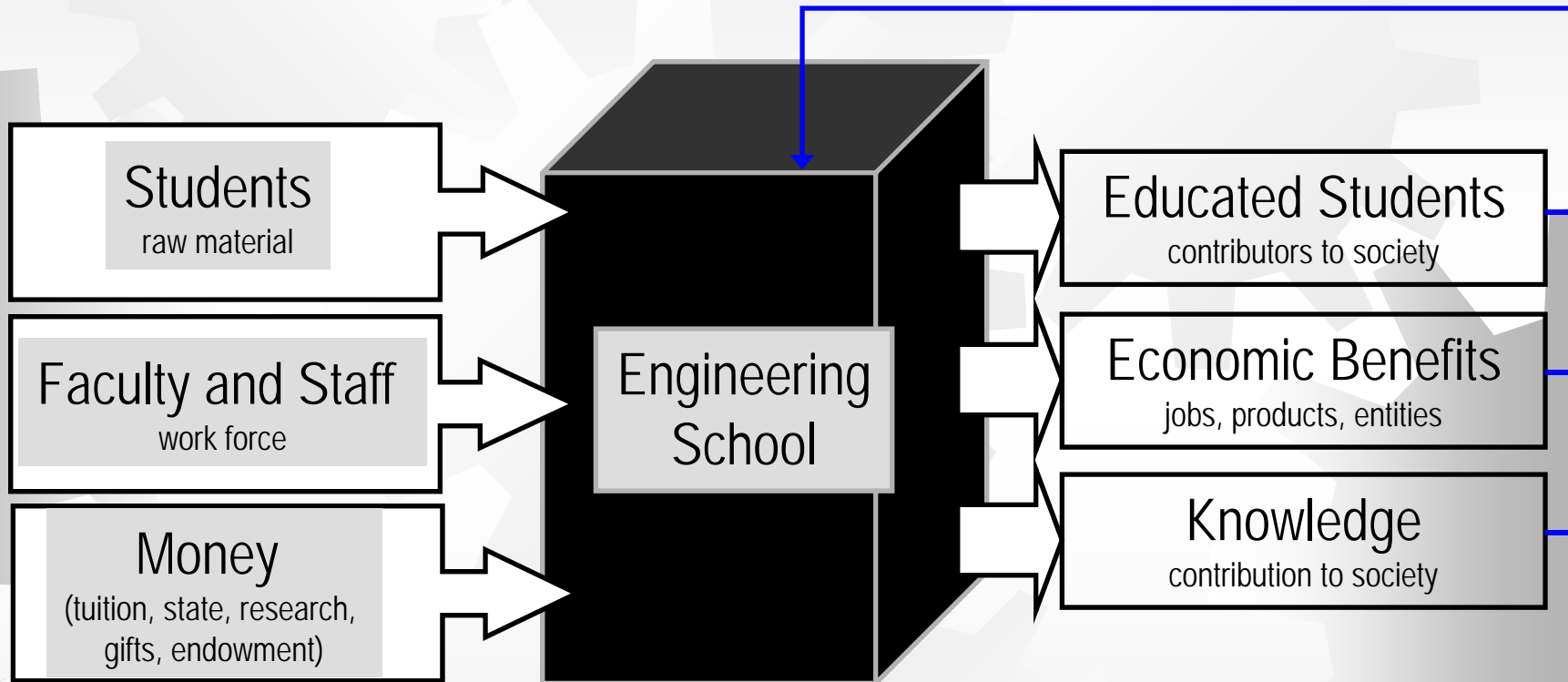


UB Engineering: Our Vision

- A school that is
 - respected by our peers and stake holders*,
 - productive compared to our peers
 - leaders in our chosen fields of study
- Achieved by constant improvement of programs, facilities and people; implemented using innovative approaches
- Growing in student population and faculty numbers

*stake holders include: corporations, our faculty and staff, our students and alumni, government, and the community.

An Engineering School



Continuous Improvement Teams

- Student Quality, Quantity, and Representation
 - Cadigan, Hillman, Pilarz, Runk, Stevens, Watts, Wegrzyn
 - VanBenschoten, Bisantz, Hammonds, Gidney, Wild
- New Markets for Education and Research
 - Elsenbeck, Gupta, Krishnamurthy, Lerner, Pilitsis, Stewart
 - Batta, Anderson, Hewlett, Soom
- Advancing Reputation and Resources
 - Agrusa, Bansal, Hammond, Klein, Lehman, Mansouri
 - Barnes, Collins-Gross, Jayaraman, Michalowski, Mitin, Porter, Siderakis
- Productivity, Excellence, and Growth
 - Garcia, Gerhardt, Lynch, Stanfill, Stopher
 - Stenger, Kofke, Nagi, Recupero, Weber

October 2007:

Proposed 12 (one year) Goals to Four Focus Groups

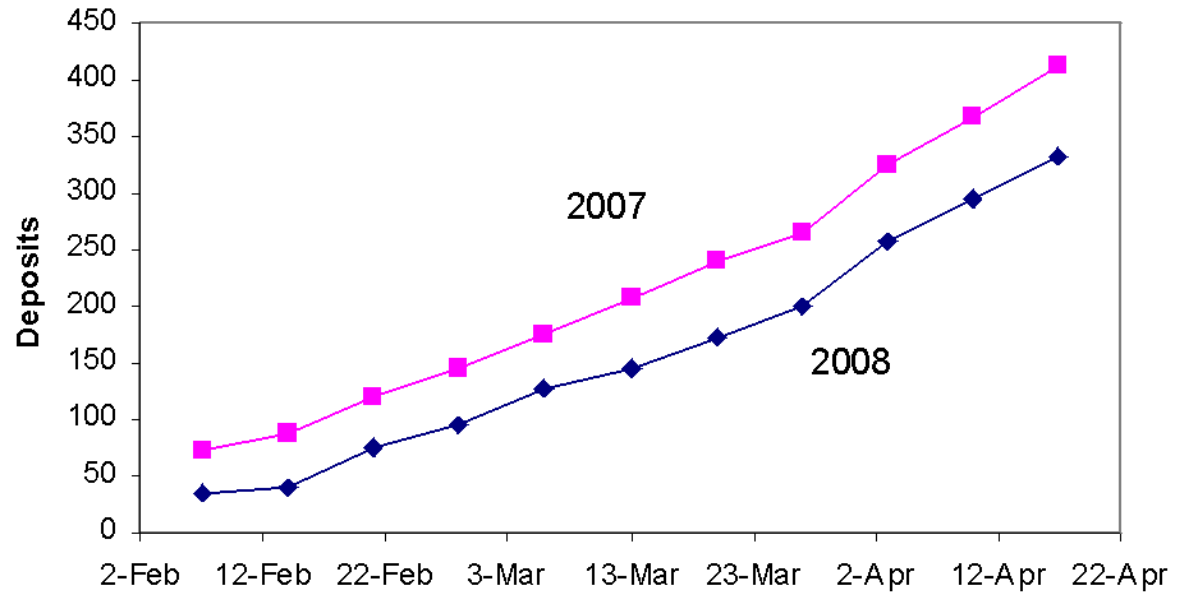
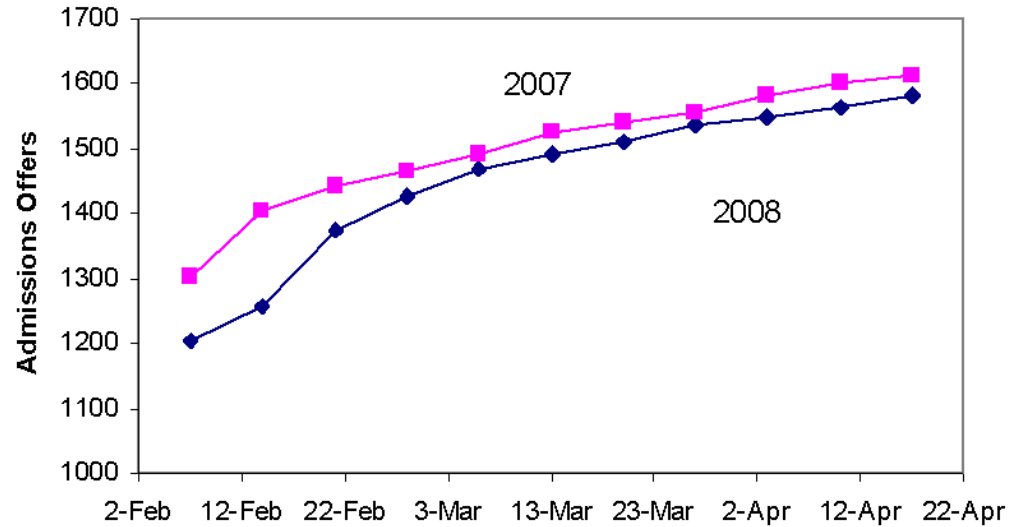
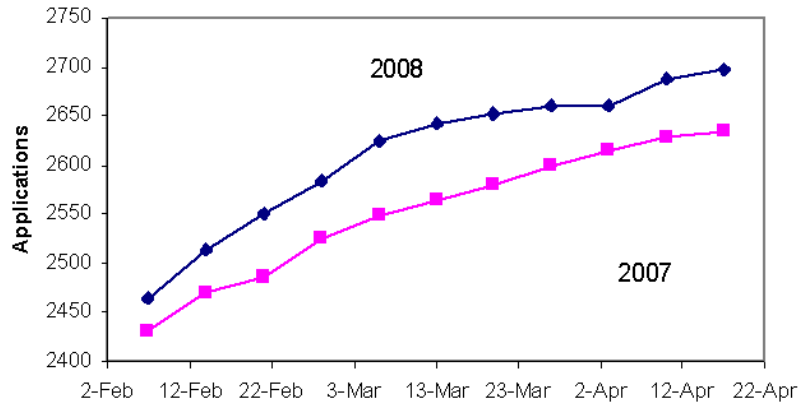
1. Add 20 SAT points to freshman class
2. Increase underrepresented enrollment in freshman class by 30%
3. Undergraduate enrollment growth of 5% through better retention
4. Launch a plan to double PhD productivity
5. Graduate enrollment over 1100 head count
6. BME launched successfully and SSE at 50 students
7. Improve peer/employer rankings in US News survey from 2.8 to 3.0
8. Investment commitments of \$10,000,000
9. Increase national visibility – awards, publicity, innovations
10. Faculty Full-Time Equivalent to 157
11. Twenty percent increase in research proposals
12. Develop workload policies to optimize faculty efficiency

1. Add 20 SAT points to freshman class

- Instituted minimum SAT of 1100 for Fall 2008 class
- Fall 2008 accepted student pool stronger than 2007
 - 2007 Average SAT (accepted students) = 1237
 - 2008 Average SAT (accepted students) = 1254
- In addition to all the usual recruitment
 - Engineering participation in spring Open House honor events
 - Created Facebook site for UB Engineering Class of 2012
- Dean's Scholar Program
 - 2007: 86 accepted and 24 deposits as of May 2, 2007
 - 2008: 72 accepted and 9 deposits as of April 16, 2008



Enrollment Metrics



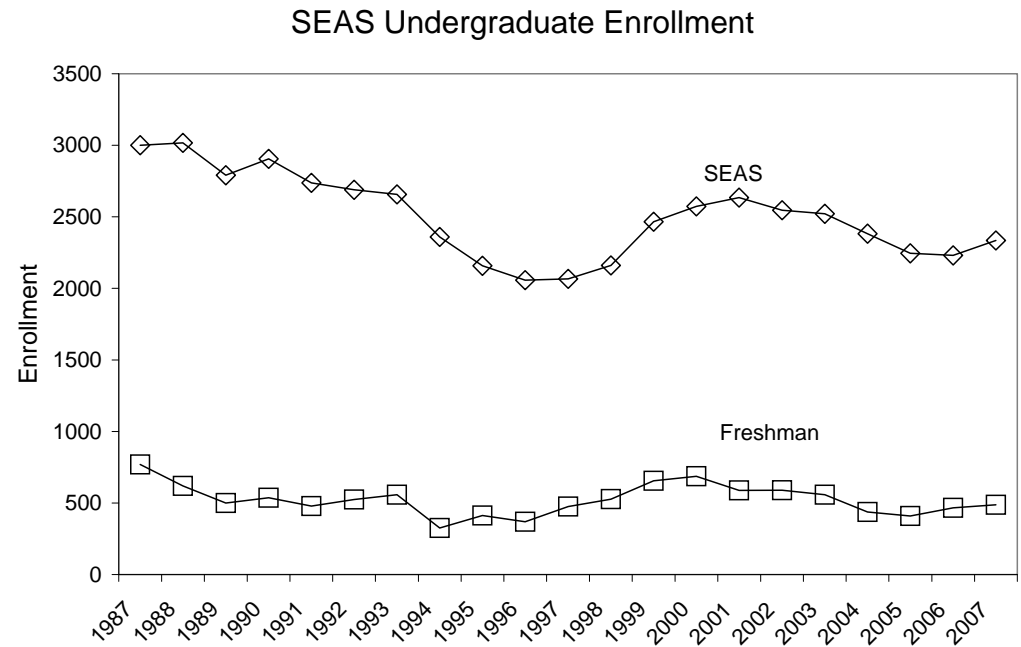
2. Increase underrepresented enrollment in freshman class by 30%

- Small applicant pool
- Underrepresented percent in accepted students is about the same in 2008 as 2007
- Need to reach out to NYC and Buffalo City Schools
 - Recent recruitment trip to Brooklyn Technical High School revealed
 - Stonybrook and Binghamton are preferred SUNY schools
 - Buffalo perceived as too far, too snowy, too cold
 - Presentations to classes well received by students and faculty
 - Recruiting NSBE and SWE for outreach
 - Targeted letter to all female applicants with female faculty contacts

3. Undergraduate enrollment growth of 5% through better retention

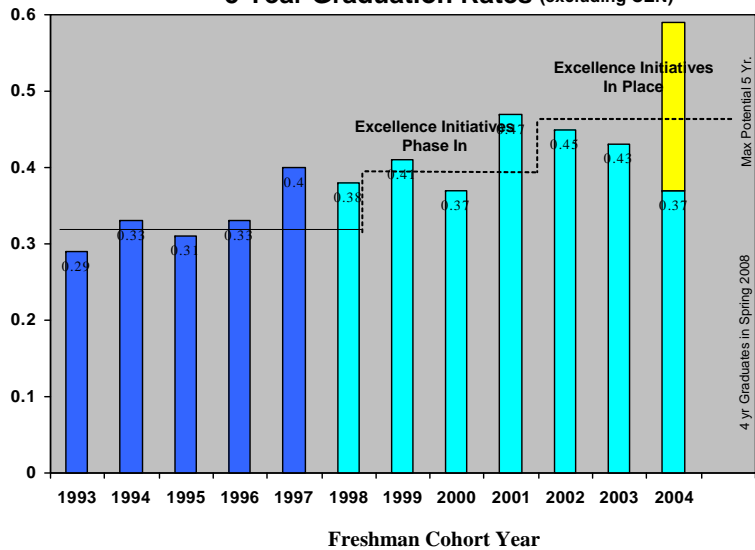
- Hypothesis: higher quality will result in higher retention
- Focus group discussion on feasibility of higher retention and clearer definition of goal
- Students leaving engineering most often cite:
 - engineering is not for me
 - poor academic performance
- Push for higher quality may (at least initially) result in lower enrollments
- Fall 2006 to Fall 2007 increase of
 - 104 undergraduates (+4.7%)
 - 24 graduate students (+2.7%)

Enrollment trends



Graduation Rates Rise by Factor of 40%
as Result of Cumulative Systemic Change

5 Year Graduation Rates (excluding CEN)



William G. Wild Jr./School of Engineering/University at Buffalo/2008

4. Launch a plan to double PhD productivity

- 08-09 allocation model for 15% of TA's to departments based on PhD graduation rate over past 5 years
- Dean's Fellow Program initiated this year
- Impediment - need a larger number of fellowships to support first year doctoral students
- Create revenue models for new graduate MS programs
 - Off-Shore On-Shore model for EE MS
 - CSE collaboration with Amrita University in Bangalore
 - Contract MS (National Grid, CTG)
- Submitted proposal to create differential tuition for out-of-state graduate students
- Revenues from efforts described above would be used to
 - Support fellowships for first year doctoral students
 - Supplement strained tuition scholarship fund

5. Graduate enrollment over 1100 head count

- ✱ Fall 2007 enrollment was 1015 (85 below target)
- ✱ For Fall 2008
 - ✱ 37 percent more students admitted than last year
 - ✱ I-20s for International students processed at faster rate (200% increase in I-20s as of April 12)
 - ✱ Continued effort to contact admitted students through student ambassadors
 - ✱ Expecting at least 400 new graduate students
 - ✱ Total number of graduate students in the Fall expected to be at 1100 head count

6. BME launched successfully and SSE at 50 students

- BME launch status

- \$3M donation secured - Oishei Foundation
- Search for new department chair to start soon
- New faculty hiring, plus adding and affiliating faculty from SEAS and SMBS
- Curriculum committee formed
- Center for Advanced Technology in Bioengineering renewed by NYSTAR
- More this afternoon

6. Service Systems Engineering launch

- SSE program aggressively marketed in WNY
- Faculty position in ISE department to manage and build SSE program
- Positive feedback from evaluators from Penn State and Virginia Tech
- 2007-08 cohort of 15 students - mix of domestic/international CSE/ISE backgrounds
 - Most of them will be graduating at the end of summer 2008
 - Preliminary internship placement is excellent
 - 3 students have obtained well-paid internships in IBM Almaden
 - 1 student is placed in Siemens
 - 2 students are in consideration for New York Power Authority
 - other placement efforts are ongoing
 - most companies that have been approached are receptive to these candidates
 - Companies visited and cultivated for promoting the program
 - M&T Bank, HSBC, Independent Health, Catholic Health Systems, Roswell Park Research Institute
 - In class presentations by IBM, HP, CTG, National Fuel

7. Improve peer/employer rankings in US News survey from 2.8 to 3.0

- US News March 2008 Ranking = 52nd (up from 61st)
 - Peer (deans) 2.8 in '07 remained at 2.8 in '08
 - Employer 2.8 in '07 up to 3.0 in '08
 - Total Raw Score up from 38 to 39
 - All “metrics” are up
 - selectivity, applications, degrees, research, enrollment, GRE scores
 - All departments increased in ranking
- Plans to
 - Enlist alums to assist with peer/employer rankings
 - Continue to communicate with our designated employer rankers
 - Researched disciplines of peer evaluators (deans) (40% are EE) – need to focus our school message appropriately

8. Investment commitments of \$10,000,000

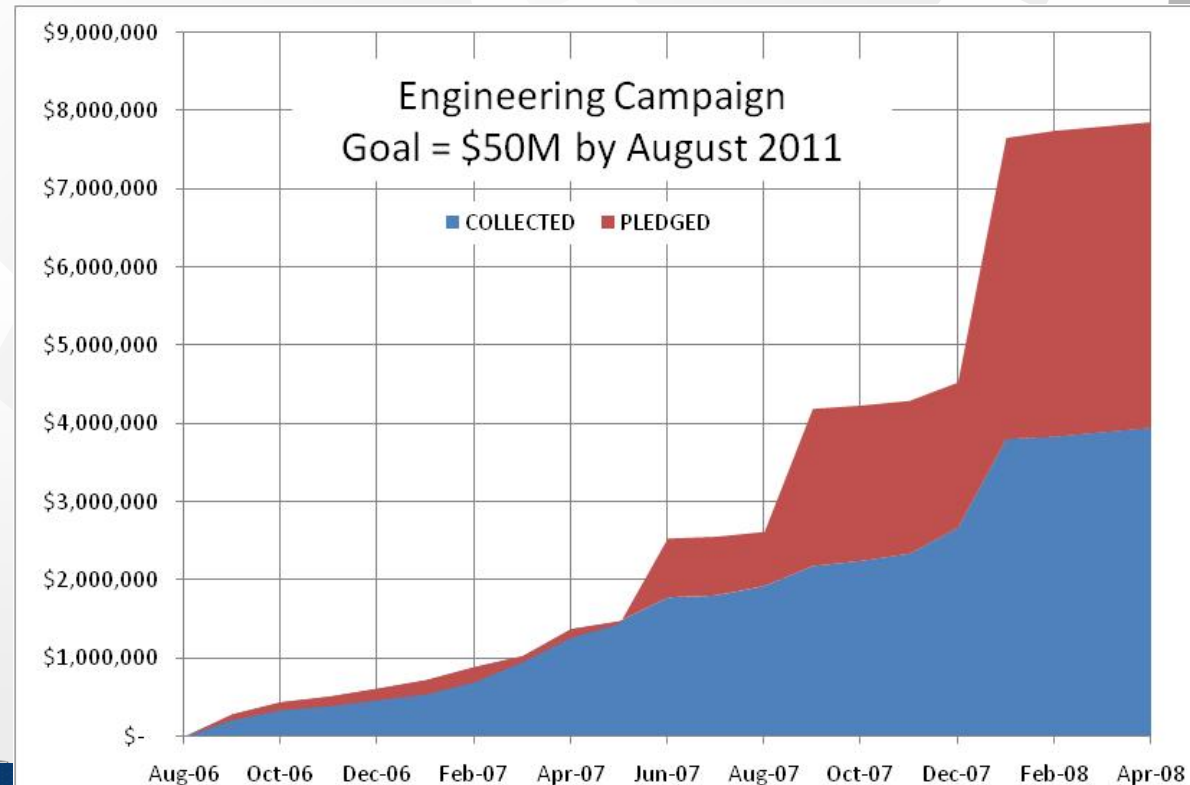
- Conversations in Washington, DC and Buffalo

- Hosts:

- Raj Boveja in DC
 - Ravi Bansal and Tom Lynch (and others) in Buffalo

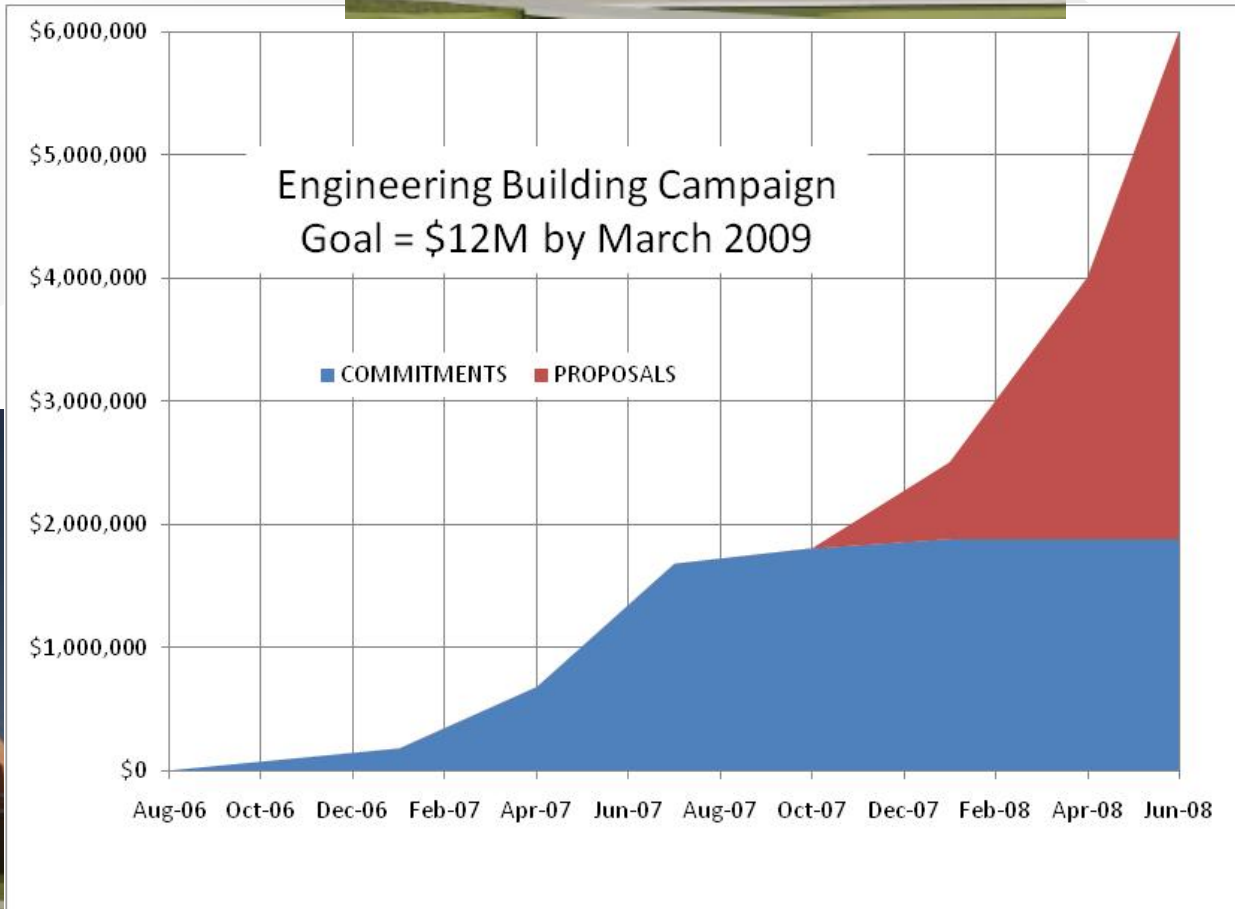
- Large successes since October meeting

- Oishei \$2M and \$1M matching
 - Anonymous \$1M
 - Greatbatch \$500K



New Building

- Completed Programming and Schematic Design
- Currently in Value Engineering
- To Bid in March 2009



9. Increase national visibility – awards, publicity, innovations

- Awards since October '07
 - US Presidential Mentor: George Lee
 - 4 NSF Career Awards: Civil (2), Computer, Electrical
 - Institute of Industrial Engineers David F. Baker Award: Rajan Batta
 - SUNY Distinguished Professor: Vladimir Mitin
 - Improved Rankings
- Hired a new full-time communications specialist
 - Working on new look for newsletter
 - Several postcards being prepared

10. Faculty FTE to 157: overcome financial challenges, hire the best

★ Faculty Attrition

- ★ Retirements: 2
- ★ Resignations: 1

★ Faculty searches (9)

★ Mechanical & Aerospace (MAE)

- ★ Thermal Fluid for Extreme Events
- ★ Energy Conversion for Nano-systems: Illinois
- ★ Chair

★ Industrial (ISE)

- ★ Decision and Risk for Extreme Events: Wisconsin
- ★ Service Systems Engineering (2)

★ Civil (CSEE)

- ★ Intelligent Transportation: RPI

★ Computer Science (CSE)

- ★ Smart Environments
- ★ High Performance Computing

May reach 155 (up net 5)

11. Twenty percent increase in research proposals

- Quarterly Progress Report includes proposals submitted by faculty with title, agency, and dollar amount
 - 2006-07
 - 329 proposals for \$138M
 - End of 3rd quarter 2007-08
 - 289 proposals (88% of 06-07) for \$115M (83% of 06-07)
- Energy thrust area developing
 - hybrid photovoltaic battery systems
 - proposal being developed for DOE solicitation
- Large proposals submitted to NSF, NIH, DHS, DOE (pending)

12. Develop workload policies to optimize faculty efficiency

- Starting Fall 2008: Faculty Excellence Grants
 - Teaching release and travel grant
- Annual Report of Faculty to be collected in database format and shared online - beta testing next week
- Teaching evaluations of all faculty to be shared with faculty
- Quantitative requirements for tenure and promotion
 - Publications, research funding, teaching load, teaching quality, student supervision, leadership of service
 - concerns that the bar is high
 - In first two years:
 - 7 for 8 (cases) for tenure (assistant to associate professor)
 - 8 for 8 (cases) for promotion to full professor

Mid Year One Report Card

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