Faculty Senate Meeting
Tuesday, December 20, 2016
3:30p.m. – 5:30p.m. – Toepfer Room, Adelbert Hall,

3:30 p.m.	Approval of Minutes from the November 29, 2016, Faculty Senate Meeting, *attachment*	Peter Harte
3:35 p.m.	President and Provost's Announcements	Barbara Snyder Bud Baeslack
3:40 p.m.	Chair's Announcements	Peter Harte
3:45 p.m.	Report from the Secretary of the Corporation	Arlishea Fulton
3:50 p.m.	Report from the Executive Committee	Juscelino Colares
3:55 p.m.	Proposed Revisions to FSCICT Charge, *attachment*	Ken Ledford
4:05 p.m.	Proposed Revisions to Graduate Studies Committee Charge, *attachment*	Ken Ledford
4:10 p.m.	Report on International Rankings, attachment	Jean Gubbins David Fleshler
4:40 p.m.	Development Report, *attachment*	Bruce Loessin

Case Western Reserve University
EST. 1826

Faculty Senate Meeting
Tuesday, December 20, 2016
3:30-5:30 p.m. – Adelbert Hall, Toepfer Room

Members Present

Anita Aminoshariae	Megan Holmes	Roy Ritzmann
W. A. "Bud" Baeslack III	Thomas Kelly	R. Mohan Sankaran
Karen Beckwith	Kenneth Ledford	Barbara R. Snyder
Matthias Buck	Paul MacDonald	Glenn Starkman
Gary Chottiner	Gerald Mahoney	Usha Stiefel
Juscelino Colares	Jay Mann	Robert Strassfeld
Christopher Cullis	Maureen McEnery	Ibrahim Tulunoglu
Mitch Drumm	Frank Merat	Rebecca Weiss
Robin Dubin	David Miller	Jo Ann Wise
Neetu Gulati	Roger Quinn	Stuart Youngner
Peter Harte	Mary Quinn Griffin	Amy Zhang
Steven Hauck	Vasu Ramanujan	Christian Zorman

Members Absent

Jennifer Barrord	Angela Graves	Horst von Recum
Cynthia Beall	Ronald Hickman	Gillian Weiss
Jeremy Bendik-Keymer	Lee Hoffer	
Boebel Toly	Paul Iversen	
Cathy Carlin	Sudha Iyengar	
Lisa Damato	Kathleen Kash	
Evelyn Duffy	Kurt Koenigsberger	
Kimberly Emmons	Thomas Montagnese	
Scott Fine	Leena Palomo	
Carol Fox	Aaron Perzanowski	
Archishman Ghosh	Andres Pinto	

Others Present

Bob Brown	Arnold Hirshon	Jeff Wolcowitz
Don Feke	Dean Patterson	Sue Workman
David Fleshler	John Sideras	Stephanie Endy

Call to Order
Professor Peter Harte, chair, Faculty Senate, called the meeting to order at 3:30 p.m.

Approval of Minutes
The Senate approved the minutes from the November 29th, 2016 Faculty Senate meeting. *Attachment*

President's Announcements
The President reported that over 200 undergraduate students and almost 550 graduate and professional students graduated this month. The President also said that a reception was held for student athletes. The achievements of 36 athletes with GPAs over 3.8 were celebrated. The Ohio governor signed a "campus carry" bill into law making it legal to bring a concealed weapon into day care centers and college campuses. The CWRU Board of Trustees will vote whether to allow concealed carry on campus. The President expects that this issue will come before the Senate shortly.

Provost's Announcements
The Provost reported that PCUE working groups are still in the process of being established.

A member of the Senate asked the President whether her office would be making a statement about the international LLM student who was recently shot and killed in Hudson. The President commented that she does not typically make public statements each time there is a student death but she does communicate with the family as she did in this case. The Deans of the Law School have also made a statement, but if faculty feel it is more appropriate for a statement to come from the President she is happy to discuss it.

Chair's Announcements
Prof. Peter Harte reported that the a number of student organizations as well as faculty and staff (known as the CWRU White Rose Group) are in the process of organizing a series of events to be held for the university community on Inauguration day. More details will follow.

Report from the Secretary of the Corporation
Arlishea Fulton, senior counsel, reported on the December 13, 2016 meeting of the Executive Committee of the CWRU Board of Trustees. The Trustees approved revisions to the amendment section of the Faculty Handbook, the charge for the Nominating Committee and the initiative and referendum section of the Handbook. *Attachment*

Report from the Executive Committee
Professor Juscelino Colares, vice chair of the Senate, reported that at its December 5th meeting the Executive Committee approved 3 honorary degree nominations. The nominations remain confidential until the nominees have been informed.

Professor Paul Iversen, Chair of FSCUL, presented a statement from the committee urging the CWRU administration to implement a multi-year strategy to provide adequate funding for library content. After discussion, the Executive Committee decided that Prof. Harte would discuss library funding needs with Glenn Starkman, chair of the Senate Finance Committee.

Prof. Ken Ledford presented revisions to the Senate By-Laws adding the chair of the Emeriti Academy Executive Committee as a nonvoting member of the Senate. The Senate had approved this idea previously, but had not reviewed proposed language. The Executive Committee agreed that a non-voting member of the Senate should not be counted for quorum purposes and Prof. Ledford said that the By-Laws Committee would draft language to this affect. The Executive Committee agreed to defer a vote on the revisions presented until new language on quorums was drafted. *Attachment*

Proposed Revisions to FSCICT Charge
Prof. Ledford presented a proposed revision to the charge for the Faculty Senate Committee on Information and Communication Technology. The Committee proposed removing the representative from the Council of Technology Officers from Committee membership since the Council no longer exists as a result of the reorganization of IT. The Senate voted to approve the proposed revision. *Attachment*

Proposed Revisions to Graduate Studies Committee Charge
Prof. Ledford presented proposed revisions to the charge for the Graduate Studies Committee, including a change to the student membership as a result in the merger between the GSS and the Professional Student Association. The Senate voted to approve the revisions. A member of the Senate objected to the fact that the Graduate Studies Committee only reviews changes to some of the university's professional degree programs and not all. He suggested that the Senate discuss this issue in the future. *Attachment*

Report on International Rankings
David Fleshler, Vice Provost for International Affairs, introduced the topic of international rankings. Several faculty members and staff had expressed concern about the university's international rankings. Although the university's rankings among US institutions have remained steady, they have fallen when compared with both domestic and international institutions. Among the top three international rankings - Academic Ranking of World Universities, QS World University Rankings, and Time Higher Education World University Rankings- Times Higher Education has been chosen as the ranking on which to focus. While the rankings' indicators fluctuate over time, Times Higher Ed has been the most consistent and uses reliable methodologies. An ad hoc Committee is being formed to identify actions that will help increase the university's position in this ranking, to create recommendations for a targeted plan, and to identify resources necessary to implement the recommended actions. The ad hoc Committee will report to the Senate again in the future. *Attachment*

<u>Development Report</u>

Bruce Loessin, Senior Vice President for University Relations and Development, provided a development update. The campaign has gone very well even after the overall goal was increased. Average trustee attainment has increased 350% over the life of the campaign and alumni giving increased 260%. The average cash gift has doubled since the beginning of the campaign and scholarship attainment has increased by 33%. 85 endowed professorships have been started or completed over this same period and it is likely that there will be more before the end of the campaign. Campaign expansion priorities include the university's scholarship program, implementation of the Master Plan, private support for research and International development initiatives. It is anticipated that the campaign goal will be reached by the end of calendar year 2017 if not sooner.

The meeting was adjourned at 5:00 pm.

The Executive Committee of the Board of Trustees met on December 13, 2016. Following is the report of key items approved by the Trustees. The next Executive Committee meeting is January 17, 2016.

The Trustees approved the **establishment of 6 new endowments totaling $1.3 million** for scholarships, a lectureship, an undergraduate student prize, research, and the establishment of the Charlene Phelps collaborative for older adults and family engagement with Judson. There were amendments to the **purpose of one endowment and the name of a second.**

The Trustees **approved 42 junior faculty appointments, 5 senior faculty appointments, 8 emeriti appointments, 7 junior faculty promotions, 1 new appointment to a named professorship, and 6 reappointments to named professorships**.

Upon the recommendation of the Faculty Senate, the Trustees approved the **following 3 amendments to Chapter 2 of the Faculty Handbook**:

1. revisions to the amendment section of the Handbook
2. revisions to the charge for the Faculty Senate Nominating Committee
3. revisions to the initiative and referendum section of the Handbook

The Trustees approved the following 4 Curriculum and Academic amendments:

1. to merge the Department of Environmental Health Sciences into the Department of Epidemiology and Biostatistics
2. to rename the Department of Epidemiology and Biostatistics to PQHS – the Department of Population and Quantitative Health Sciences
3. to approve the establishment of an academic English proficiency certificate
4. to modify minimum requirements for master's degree programs

The Trustees approved the **January 2017 issuing of 205 undergraduate and 543 graduate degrees**, and also approved the **award of three honorary degrees**.

The annual report to the Board on Squire Valleevue Farm was provided and the Board approved the 2017 fiscal year capital plan and an increase in the revolving lines of credit.

Report provided by Arlishea Fulton, senior counsel, Office of General Counsel

Proposed changes to the Faculty Senate Committee on Information & Communication Technology's charge. These changes are relative to the charge approved by the Faculty Senate in Spring 2014, http://www.case.edu/facultysenate/media/caseedu/faculty-senate/documents/approvals-and-endorsements/spring-2014/FSCICTchargetrackedchanges.pdf.

The purpose of the proposed changes is to:

I)   Alter the definition of the membership of the Committee to reflect the fact that the body previously known as the Council of Technology Officers no longer exists. Thus, there is no longer a chair from that body to serve on FSCICT to serve as a source of interaction between the two bodies.

II) As part of the changes associated with the centralization of IT across the university, Information Technology Services has changed its name to University Technology. Additional changes to the text are made to accurately reflect the name change.

Item j. Committee on Information & Communication Technology.

1) The Committee on Information & Communication Technology shall consist of the Provost or designated deputy, the Vice President for Information Technology Services, and the University Librarian annually. The Chair or the designee of the Committee on University Libraries shall sit ex officio on the Committee on Information & Communication Technology; and the Chair, or the designee of the Committee on Information & Communication Technology shall sit ex officio on the Committee on University Libraries ex officiis and the chair of the Council of Technology Officers shall sit ex officio on the Committee on Information and Communication Technology; nine voting members of the University Faculty elected by the Faculty Senate, no more than two from each constituent faculty; and one undergraduate student elected by the Undergraduate Student Government, one graduate student elected by the Graduate Student Senate, and one postdoctoral scholar/fellow elected by the Post Doctoral Researcher Association. The term of membership for faculty on the Committee on Information & Communication Technology shall be three years; three members shall be elected each year. Each elected faculty member of the Committee shall be eligible for re-election only after the lapse of at least one year following the expiration of two consecutive three-year terms of membership. The term of membership for student and postdoctoral scholar/fellow members shall be one year, beginning immediately upon their election to the Committee at the first regular meeting of the Faculty Senate subsequent to Commencement each year. Student and postdoctoral scholar/fellow members shall be eligible for re-election.

2) The Faculty Senate Committee on Information and Communication Technology (FSCICT) shall advise the Vice President for Information Technology Services and the Executive Technology Steering Committee on policies, strategies and practices that promote the effective use and management of information and communication technologies (ICT) to support the University's academic and administrative missions.

The committee shall:

a) Establish priorities related to ICT policies and strategies on the campus;

b) Review and provide input annually on the operations and budget of ~~Information~~ University Technology ~~Services~~;

c) Advise, consult and help develop guidelines and policies on how to organize and govern information and communication-related services, and how to develop, select and budget for ICT within University ~~Information~~ Technology ~~Services and other technology organizations within the university~~.

The Committee shall review the information technology and telecommunications infrastructures for teaching, research, and service; collaboration technologies; and administrative systems, especially those related to the academic advising and research administration.

3) The Committee shall report to the Faculty Senate at least once each year.

Sec. D. Committee on Graduate Studies

Par. 1. The Committee on Graduate Studies shall consist of the dean of graduate studies, *ex officio*, the associate dean of graduate studies, *ex officio*, the associate vice president for research, *ex officio*, nine voting members of the University Faculty elected for overlapping three-year terms, ~~and three~~four graduate/professional -student~~s members~~, at least one of which will be a professional student,~~,~~ and one post-doctoral scholar/fellow. The students and scholar/fellow are all voting members and are~~, and the professional school senator, *ex officio*,~~ elected for one-year terms. The Nominating Committee, in consultation with the dean of graduate studies, shall select nominees for election to the committee on the basis of participation in graduate research and in graduate study and instruction. Such selection shall be broadly representative of graduate disciplines.

Par. 2. The Committee on Graduate Studies shall review and make recommendations to the Faculty Senate with respect to graduate and professional degree programs. Degree programs refer to any course of study that ~~constitutes a specialization or concentration and~~ leads to recognition or an award for the completion of a prescribed course of study beyond the baccalaureate diploma. The Ohio Chancellors Council on Graduate Studies (CCGS) does not define the degrees of Doctor of Medicine, Doctor of Dental Medicine or Doctor of Jurisprudence as graduate degree programs, and the Faculty Senate Committee of Graduate Studies therefore does not review these programs.

Committee Review Responsibilities:

a. New ~~g~~Graduate/~~p~~Professional degree programs.
b. New ~~j~~Joint/dual degree programs.
c. New ~~i~~Individual multidisciplinary degrees
d. Changes in degree program name
e. Changes in degree program delivery mode (i.e. online)
f. Changes in curriculum of an existing degree which are greater than 50% that result in a new degree program.
g. Changes in curriculum of an existing degree which are less than 50% that result in a new concentration within the degree
h. Graduate ~~c~~Certificate programs
i. Areas of specialization, tracks, or concentrations (or anything similar) within a degree or professional program
j. Delivery of graduate/professional degree programs at new off campus locations (domestic and international)
k. Changes in ~~a~~Academic ~~p~~Processes, such as grades or grading system, diploma format and transcript format.
l. Academic standards
m. Academic policies

~~the academic standards, academic policies, and degree requirements of all departmental, inter-departmental, inter-divisional constituent faculty, and *ad hoc* and special programs under the administration of the School of Graduate Studies. With respect to graduate degree programs, the Committee on Graduate Studies shall review and make recommendations to the Faculty Senate on new graduate degree programs. New graduate degree programs include individual interdisciplinary degree proposals, new degree programs, joint/dual degree programs, as well as changes in degree program name, delivery mode, or changes which modify the curriculum of an existing graduate degree program by greater than 50% as defined in the Ohio Regents Advisory Committee on Graduate Study (RACGS) Guidelines and Procedures for Review and Approval of Graduate Degree Programs.~~

Graduate degree program refers to any course of study that constitutes a specialization or concentration and leads to recognition or an award for completion of a prescribed course of study beyond the baccalaureate diploma. The committee also reviews and makes recommendations to the Faculty Senate with respect to graduate certificate programs at Case Western Reserve University. The Ohio RACGS does not define the degrees of Doctor of Medicine, Doctor of Dental Medicine and Doctor of Jurisprudence as graduate degree programs, and the Committee of Graduate Studies therefore does not review these programs.

Par. 3. The Committee on Graduate Studies will provide oversight and guidance for academic and policy issues for postdoctoral scholars and fellows.

International Rankings
Faculty Senate Meeting

December 20, 2016

David Fleshler
Vice Provost for International Affairs

Jean Gubbins
Director of Institutional Research

Arnold Hirshon
Associate Provost and University Librarian

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International Rankings Systems

Shanghai Jiao
Tong University

QS

Times Higher Education

Why Rankings Matter:

- Country Sponsorship
- Student/Parent Choice
- Funding
- Collaboration

Things to Keep in Mind

- Ranking methodologies change

- Small changes can be significant

- Movement can be unpredictable

- Some variables are fixed
  - Nobel Prize Winners

- Long-term results

CWRU in the Rankings

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
CWRU International Ranking	101-150	101-150	101-150	99	99	97	97	87	83	78
Ranking Among U.S. Institutions	51-61	52-65	53-64	52	53	52	53	49	47	46

CWRU in the Rankings

QS WORLD UNIVERSITY RANKINGS

	2016	2015	2014	2013	2012	2011	2010	2009*	2008*	2007*
CWRU International Ranking	202	215	189	175	164	145	127	119	90	85
Ranking Among U.S. Institutions	49	51	48	47	45	45	41	38	33	32

*Rankings for these years were published by the THE and QS as partners

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CWRU in the Rankings

	2017	2016	2015	2014	2013	2012	2011	2010	2009*	2008*
CWRU International Ranking	126	133	116	88	104	93	65	119	90	85
Ranking Among U.S. Institutions	47	50	48	41	49	47	39	38	33	32

*Rankings for these years were published by the THE and QS as partners

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CWRU in the Rankings

	2016	2015	2016	2015	2016	2015
CWRU International Ranking	101-150	101-150	202	215	126	133
Ranking Among U.S. Institutions	51-61	52-65	49	51	47	50

Key Performance Indicators*

Shanghai Rankings	QS Rankings	THE Rankings
• Quality of Education • Quality of Faculty • Research Output • Per Capita Performance	• Academic Reputation • Employer Reputation • Citations • Faculty-Student Ratio • International Factors	• Teaching • Research • Citations • International Outlook • Industry Income

*Key Performance Indicators are not equally weighted within each ranking system

Why have we fallen in THE?

- More international schools have been included for ranking AND some international schools have displaced US schools in the ranking

- International rankings favor larger schools
  - Higher name recognition
  - Larger international alumni bases

- Citations are normalized across all disciplines for rankings
  - CWRU has a heavy concentration in science and medicine

- Low industry income

Why Times Higher Ed?

- Most reputable

- Most consistent

- Fair methodology

- Key criteria are most closely aligned to CWRU strengths

- Highest ranking → Most favorable to CWRU

Criterion	Weight	Indicator	Subfactor Weight
Teaching	30%	Reputational survey - teaching	50%
		PhDs awarded per academic staff (a)	20%
		Ratio of undergraduates per academic staff	15%
		Ratio of PhDs awarded to bachelor's awarded	7.5%
		Institutional income per academic staff	7.5%
Research	30%	Reputational survey - research	60%
		Research income (a) (b)	20%
		Papers published per academic and research staff (a)	20%
Citations	30%	Citation impact (five-year period) (a)	100%
Internat'l Outlook	7.5%	Ratio of international to domestic students	33%
		Ratio of international to domestic academic staff	33%
		Proportion of internationally coauthored research papers (a)	33%
Industry Income	2.5%	Research income from industry (b)	100%

(a) Normalized by subject area profile

(b) Normalized by academic staff

Appoint a small committee. Suggested members:

- Dr. Glenn Starkman (Physics/Faculty Senate)
- Dr. Juscelino Colares (Law/Faculty Senate)
- Dr. Matthias Buck (Medicine/Faculty Senate)
- Representatives from the Committee on Research and Grad Studies Committee
- Arnold Hirshon (KSL)
- Jean Gubbins (Institutional Research)
- David Fleshler (International Affairs)

Next Steps

The committee will meet 2-3 times next semester to:

- Identify actions that are most likely to lead to moving up in rankings
- Identify resources required to implement the recommended actions
- Create recommendations for a targeted plan
- Report back to Faculty Senate

Thank you!

Questions/Comments?

SHORT TERM RECOMMENDATIONS

RESEARCH FACTORS

Academic Search Engine Optimization (ASEO)

- Increase visibility of CWRU Research
- Increase Citations score
- Free
- Constraints
  - Time consuming
  - Algorithms constantly change
  - Does not help past publications

DATA FACTOR

Report Industry Income

- Deservers further exploration
- "Low Hanging Fruit"

REPUTATION FACTOR

Blog/Online Activity

- Blogs and other medium term marketing solutions can be tracked through marketing metrics to quantify reputation metric
- Will have an impact on "reputation"

RESEARCH FACTORS (Increase Citation Scores): university policy individualized targeting, optimization, research output (key areas).

DATA FACTOR: This is often not reported because the default is better than our actual number (per Jean Gubbins).

REPUTATION FACTOR:

CREATE USEFUL CONTENT -

- Provide people with consistent valuable content to earn trust/respect
- Spread our message
- Have our message be shared
- Differentiate by creating content that is designed to create awareness of issues
- Can close marketing gap with bigger schools

IMPROVE REPUTATION -

- Reach out to prospective int'l students
- Create awareness for unique accomplishments and student life
- Can serve as informational hub for people who want to learn about CWRU

LONG TERM RECOMMENDATIONS

REPUTATION FACTOR	REPUTATION FACTOR	REPUTATION FACTOR	RESEARCH FACTOR
PR Campaign	**Advertising**	**Promote MOOCs**	**Research Output**
• Spread word of Case's Highlights • Accomplished professors, research, alumni, etc. • Consider outside help • Hubspot, foreign social media advertising, etc.	• Target the administration of schools being asked to survey • Coordination or unique aspects of Case • Impact reputation directly	• Increase awareness of MOOCs via marketing • Increase presence of MOOC leaders on campus • Could influence reputation of ranking • Already part of strategic plan	• Most important factor • Highest weight • Will be most costly and intense process – but highest gains

REPUTATION FACTOR:

Reputation increase for USC due to academic awareness, new partners, research dissemination.

Targeted advertising – research, ties to Clinic, uniqueness of CWRU programs, partners, and alumni.

MOOCs – offers increased global brand recognition.

RESEARCH FACTOR:

Highest weight as a factor also most costly and intense process, but offers highest gains.

Increasing International Rankings

Objective – Find Ways to Increase International Rankings

Yiyi Ming, PJ Adams, Pranav Jayanth

4/30/2014

TABLE OF CONTENTS

EXECUTIVE SUMMARY

One of the most basic reviews of a university's overall quality is sometimes viewed as a ranking versus other peers. For better or for worse, this metric is often said to drive consumer choice, provide an assessment of university health, push university's need for constant growth and even influences national policy[1]. Their shortcoming are numerous - they are subjective measures passed off as objective, they have inherent biases, methodologies are simplified or they are mathematical constructs without elucidation[2], rankings may not take into account size differences[3], or methodologies change with little warning every year. Nonetheless, according to an AUBR (Assessment of University Based Research) Expert Group study in 2009, "rankings enjoy a high level of acceptance among stakeholders and the wider public because of their simplicity and consumer-type information"[4].

Our objective is to find novel ways to increase international rankings. A previous group has "demystified" the ranking systems and now we are adding – now what?

For Case Western Reserve, rankings have been favorable for us domestically. We have consistently been a top university and increase YoY to a current ranking of #37[5]. However, this story is not consistent internationally. CWRU's international rankings via Times Higher Education, Shanghai Jiantong and QS has been on a downward trend YoY since 2010. The inconsistence between the national ranking and international ranking created the need to find out the factors that influence international rankings.

In Fall 2013, a study prompted by CWRU's recently formed Center for International Affairs uncovered the methodologies of much of the top international ranking systems. Our report now details several recommendations based upon analytical analysis and interviews from CWRU administration and faculty. We hope that our recommendations are consistent with both CWRU policy and with ranking system methodologies.

Shown below are our overall recommendations:

Short Term	Long Term
Bibliometric Tools	Marketing Activities
Blogs/Online Activities	Research Output
Promote MOOCs	

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[1] Global University Rankings and Their Impact (Page 8)
[2] Ibid (Page 13)
[3] Ibid
[4] Ibid (Page 12)
[5] http://colleges.usnews.rankingsandreviews.com/best-colleges/case-western-reserve-university-3024

As we enter a new age of globalization, there is a new need to be recognized as a global leader in education. International rankings are simply a easy-to-understand metric that categorizes the university against its peers. Rankings are a way to attract international students to a school. A study administered by the International Student Recruitment Agency shows that international applicants do rely on a university's international ranking. Per the research penned from the previous study, "according to the CWRU's Director of Undergraduate studies, admissions has verified that student applications rise and fall with the university's international ranking status"[6]. This trend is also particularly true for post-graduate students[7]. This trend should be considered because about 30% of our post-grads are international students[8].

International rankings also has been shown to affect a universities overall reputation, which can affect the way that a university is viewed for its prestige, research impact, international partnerships, research, and employment opportunities[9]. Through our interviews, we have learned that if a university has more "prestige", it tends to attract more world-class researchers[10]. Thus, rankings do have a tangible impact into not only attractiveness to students, but attractiveness of researchers. This fact is immensely important in order to stay competitive with other research universities. Thus, if we increase rankings, we may see more world-class researchers show interest, have more international partners, increase employment opportunities for graduates overseas and may even be able to disseminate research more effectively.

International ranking are supposed to provide a transparent method for peer evaluation. When a third party is evaluating different schools, it offers a relatively objective ranking for prospective students and cooperative employers. At the same time, these published international rankings are providing the schools information about their performance so that they use this feedback to improve their performance. This evaluation will influence a college in many different ways. The most two obvious impact is the partnership with other colleges and getting funding from the government. According to CWRU's Coordinator of Communications and Programming, many colleges will choose their partners for a program based on the other college's international ranking. The same situation applies to the government funding; a school's ranking would be a big factor for the government to make decision about the funding.

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[6] Study is titled "Objective: Increase CWRU's International Ranking" and can be found by contacting Kendee Franklin of the Center for International Affairs
[7] Ibid
[8] Statistic shared by Provost Bud Baselack
[9] Taken from study titled "Objective: Increase CWRU's International Ranking" (Page 1)

[10] Shared by Arnold Hirshon

Rankings can also imply several things about a university, such as:

- Prestige
- Research Output
- Future Growth
- Industry Experience
- Partnerships
- Academic Excellence

RANKING SYSTEMS

The three most prestigious and widely used international ranking systems are ARWU (The Academic Ranking of World Universities by Shanghai Jiaotong University), THE (Times Higher Education) and The-QS (The-QS World University Ranking).These three different ranking systems use different factors to evaluate a college's quality and give the factors different weight, and therefore give different results. They are also the primary "league tables" that rank peer evaluations.

A caution before moving forward; we want to stress that each ranking system has differences between others. As will be soon demonstrated, one ranking system may favor peer evaluation via surveys more than research citations. This is reflected by its weights. Though we recognize that important concept, international rankings are fundamentally different as a whole than the familiar domestic ranking of US World and News. They, in general, favor research over any other factor, some almost outright ignoring teaching quality and classroom activities.

ARWU (SHANGHAI JIATONG)

ARWU's goal is simple: try to find the top <u>research universities</u>.

This goal is fully represented by its methodology for ranking. ARWU selects around 1000 of the 17,000 universities which have Nobel Laureates, Fields medalists, Highly Cited Researchers, or papers published in Nature or Science. It tries to measure 4 factors: qualify of education, quality of faculty, research output and per capita performance of the university.

Quality of Education measures alumni of an institution winning Nobel Prizes and Fields Medals and it weighs for 10%. Quality of Faculty is measured by staff of an institution winning Nobel Prizes and Fields Medals and highly cited researchers in 21 broad subject categories. They each weigh for 20%.

Research output measures papers published in Nature and Science and papers indexed in science citation index-expanded and social science citation index.

The rest 10% is assigned to be per capita performance, which is measured by the per capita academic performance of an institution, using the above 5 indicators divided by the total academic staff in an institution. Our ranking has been going down each year for total and each indicator as well.

The main thing to note about AWRU is that it was designed by the Chinese government to rank Chinese universities against worldwide universities. The absolute main factor it looks for is research output. There is no real nuance to this metric – quality of teaching, student selectivity and other important student metrics are largely ignored in favor of high research. This system is the most biased towards research.

TIMES HIGHER EDUCATION (THE)

The Higher Education used to be a supplement of QS before 2009. In the year 2009, THE announced they ceased the cooperation with QS and found their new cooperation partner Thomas Reuters. Compared with ARWU, THE attempts to be more nuanced. But THE still assigns a heavy weight on research and citation.

32.5% is assigned to citation-research influence and 30% is assigned to research-volume, income and reputation. Research consists of reputation survey- research (19.5%), research income (5.25%), papers per academic and research staff (4.5%) and public research income/total research income (0.75%). Another big weight (30%) is assigned to teaching-the learning environment, which is constitutes of reputation survey-teaching (15%), PhDs awarded (6%), undergraduate admitted per academic (4.5%), PhD awards/bachelor awards (2.25%) and income per academic (2.25%). The rest 7.5% is assigned to economic activity/innovation(2.5%) and international mix (5%).

It is very obvious that THE concentrates more on the peer review and reputation than AWRU. A huge percentage of teaching and research score is acquired by sending out survey to measure the reputation. THE, similar to AWRU, places huge importance on research and citation output. Together, they make up 60% of the ranking system. Thus, it's now seen that two of the top 3 ranking systems place research output and citation in high regard.

THE-QS

After THE ceased cooperation with THE, it starts its cooperation with US News & World Report. Similar to THE, the QS concentrates on reputation a lot. 40% weight has been assigned to reputation. This is measured by surveys sent to academics. 20% is assigned to student to faculty ration and 20% is assigned to citations per faculty. Employer reputation counts for 10%. A global survey will be sent to ask employers to evaluate the graduate students from a school. The rest of the 10% is for international outlook: 5% for international faculty ration and 5% for international student ratio.

QS is interesting in that it doesn't have a raw research output. Instead, we believe that academic reputation is captured by this. QS sends out reputational surveys to people around the world. Those that respond, typically a small percentage of the 180K emails they send out, are probably only aware of large research producing schools. Thus, we see again that research output is a key factor.

HISTORICAL PERFORMANCE

Case's international rank has been decreasing YoY for all 3 international rankings. This basic issue is the reason why this study was first undertaken. In order to understand why we are dropping internationally, but also are doing well domestically, we undertook some basic analysis and met with key individuals from administrative positions in the university.

We have discovered that the biggest factor is research output. This is tied to the citation, research and reputation factor.

Please refer to the exhibits section for analysis.

CONCLUSION

From our research result, we can know that each ranking system concentrates on different things. AWRU use research to be the biggest indicator to measure a college's quality. THE has three big indicators: research, citation and teaching. But THE uses measure these indicators by reputation rather than using the sole facts or objective things to decide the quality. QS also concentrates on the reputation and research.

So the most efficient way for us to improve our ranking is to improve our research and reputation. But research and reputation takes time to build. It is better for us to focus on both long term and short term strategies to improve our rank.

In this section, we will begin to analyze our different recommendations that we believe will benefit CWRU achieve superior rankings. One thing to keep in mind is the idea that these recommendations are strategic initiatives. We have strived to keep in line with the strategic plan as laid out by the administration. We recognize that at the end of the day, rankings follow strategy, but we also recognize that we should be mindful of how our strategy affects rankings and whether there is anything we can be doing to increase rankings. With that in mind, below is a graphic depicting our recommendations.
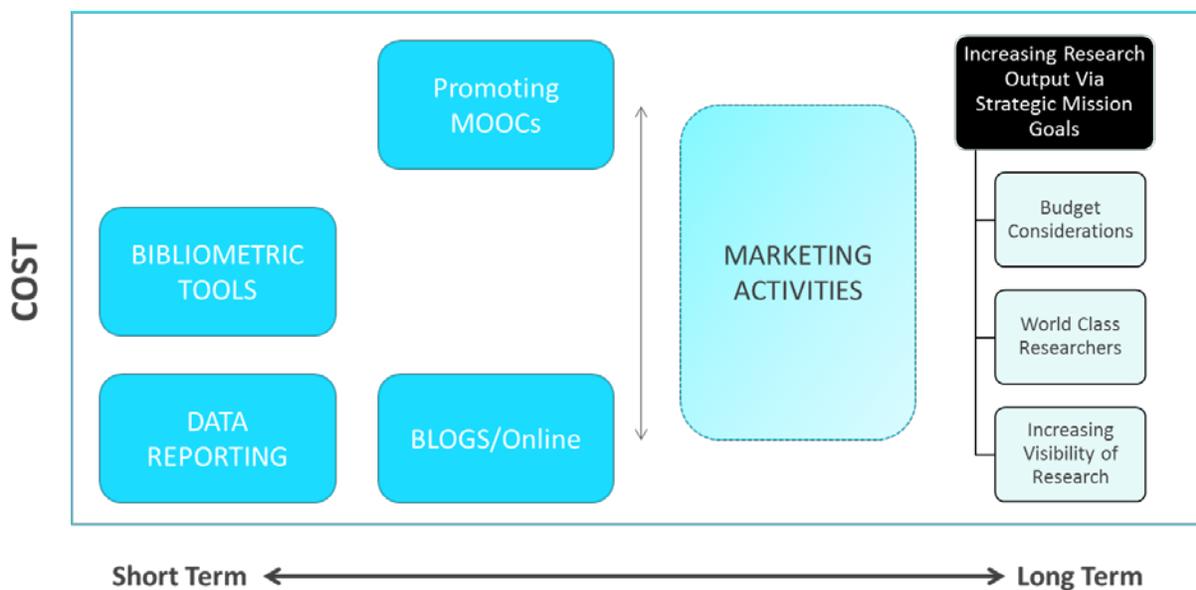
DATA REPORTING

While the group was brainstorming recommendations, we were striving to find a "Low Hanging Fruit" opportunity for the school to capitalize on so CWRU could see some immediate impact on the ranking systems. THE has a factor in its ranking system that is unique to all other systems and this factor is called Research Income[11]. From our research, we feel that this factor could be our opportunity to snatch a "Low Hanging Fruit" that fits our goals of exploring free options as well as helping the Center in the short-term.

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[11] Details of this factor are mentioned earlier in this document

What's provocative about this factor as it pertains to CWRU is that THE reports "No Data" as Case's score in this factor. At first, the group thought this meant that Case received a zero as our score for this factor. Later research revealed that this was not the case, but in an interview and follow up conversation with Jean Gubbins along with some further internet crawling, shed some light this issue[12]. If no data is reported to THE for research income, they take a rough estimate and use that number as the score. From our conversation with Jean, she thinks THE's estimate may actually help Case. She said, "Research funding from industry is an area where CWRU lags behind some of its peers, so the estimate that THE uses is probably higher than the actual figure".

Although Jean thinks THE's estimate for CWRU's Research Income is benefitting CWRU's ranking score, we think this number deserves some exploration.   We recommend learning the actual figure for Research Income. We make this recommendation out a spirit of thoroughness in an attempt to "leave no stone unturned" just so CWRU can know exactly where it stands in regards to this factor. If the number is higher than anticipated, this could be a "low hanging fruit" opportunity to give CWRU a quick boost in it's THE ranking. If the number comes back as Jean suspects, then the status quo can be maintained. No matter the results, we feel finding out the actual figure for Research Income would benefit the Center for International Affairs.

REPUTATION AND RESEARCH

Increasing the reputation for CWRU in regards to the international rankings is by far the biggest challenge that the group was faced with. CWRU is fighting an uphill battle when it comes to this ranking factor due to its' size. Case simply does not have the resources that a school like the University of Southern California has. When we were creating recommendations concerning CWRU's reputation ranking, we had to keep in mind Case's resource constraints. This led us to explore traditional as well as non-traditional options with a varying range of costs.   We feel that by meeting these goals, our recommendations will achieve the long-term goal of increasing CWRU's reputation ranking in both QS and THE.

TRADITIONAL AND NONTRADITIONAL ADVERTISING

Our first long-term solution to address reputation is a traditional one that looks to exploit how reputation is measured by QS and THE. We suggest CWRU and the Center for International Affairs run an advertising and public relations campaign. The campaign should center around the highlights of Case and more specifically, it should highlight any notable research (past/present/future) at CWRU. The THE and QS reputation surveys ask their respondents to list the universities that "produce the best

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[12] Information is draw from an email from Jean Gubbins on 4/18/2014

research"[13]. By highlighting CWRU's best research, we feel these campaigns can create impressions on future nation-wide respondents who will be more inclined to include CWRU in their responses. This recommendation coupled with our other recommendations can have a powerful impact on Case's reputation ranking.

Once we looked into traditional options to increase CWRU's reputation, the group began to explore other non-traditional options. After researching several options, we have come up with two additional recommendations to increase CWRU's reputation score in THE and QS.

MOOCS

The first recommendation along the non-traditional lines is the usage and promotion of Massive Online Open Courses. MOOC's as they are commonly referred to, are gaining widespread support in the academic community and MOOC's offer a chance to make global impressions, which is something that traditional advertising is not able to accomplish. Several of these MOOC's are taking place under CWRU's umbrella as MOOC'S have become a part of CWRU's five-year strategic plan. Our first recommendation regarding MOOC's involves supporting the ones that are currently happening. A "quick hit" in terms of benefits lies in promoting these MOOC's.

A well-structured promotion plan of the ongoing MOOC's will lead into increased enrollment and subsequently greater recognition for CWRU through a greater exposure of MOOC's. Our second recommendation is to continue and expand the utilization of MOOC's based on the success of the on-going ones. We feel that utilizing MOOC's is a great way for CWRU to make impressions worldwide, therefore creating a stronger reputation globally. Pairing the global impact of MOOC's with the nation-wide impact of traditional marketing will improve CWRU's reputation on multiple fronts.

BLOGS AND ASEO'S

Blogs and ASEOs are part of our online recommendations both in the strategic plan ("increase online presence") and for our overall mission of increasing global rankings.

We believe that a blog will help our reputation score by virtue of a blog targeting different demographics. For example, those that would access a blog are generally looking for a more informal version of a web site. This could potentially bring in positive net effects for us. There has been much research done about the effects of blogs, and we believe we can capitalize on it.

We believe that if we create useful content on the blog, we can close marketing gaps with "powerhouses" that have bigger budgets. This is because it is easily marketable. We could also use it to

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[13] http://ip-science.thomsonreuters.com/m/pdfs/GIP-ReputationSurvey.pdf

improve reputation by reaching out to prospective students, creating awareness of unique accomplishments and highlighting student life.

There are some blogs online that are available like Cornell's student life blog which we believe is a good example of what we're proposing[14].

Please refer to the execution section for a more in depth analysis of blogs and what we can do to make them successful.

ASEOs are also an interesting recommendation. They are ways to increase visibility of research papers. We think that it could be a short term goal to implement ways to increase visibility of research, thus increasing citation scores. Though we are already doing quite fine in this regard, it is simply a way to stay ahead of the curve.

ASEOs are a type of optimization that simply uses keywords to drive visibility up. Instead of getting buried on page 200 in Google Scholar, if an academician takes time to use key words in order to increase their visibility, it could directly influence how many times they get cited. The main draw to this is the ability to create awareness of top research. Though we are doing this already through our citation score, we feel that we should continue to do so. Creating a policy that allows faculty to use as a guideline in order to make sure their research is visible is something that we feel is not mandating anything.

We will go into detail in the "Execution" stage about how to implement this.

RESEARCH OUTPUT

The biggest driver of international rankings is undoubtedly increasing research output. All three ranking providers consider this, some more than others, the primary objective. This fact is backed up by the EUA report as well. Thus, if we truly want to increase international rankings, we increase research output. This, however, is a big challenge and more than a simple 5 year commitment. This is a university wide engagement and mission.

One of the big ways to increase research output is by increasing resources available. Our research has shown a correlation between top university performers and their research capabilities[15]. This simple fact is a reflection of the way that universities are ranked internationally – they are judged mostly for their research output, not teaching excellence or other nuances of domestic rankings like US World and News. By increasing resources available, we increase the chances of top researchers coming to CWRU and publishing content.

From our rankings, we can see that our citation score seems to be increasing while research scores (and reputation) is decreasing. This is a worrying trend. What this tells us, from our observations,

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[14] https://www.cornell.edu/studentlife/blogs/
[15] Please see exhibits for more information

is that our work that we are doing is impactful via the increasing citations per faculty, but our aggregate output is falling. It may also indicate that we are simply losing faculty members, which could also increase citation per faculty scores. The second trend we believe is less likely due to the rising ranks of domestic rankings. Nonetheless, we must continue to stay vigilant and increase research output.

From our conversations with Arnold Hirshon, he believes that the fault lies in the resources available. Our research and analysis seems to validate that[16]. Bigger schools tend to be on the top 20 rankings of international systems. University of Wisconsin-Madison in particular is an interesting example. We are ahead of them domestically, but they are consistently in the top 20 of international rankings. When we compared that university to a list of universities that simply publish the most amount of research, we found a startling correlation. Though this is not an absolutely cold hard fact (we have not proved causality), it backs up our observations of research and reputation being closely tied together. Universities that publish more are simply better known internationally, due to their size. Thus, their rankings increase because the biggest factors are reputation and research.

Thus, we come to the final recommendation. If we truly want to increase rankings substantially, we increase research output. That is of course, the strategic mission of the university itself. We will talk more about this in the next section, the "Execution".

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[16] Please see exhibits for research and analysis

In this section, we hope to demonstrate potential execution strategies based on our recommended actions from the preceding section. We will be using a structured framework that will allow for quick and easy analysis of each recommended execution strategy. That structure for each recommendation is as follows:

It's important to keep in mind that this is simply a suggested execution path from our recommendations - there will be factors that our group has not considered due to our nature of being an outside group, and one with a limited scope. Thus, the execution strategies are more of a reflection of opportunities we think will benefit the University rather than project plan proposals.

MARKETING ACTIVITIES

MOOCS - DESCRIPTION AND BENEFITS

Massively Online Open Courses (MOOCs) are a relatively new type of course that has only existed due to the massive technological change of recent years. The theory behind it is simple - to democratize education in a free to use platform (for the student) and allow them to eventually certify their completion of the course.

This could potentially benefit ranking systems in a tremendous way. The reputation of a university could increase due to both the exposure and the mission that a MOOC implies. As Moody's reported - "MOOCs create new revenue opportunities, increase brand recognition, and provide improved operating efficiencies. The availability of open platforms enables a university to post content without incurring the cost of developing and maintaining the infrastructure.[17]" However, this a gross oversimplification and is not necessarily aligned with the overall university mission. Nonetheless, MOOCs have been gaining in prominence as a tool to attract a worldwide audience, with Stanford's 2011 MOOC on AI reaching 160,000 subscribers[18].

IMPLEMENTATION ANALYSIS

Case Western Reserve University is already committed to the continued proliferation of MOOCs. In the Strategic Plan, CWRU plans to extend its impact online by increasing opportunities available through the internet. It says - "We also offered our first two MOOCs that together enroll more than

[17] https://www.moodys.com/research/Moodys-Massive-open-online-courses-carry-mixed-credit-implications-for--PR_255083

[18] http://www.nytimes.com/2012/07/18/education/top-universities-test-the-online-appeal-of-free.html?_r=0

110,000 students. They proved so successful that each runs again in the fall of 2013, and will be joined by several other course offerings in coming semesters"[19].

It's clear that MOOCs are a part of CWRU's strategic plan. We feel that we are in a position to leverage university policy in order to heavily promote the MOOCs. Thus, there are several option that are related to promotion that we could undertake:

1. Network worldwide

One of the biggest advantages of MOOCs is that it takes advantage of the internet. With this ability, one can network with other schools, academics, governments, colleagues, businesses and other sources to network awareness of the MOOC. Due to the large costs and almost altruistic nature of the MOOC, this step is absolutely essential. Michael Goldberg, professor in CWRU, is at the time of writing, rolling out his new MOOC. After speaking with him regarding how he's getting the word out, it is clear he is using his past connections and present connections to find new avenues to find interest.

We would recommend utilizing a common thread of networks to get the word out. A database with several prominent figures that have historically been supporters of CWRU MOOCs could benefit professors who may be concerned about their networking ability. We would also recommend a system that allows a MOOC centric network to be readily accessed - such as a guideline on a webpage - that has steps for success to properly network a MOOC. These steps could include - using social media effectively, media outlets, government contacts, peer university contacts, etc

2. Gauge interest via surveys

One effective way to gauge interest into what sort of MOOC would be popular would be to send or attach surveys to existing CWRU MOOCs. This could potentially be skewed by subject matter, so other avenues could also be explored, like to target alumni or incoming high school students via SAT scores.

3. Work with foreign governments

One of the more interesting aspects marketing wise of Michael Goldberg's MOOC is that he has has been able to work directly with the Greek state department. His MOOC will be the first MOOC to be translated in Greek. This sort of close knit relationship has huge upsides for Case's international reputation. Thus, we feel that working with foreign governments directly is simply one direct strategy to make Case well known in foreign governments outside of traditional research based reputation. Instead, if Case becomes a familiar institute to regular students and citizens, it will create a kind of downward pressure on academics and administration in change of reputational surveys.

4. Leverage alumni base

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[19] Please refer to page 13 of CWRU Strategic Plan for quote

By leveraging our current alumni, we could effectively find brand ambassadors to verify the prestigiousness of our teaching staff and therefore MOOCs. Who better than alumni in diverse working environments to want to continue to not only learn from their alma mater but also to spread awareness?

5. Find international "oasis"

International students come from all over the world to our institution, but we can pinpoint certain locations that tend to be higher represented to effectively promote our MOOCs. We could potentially do this by using information gathered from previous MOOCs about international subscribers

6. Highlight interesting characteristics of MOOCs

MOOCs have become an interesting "standard" of prestigious universities. They indicate certain attributes about a university's ability to not only commit the funding to develop MOOCs, but that also the knowledge that is disseminated is inherently "demanded". It's clear from CWRU's numerous research that we provide great research to specific niche's - MOOCs take that one step further and deliver it directly to an everday person.

Thus, we could use the very demand of MOOCs to increase our reputation. QS, in their report, mentioned that their number one school, MIT, moved up largely because of their pioneering MOOC. If we are also committed to further pursuing MOOCs, it becomes relatively painless to promote the MOOC. By doing so, we are increasing our reputation overseas, and thus increasing international rankings.

PROS AND CONS OF MOOC PROMOTION

Pros	Cons
● MOOCs are currently "in vogue" ● Already part of university plan - simply have to promote ● Marketing MOOCs is relatively easy ● May create more networks and partners ● QS has directly attributed MOOCs as a rank increaser	● MOOCs are expensive, take time away from teaching and researching, take time to prepare and require a return on investment that may not always be certain. ● May be a fad ● The above cons make relying on marketing MOOCs as a reputation increaser somewhat dubious at best

FEASIBILITY AND CONCLUSION

We believe that promoting MOOCs is a fairly low cost way to continue to support the strategic university initiative to pursue MOOcs. It will depend on the amount of MOOCs and whether they can be reliably produced with a high amount of interest. If that stays the case as it is now, there is no real downside to promoting MOOCs through a variety of advertising and marketing routes like e-mails, journals, in promotional packages and through networking.

BLOGS

DESCRIPTION

Blogs, when properly implemented have the ability to create real value for stakeholders. In our case, we believe that blogs will have a net positive impact on reputation.

IMPLEMENTATION

A blog should have 4 characteristics: structure, content, oversight and measurement.

Structure - the structure of this blog should be informal. As mentioned in the Harvard Business Review, "blogging lets you participate in communities you want to cultivate"[20]. If we want to create a community, it's best to be informal. We could also structure it to have a certain number of blog posts per day in order to stay relevant with up to date information, currently a problem with existing blogs. The structure should also be unified, and combine many disparate threads into one location.

Content - content is key for a blog. We envision that the blog should combine many different key aspects of CWRU into one location. We are suggesting a blog that that has both acquired content and created content. This is in order to serve two purposes: 1) create a unified and informal place for students and interested third parties to learn about CWRU's achievements and 2) showcase original content created by students and key thought leaders such as professors and administration. If students create their own content, it should be dealing with student life. This is in order to help those overseas to learn about Case without having to fly over. If thought leaders create content, it's mainly to showcase progressive ideas and to disseminate interesting research or opinions.

Oversight - We think that having a student run such a blog is within the boundaries of the purpose of the blog. Specifically, the Marketing Club on campus could oversee the blog, take into account comments, promote it through various social networks and create awareness of the blogs through novel channels like international social media. We feel that this relationship could be mutually beneficial for both the University and for student groups.

Measurement - If we use a Google Analytics equipped platform, we could easily track statistics to better understand how well the blog is doing.

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[20] http://hbr.org/2005/11/if-you-want-to-lead-blog/ar/1

PROS AND CONS

Pros	Cons
- Low cost - Beneficial relationship b/w faculty and students - Easily marketable - If done right, could bring interest to university highlights - Possibility to expand - Increase reputation via honest marketing - mostly for students	- Not the biggest impact on ranking increase - Required right content to work - Constant upkeep and marketing - Uncertain timeframe - maybe long term increase, maybe short term

FEASIBILITY AND IMPLEMENTATION

This recommendation is fairly low cost and easy to implement. The hardest part will be coming up with engaging content. If that step is correctly done, the rest of the package can be easily marketed. We believe that this could impact reputation scores by increasing awareness of the university. If more students and interested parents are seeing a web presence via a blog, it might create a enhancements of the image of CWRU. This will need to be tracked via statistics and analytics.

TRADITIONAL MARKETING ACTIVITIES

DESCRIPTION

Increase internationalization by highlighting extensive Case accomplishments. So much of our achievements remain unknown in this day and age. If there was a push to increase awareness internationally, we believe that it will affect the way that CWRU is viewed in important reputational surveys like in QS and THE. Professors and Associate Professors seem to make up the bulk of the survey in THE (53%), which indicates that they are who we will be targeting.

IMPLEMENTATION

Because research is the main driver of these 3 systems, we recognize that marketing will serve as an important role as an ambassador of research. Thus, we would target research journals, top tier magazines and other avenues which would allow our strong research to be visible to those who might take these surveys. Of course, there's always a risk that we will not target the right people, so in order to

hedge that, we also recommend that professors and other administration who are visiting internationally to also serve as an ambassador for CWRU if they choose to.

Our ads might highlight important research achievements, our strong domestic position, increasing prestige, strong partners like the Cleveland Clinic and UH, top ranked programs, unique facts and history or alumni connections. We hope that the ultimate result will be that our academic reputation increases via the survey, we get new international partners and our research gains greater visibility.

We could also directly target our advertising to top ranked international schools and other heads of universities. Provost Bud Baeslack brought up the USC is a "marketing powerhouse", but we are naturally constrained due to our size. Nonetheless, we could use our strong fundamentals to create awareness of what CWRU stands for.

PROS AND CONS

Pros	Cons
- Leverage existing marketing capabilities - Can be highly targeted - Has a direct impact into reputation ratings - Possibly influence citation score by increasing visibility	- High cost - High uncertainty

FEASIBILITY AND CONCLUSION

We believe that this solution is high cost and does have high uncertainty. It also has to have a lot of oversight by the marketing department and coordination between different departments. The targeting needs to also be done very carefully, as to prevent information from largely falling on deaf ears, so to speak. Nonetheless, if done right, it could have major impact into the awareness of survey takers. If survey takers are indeed aware of the research and impact of Case Western, there's a higher chance of being rated per the reputation side. Since reputation and research are almost one and the same for international rankings, this has the most impact other than direct research funding. We believe that a careful budgetary analysis and key performance indicators need to be analyzed before moving further.

BIBLIOMETRIC TOOLS AND RESEARCH FUNDING - RESEARCH

DESCRIPTION

We have ultimately come to the conclusion that research output is the biggest factor into the ranking system. Because output not only increases the research score itself, it also factors into reputation. Bigger research schools are simply more well known due to the amount of research they conduct. This is

verified by the correlation between ARL index score and top 20 schools in the international rankings. This fact is also backed up by research done by EUA Global Rankings research[21]. As mentioned in the report, unversity rankings are not as nuanced as a domestic ranking like US World News. They are primarily concerned with research output. Shanghai, for example, is almost 60% skewed to research. THE is also heavily favored to research intensive schools. QS is 20% based on citations, but heavily skewed to reputation, which again is largely based off of research knowledge. Thus, if we want to truly increase international rankings, we increase research output.

We can also increase, in the short term, citation scores by utilizing bibliometric tools like ASEOs and impact factor tracking. Though we are already largely doing well in this category, indicating that our research is creating impact, bibliometric tools are a simple way to keep up with the fast paced research world.

To implement ASEOs, we could use guidelines to give to faculty that highlights the importance of using proper keywords. The downside is that they are simply "buzzwords" but this is a practice we feel should benefit any researcher. He or she has worked hard on the research – let's give them the tools to make sure that they have the most visibility.

IMPLEMENTATION

Arnold Hirshon, Unversity Librarian, mentioned that resources available is one of the biggest problems for researchers. This problem, he continues was especially apparent when OhioLink, our partner that we rely on for research resources, ran into financial difficulty. There is a serious ranking downtick when this happen across all 3 ranking systems in 2011. Even though this is the case, citation scores seem to be increasing. This discrepency seems to verify Arnold's claim. There is simply less reseach output during this time. Or if it's the same, it doesn't seem to making the same impact.

We also found correlations between ARL index and top US universities in international rankings, further proving that research is the main driver.

Armed with this information, we recommend to further look into increasing research output. We can do this by increasing top researchers and giving them the tools they need to keep producing world class researchers. We can also find ways to increase our visibility by using ASEOs.

We can use ASEOs by creating guidelines to send to faculty when they finish their research. It will allow them to have a handy guide in order to make sure their research is not buried immediately.

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[21] Page 14, bullet 13

Pros	Cons
- Biggest impact on rankings - Will benefit in more than just rankings - Both short and long term solution	- High cost - Buy In

CONCLUSION

If we truly want to increase international ranking, this is the way to do it. All metrics point to research as the main indicator, even driving reputation.

EXHIBIT 1 - WEIGHTS OF RANKING SYSTEMS

US World and News	Weight
Assessment by administrators at peer institutions	23%
Retention of Students	23%
Faculty Resources	20%
Student Selectivity	13%
Financial Resources	10%
Alumni Giving	5%
Grad rate performance,	8%

Times Higher Education	Weight
Teaching: the learning environment	30%
Reasearch: volume, income, and reputation	30%
Citations: research influence	30%
International Outlook: staff, students, and research	8%
Industry Income: innovation	3%

QS Rankings	Weight
Acedemic Reputation	40%
Student to Faculty Ratio	20%
Citations per Faculty	20%
Employer Reputation	10%
International Faculty Ratio	5%
International Student Ratio	5%

Shanghai Jiaotong	Weight
Quality of Education	10%
Quality of Faculty	20%
Per Capita Performance	10%
Research Output	60%

EXHIBIT 2 – RANKING SYSTEM PIE CHARTS

Qs Methodology

- Acedemic Reputation
- Student to Faculty Ratio
- Citations per Faculty
- Employer Reputation
- International Faculty Ratio
- International Student Ratio

Shanghai Jiaotong Methodology

- Quality of Education
- Quality of Faculty
- Research Output
- Per Capita Performance

Times Higher Education Methodology

- Teaching: the learning environment
- Reasearch: volume, income, and reputation
- Citations: research influence
- International Outlook: staff, students, and research
- Industry Income: innovation

EXHIBIT 3 – HISTORICAL PERFORMANCE

THE Case Ranking

QS Ranking

Shanghai Case Ranking
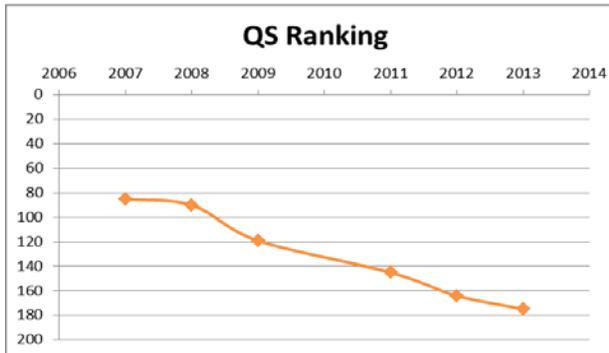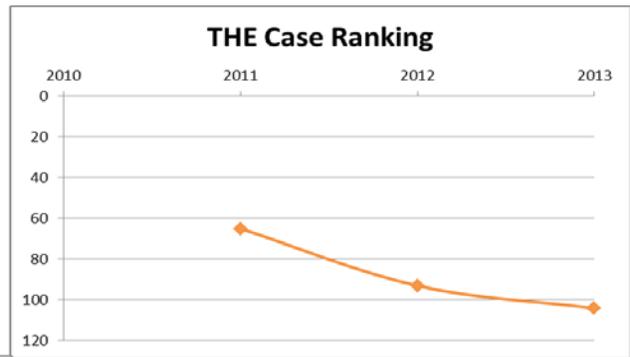
EXHIBIT 4 – BREAKDOWN OF RANKING SYSTEMS

Times Higher Education	Scores		
	2011	2012	2013
Teaching	67.2	54.2	56.5
International Outlook	56.5	29.9	34.2
Industry Income	NA	NA	NA
Research	53.8	40.2	42
Citations	66	78.4	80.4
Score	62.2	54.6	56.9
Ranking	65	93	104

Shanghai Jiaotong	Scores						
	2005	2006	2009	2010	2011	2012	2013
Per Capita Performance	33.7	33.6	31.3	31.2	22.3	22.2	22.6
Highly Cited Researchers	44.8	43.9	41.6	41.9	40	39.2	39.2
Nature and Science	23	22	15.1	14.3	16.6	18.7	20.6
Science Citation	20.8	21.8	21.8	21.6	21.7	21.7	21.7
Quality of Faculty	11.8	11.5	11.5	11.5	11.5	11.5	10.9
Quality of Education	40.7	39.2	35.4	34.5	34.8	32.1	31.6
Score	33.7	27.9	25.3	24.3	24.4	24.3	24.6
Ranking	69	70	87	97	97	99	99

QS Rankings	Scores					
	2007	2008	2009	2011	2012	2013
Acedemic Reputation	59.10	59.60	52.40	31.10	27.40	33.00
Student to Faculty Ratio	98.70	94.50	88.00	92.70	95.90	96.50
Citations per Faculty	85.40	88.00	86.40	90.80	91.00	91.80
Employer Reputation	49.70	42.00	37.60	2.50	7.10	5.30
International Faculty Ratio	18.10	21.40	20.10	25.10	25.10	22.70
International Student Ratio	79.90	51.20	51.80	61.80	59.40	59.80
Qs Score	71.60	69.80	64.62	54.80	53.82	55.70
Qs Ranking	85	90	119	145	164	175

EXHIBIT 5 – KEY FACTORS

Factors		THE	Qs	Shanghai
Reputation		33%	40%	
Research Output/Citations		30%	20%	60%
Research/Industry Income		2.5%		
	Total	65.5%	60%	60%

EXHIBIT 6 – PEER EVALUATION

Rankings Around Case Western Reserve University

#	US News	Times Higher Education	QS	Shanghai
-10	USC	US Davis	USC	Brown
-9	Wake Forest	Brown	UCSB	U of Fl.
-8	Ann Arbor	Ohio State	Virginia	Boston U
-7	Chapel Hill	Purdue	Rice	U of Az.
-6	Boston U	Rice	Emory	Arizona State
-5	Brandeis	USC	UC Irvine	IU
-4	CoWM	U of Pitt	Rochester	Utah
-3	NYU	Emory	Texas A&M	Rochester
-2	Rochester	Tufts	Boulder	Michigan
-1	GIT	Michigan State	Michigan	Rice
0	Case	Case	Case	Case
1	Penn State	Vanderbilt	Florida	Baylor Med
2	US Davis	Notre Dame	Vanderbilt	Emory
3	US SD	UC Irvine	Georgetown	GIT
4	Boston U	Rochester	U of Ill.	Mayo Med
5	Lehigh	Boulder	Tufts	Oregon State
6	RPI	U of MD	U of Arizona	Texas A&M
7	US SB	Dartmouth	Notre Dame	U of Ga.
8	Urbana-Champaign	U of Florida	Miami	Tufts
9	Madison	Boston	U of Iowa	UC Riverside
10	U of Miami	US Santa Cruz	IU	UC Santa Cruz

Ahead

Behind

EXHIBIT 7 – RANKING COMPARISONS

2012-2013 Rankings

#	US News	Times (US Only)	QS (US Only)	Shanghai (US Only)
1	Princeton	Harvard	MIT	Harvard
2	Harvard	MIT	Harvard	Stanford
3	Yale	Stanford	Stanford	UC Berkeley
4	Columbia	UC Berkeley	Yale	MIT
5	Stanford	Princeton	Chicago	Caltech
6	Chicago	Yale	Caltech	Princeton
7	Duke	Caltech	Upenn	Columbia
8	MIT	UCLA	Columbia	Chicago
9	Upenn	Columbia	Cornell	Yale
10	Caltech	Chicago	JHU	UCLA
11	Dartmouth	Michigan	U of M	Cornell
12	JHU	Cornell	Duke	UC San Diego
13	Northwestern	JHU	UC Berkeley	Upenn
14	Brown	Upenn	Northwestern	U of Washington
15	Wash U in St. Louis	Urbana Champaign	U of Wisconsin	JHU
16	Cornell	U of Wisconsin	UCLA	US San Fran
17	Vanderbilt	Carnegie Mellon	NYU	U. of Wisconsin
18	Rice	Duke	Brown	U of Mich
19	Notre Dame	U of Washington	UNC Chapel Hill	Urbana Champaign
20	Emory	UC San Fran	Urbana-Champaign	NYU

Publication output by the most prolific US universities for the five-year period 2005-2009, compared with their output in the five-year period 1981-1985.

1981-1985		Institution	2005-2009	
Total papers	Share US (%)		Total papers	Share US (%)
469,201	48.49	AAU	905,522	56.1
25,630	2.65	Harvard University	68,146	4.22
13,071	1.35	University Michigan	33,084	2.05
10,567	1.09	Johns Hopkins University	31,503	1.95
16,941	1.75	University California Los Angeles	31,108	1.93
12,841	1.33	University Washington	30,320	1.88
13,366	1.38	Stanford University	28,318	1.75
10,248	1.06	University California San Diego	27,265	1.69
15,176	1.57	University California Berkeley	27,021	1.67
11,646	1.20	University Pennsylvania	26,579	1.65
10,691	1.10	Columbia University	26,427	1.64
10,219	1.06	University Maryland	25,844	1.60
14,419	1.49	University Minnesota	25,497	1.58
13,919	1.44	University Wisconsin Madison	24,553	1.52
14,222	1.47	Cornell University	23,483	1.45
10,166	1.05	University Florida	23,226	1.44
7,483	0.77	University Pittsburgh	22,457	1.39
9,490	0.98	University California Davis	22,362	1.38
7,880	0.81	Duke University	21,954	1.36
8,715	0.90	Penn State University	21,689	1.34
11,150	1.15	Yale University	21,676	1.34
8,792	0.91	Ohio State University	21,380	1.32
8,889	0.92	University Colorado system	21,066	1.30
10,027	1.04	University California San Francisco	20,691	1.28
11,651	1.20	MIT	20,609	1.28
6,975	0.72	Texas A&M University system	19,432	1.20

EXHIBIT 8 – OVERVIEW OF RECOMMENDATIONS
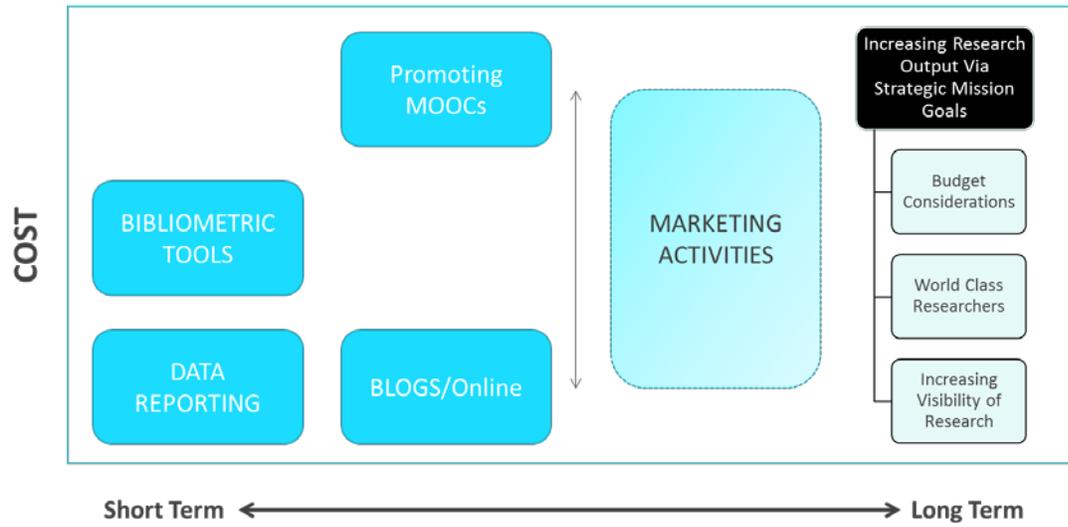
Development Update

Tuesday, December 20, 2016

Bruce A. Loessin, Sr. Vice President

University Relations and Development

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Attainment Comparison Report
Fiscal Year 2007 to Fiscal Year 2016 and November FYTD

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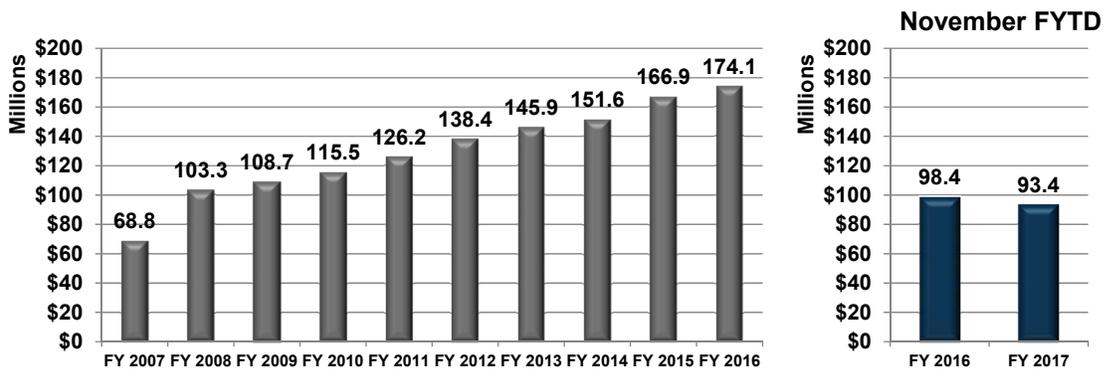
Cash Comparison Report
Fiscal Year 2007 to Fiscal Year 2016 and November FYTD
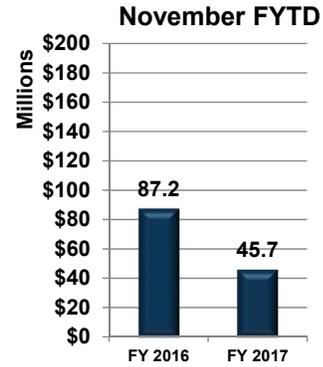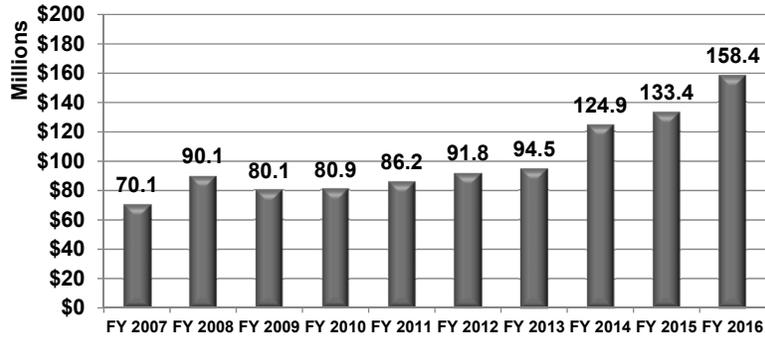
Annual Fund Comparison Report
Fiscal Year 2007 to Fiscal Year 2016 and November FYTD
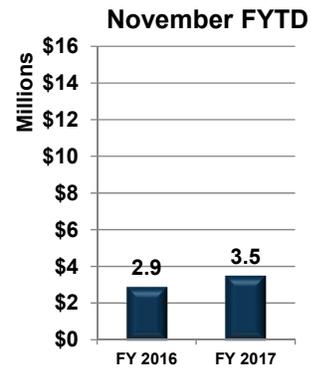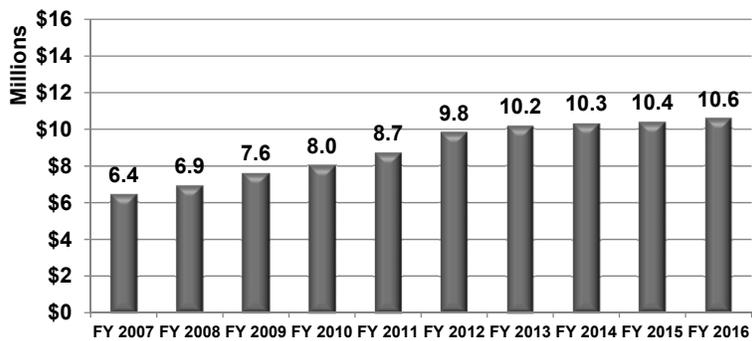
Campaign Attainment Toward Goal
November 30, 2016
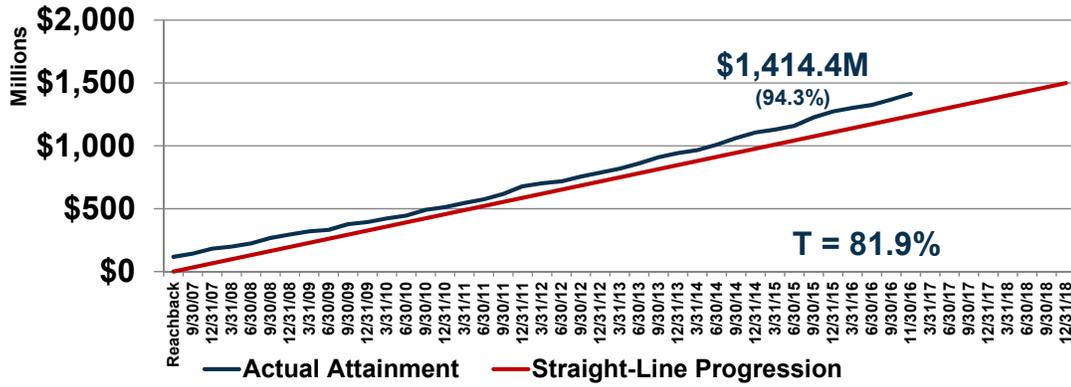
Campaign Highlights
Overall Attainment

Record-Breaking Results Including Six Consecutive Fiscal Years of All-Time Highest Totals

Campaign Highlights
Average Trustee Attainment

Up 350% Since the Start of the Campaign

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Campaign Highlights
Alumni Giving

Up 260% Since the Start of the Campaign

Raised $51.3M in FY2016 an All-Time Highest Total

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Campaign Highlights
School of Medicine

Record-Breaking Attainment Results Including Four Consecutive Years of All-Time Highest Totals

Raised Nearly as Much Cash in FY2016 ($68.1M) than the Entire University Attainment in FY2007 ($68.8M)

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Campaign Highlights
School of Engineering

Record-Breaking Attainment Results Including Six Consecutive Fiscal Years of All-Time Highest Totals

Raised Three-Times More in FY2016 ($33.4M) than in FY2007 ($10.8M)

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Campaign Highlights
Overall Cash

Record-Breaking Results Including Three Consecutive Fiscal Years of All-Time Highest Totals

$1.040B in Overall Cash in the Campaign through September 30, 2016
- *76% of Overall Attainment*
- *Only 1% from Gifts in Kind*

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Campaign Highlights
Average Cash Gift

Nearly Doubled Since the Start of the Campaign
- *$3,859 in FY2007 Compared to $7,497 in FY2016*

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Campaign Highlights
Annual Fund

Record-Breaking Results Including Eight Consecutive Years of All-Time Highest Totals

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Campaign Highlights
Scholarship Attainment

Up 33% Since the Start of the Campaign

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Campaign Highlights
Endowment Attainment

32.8% of Overall Attainment Compared to 23.7% Prior to the Campaign

Up 124% Since the Start of the Campaign

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Campaign Highlights
Endowment Attainment

Average $19.7M

Average $44.3M

FY2002 FY2003 FY2004 FY2005 FY2006 FY2007 FY2008 FY2009 FY2010 FY2011 FY2012 FY2013 FY2014 FY2015 FY2016

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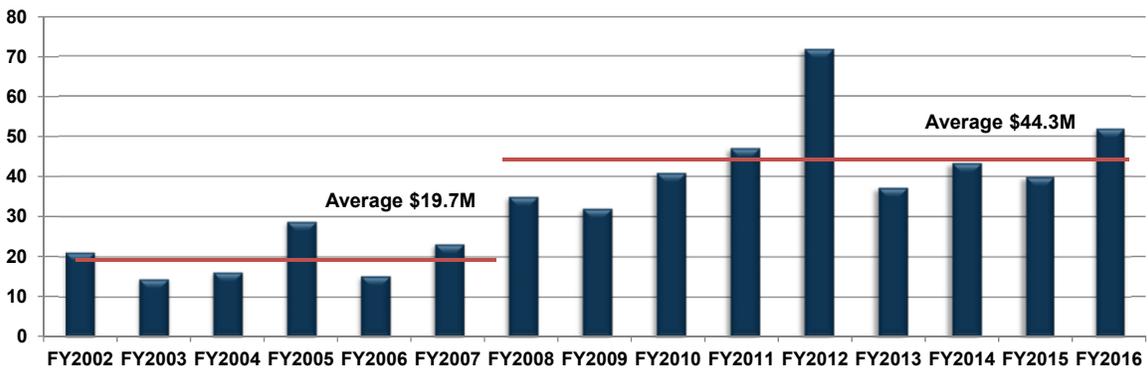
Campaign Highlights
Professorships

85 Professorships Started or Completed Since the Start of the Campaign

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Campaign Highlights
Capital Projects

$158.5M in New Construction Completed or in Progress Funded Entirely by Gifts
- *Not including the Health Education Campus Partnership with CCF*

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Campaign Highlights
Veale University Center

Campaign Highlights
Maltz Performing Arts Center

Campaign Highlights
Nord Family Greenway

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Campaign Highlights
Sears think[box]

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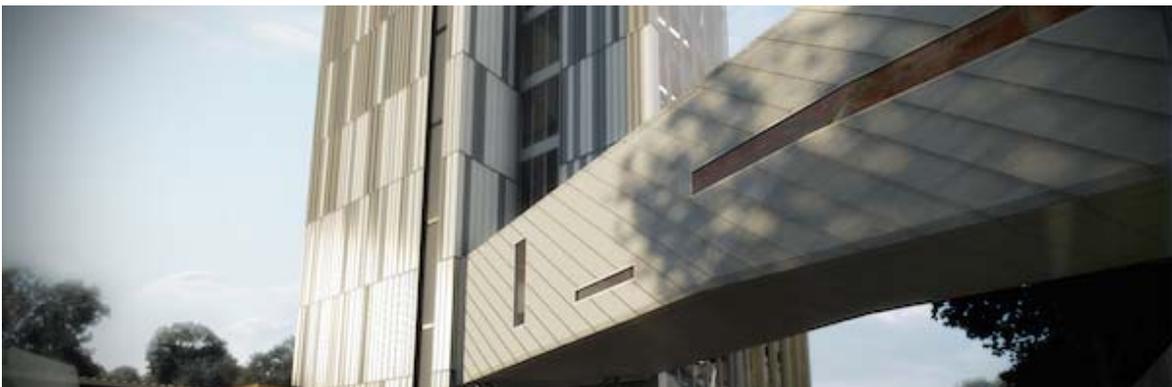
Campaign Highlights
Freedman Center for Digital Scholarship

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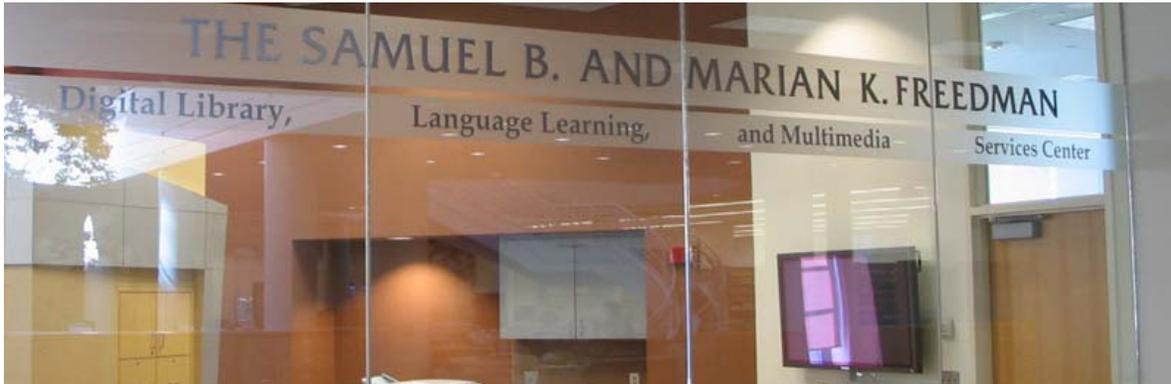
Campaign Highlights
School of Engineering Lab Renovations

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Campaign Highlights
Wyant Athletic and Wellness Center
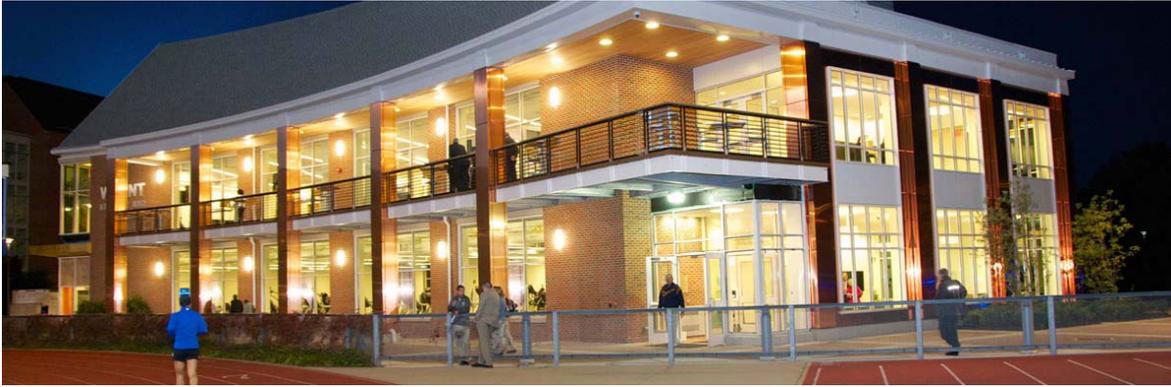
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Campaign Highlights
Jack, Joseph and Morton Mandel School of Applied Social Sciences

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Campaign Highlights
Jack, Joseph and Morton Mandel Community Studies Center

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Campaign Highlights
Linsalata Alumni Center

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Campaign Highlights
Geller Hillel Student Center

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Campaign Highlights
Toby's Plaza

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Campaign Highlights
Health Education Campus

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Campaign Expansion Priorities

- Scholarship Program
- Master Plan Implementation
- Private Support for Research
- International Development Initiative

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What is the Return on $1 of Investment[1]

Large >90 FTE	Mid-Sized 30-90 FTE	Small <30FTE
$5.96	$3.97	$2.57
$0.17	*$0.25*	*$0.39*

"The median cost to raise a dollar in the Philanthropy 100 – 25 cents – is somewhat higher than other published benchmarks for development and, candidly, higher than we anticipated. The Council for Advancement and Support of Education reports typical performance of 20 cents among universities."[2]

"The Latest answer is an average of 16 cents – though the range is great among campuses in the study."[3]

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Sources:
[1] EAB, Advancement and Investment and Performance Initiatives data; Advancement Forum interviews and Analysis, (2016).
[2] Greenfield, James, "Fund-Raising: Evaluating and Managing the Fund Development Process," (1999).
[3] Ryan, Ellen. "The Costs of Raising a Dollar: A Four-Year Study Has Produced Workable Standards For Capturing Comparative Costs Useful to Leaders in Fund Raising, Alumni Administration, and Public Relations," Currents 16, no. 8 (September 1990): 58-62