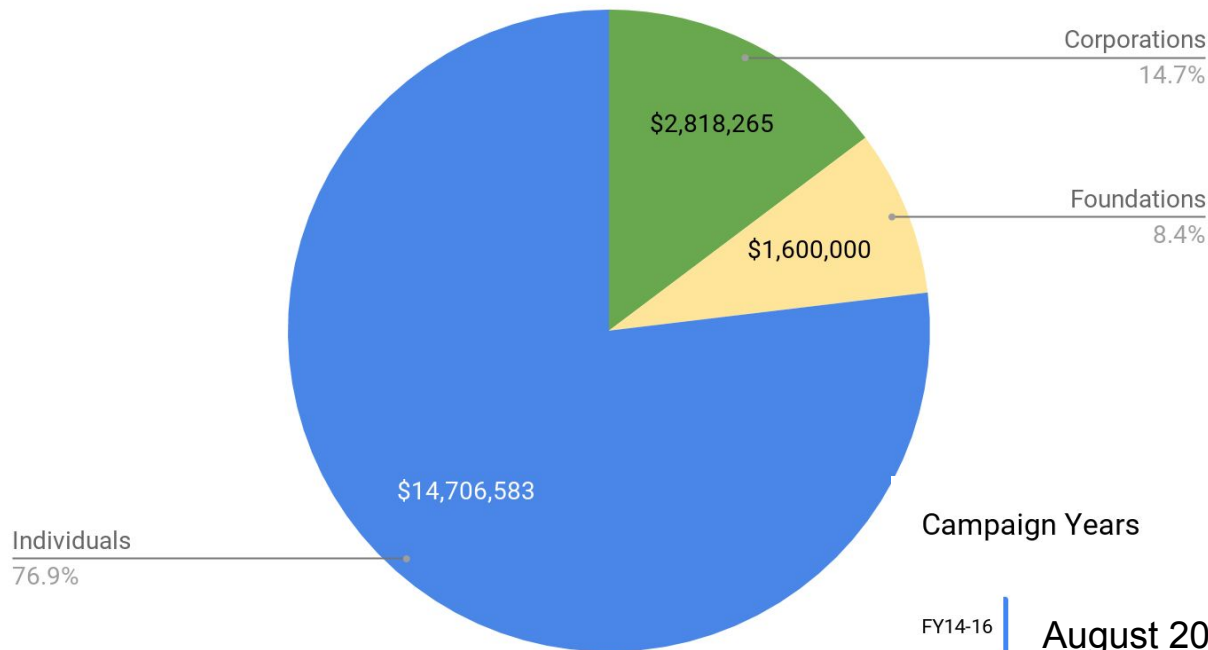


# Ferland EEDC Private Support

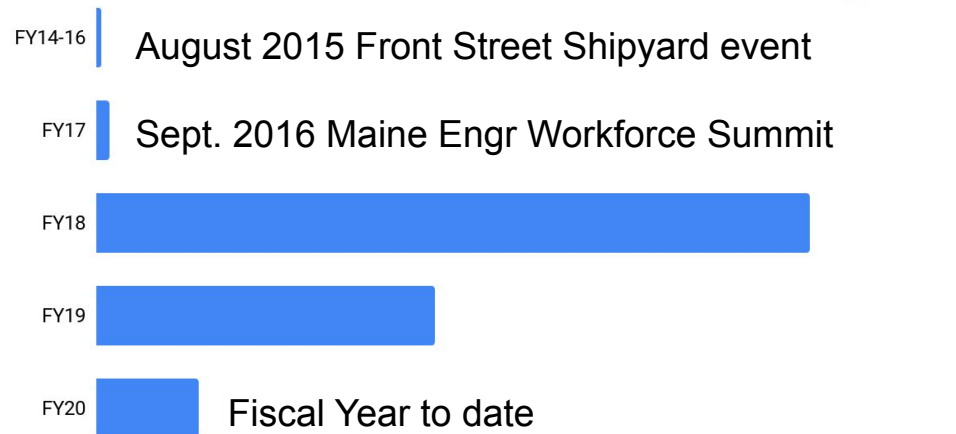
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Dollars raised by category



Campaign Years



July 2017 State of Maine approves \$50 Million Drawing private investment.



# Machine Tool Lab Commemoration & Gorman Emeriti Breakfast

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# Guinness Book of World Records

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World's largest  
3-D printer





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