Challenges and Opportunities for UW-Madison

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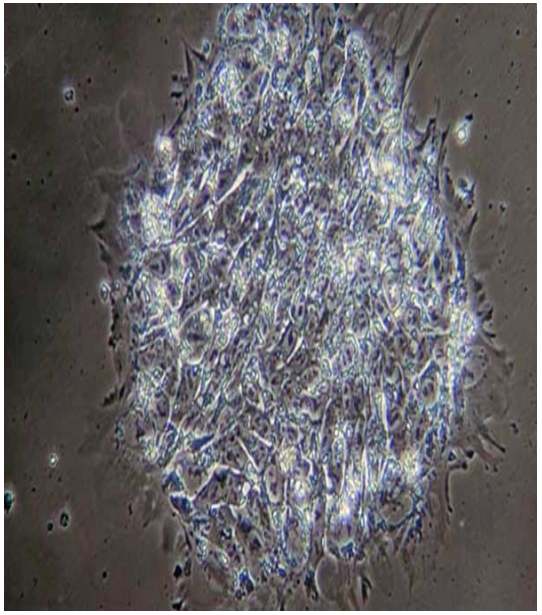
Provost and Vice Chancellor for Academic Affairs
December 7, 2007

Opportunities and Assets (1 of 2)

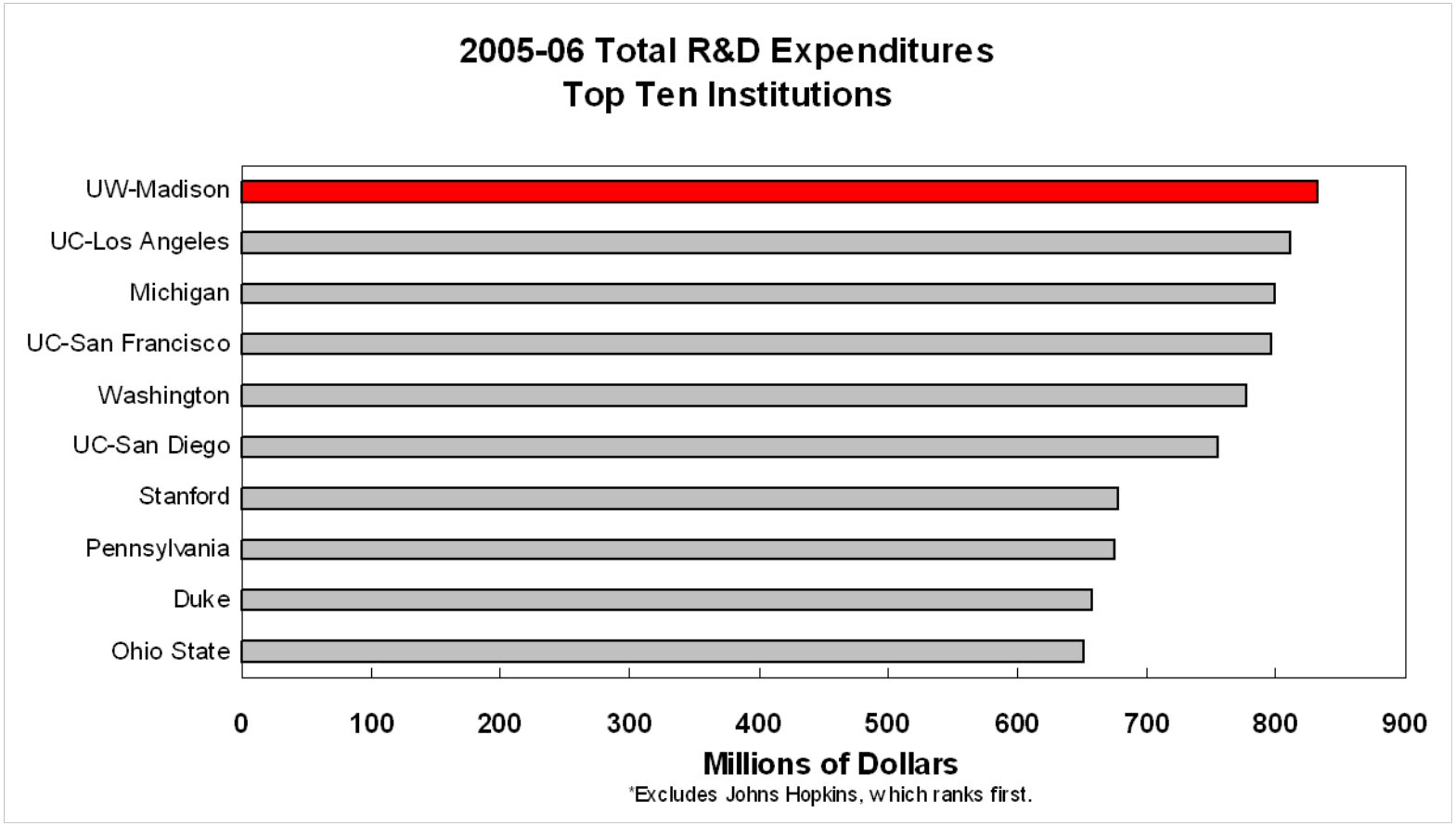
1. We are, at present, one of the most successful public research universities in the world.
2. We have faculty, staff, students, and alumni who very much want to see that success continue.
3. So far, we've been able to recruit outstanding new faculty and excellent undergraduates; our ability to recruit the best grad students, however, seems to be slipping and retaining our best faculty is challenging.

Opportunities and Assets (2 of 2)

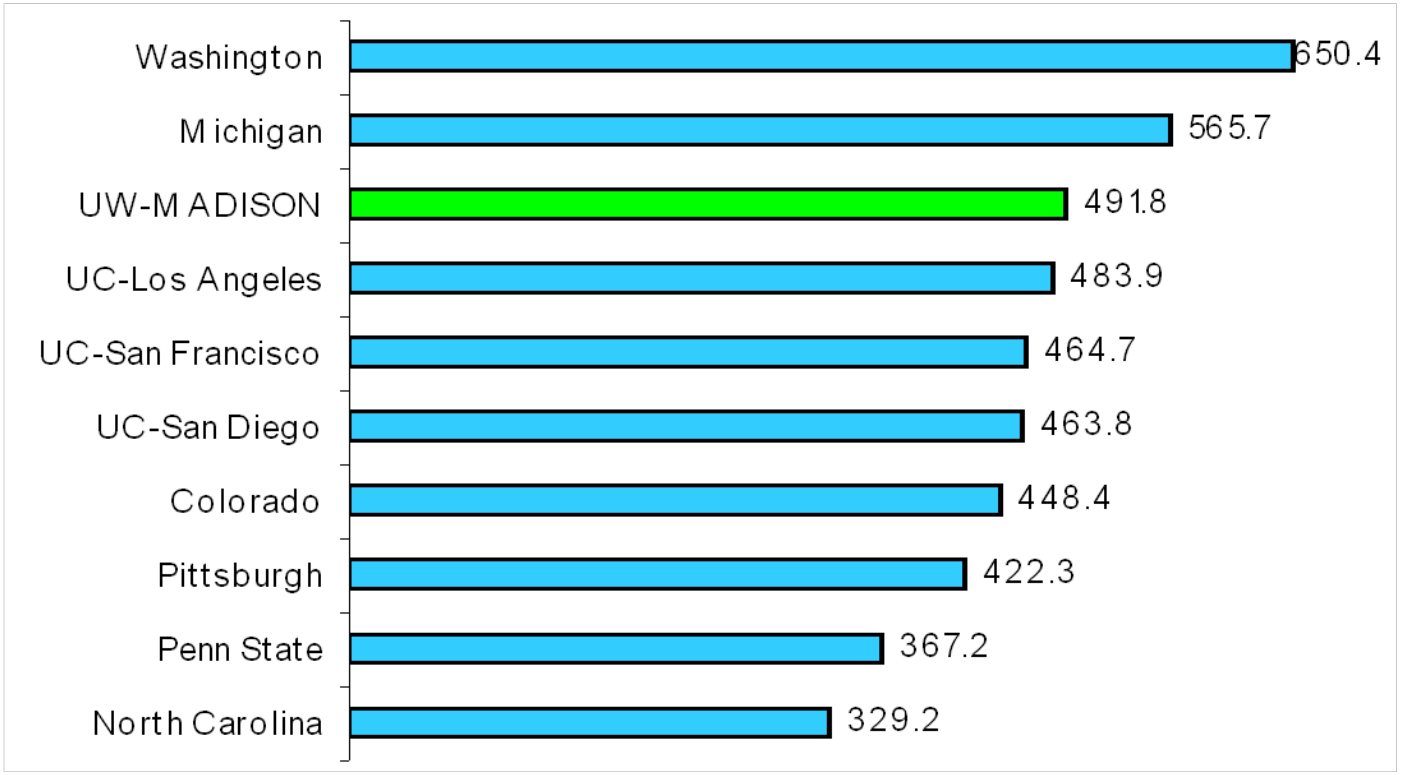
4. **For all that success, there are still many areas of the educational enterprise we can or should be more active in.**
5. **There still seems to be a strong sense among our constituents that they want a world class research university (or two) in the state of Wisconsin—even if they do not appreciate what it takes to do that.**



What does Success Look Like?



2006 Federal R&D Expenditures
Top Ten Public Universities
(Millions of Dollars)



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Institutions Ranked by Total R&D $ Expended 1988 – 2006

	1988	1990	1992	1994	1996	1998	2000	2002	2004	2006
1	Hopkins	Hopkins	Hopkins	Hopkins	Hopkins	Hopkins	Hopkins	Hopkins	Hopkins	Hopkins
2	Stanf	MIT	Mich	Mich	Mich	Mich	Wisc	UCLA	UCLA	Wisc
3	Cornell	Mich	Stanf	Wisc	Wisc	UCLA	Mich	Mich	Mich	UCLA
4	Wisc	Wisc	Wisc	MIT	Wash	Wisc	UCLA	Wisc	Wisc	Mich
5	MIT	Stanf	MIT	T A&M	MIT	Wash	Wash	Wash	UCSF	UCSF
6	Minn	Cornell	Minn	Wash	UCSD	UCB	UCSD	UCSF	Wash	Wash
7	Mich	Minn	Wash	UCSD	T A&M	UCSD	UCB	UCSD	UCSD	UCSD
8	T A&M	T A&M	T A&M	Stanf	UCLA	MIT	Stanf	Stanf	Stanf	Stanf
9	UCLA	PSU	Cornell	Minn	Minn	Stanf	UCSF	Penn	PSU	Penn
10	UCSD	UCLA	UCSF	Cornell	Cornell	T A&M	Penn	Cornell	Penn	Duke
11	Illinois	Wash	UCB	UCSF	PSU	UCSF	PSU	Minn	Cornell	OSU
12	UCSF	UCSF	UCSD	PSU	Stanf	Cornell	MIT	PSU	MIT	Cornell
13	Wash	UCSD	PSU	UCB	UCSF	PSU	Minn	UCB	Minn	PSU
14	Harv	UCB	UCLA	UCLA	UCB	Minn	Cornell	UCD	UCB	MIT
15	PSU	Texas	Harv	Harv	Penn	Illinois	T A&M	MIT	Duke	Minn
16	UCB	Illinois	Illinois	Ariz	Harv	Penn	Illinois	Duke	OSU	UCD
17	Texas	Harv	Texas	Texas	Ariz	Colo	UCD	T A&M	UCD	Fla
18	Yale	Penn	Penn	Penn	Illinois	Harv	WashU	OSU	Illinois	WashU
19	Colum	Colum	Ariz	Illinois	OSU	Ariz	OSU	Illinois	WashU	UCB
20	Penn	Yale	MD	Colum	UCD	OSU	Duke	WashU	Ariz	Ariz

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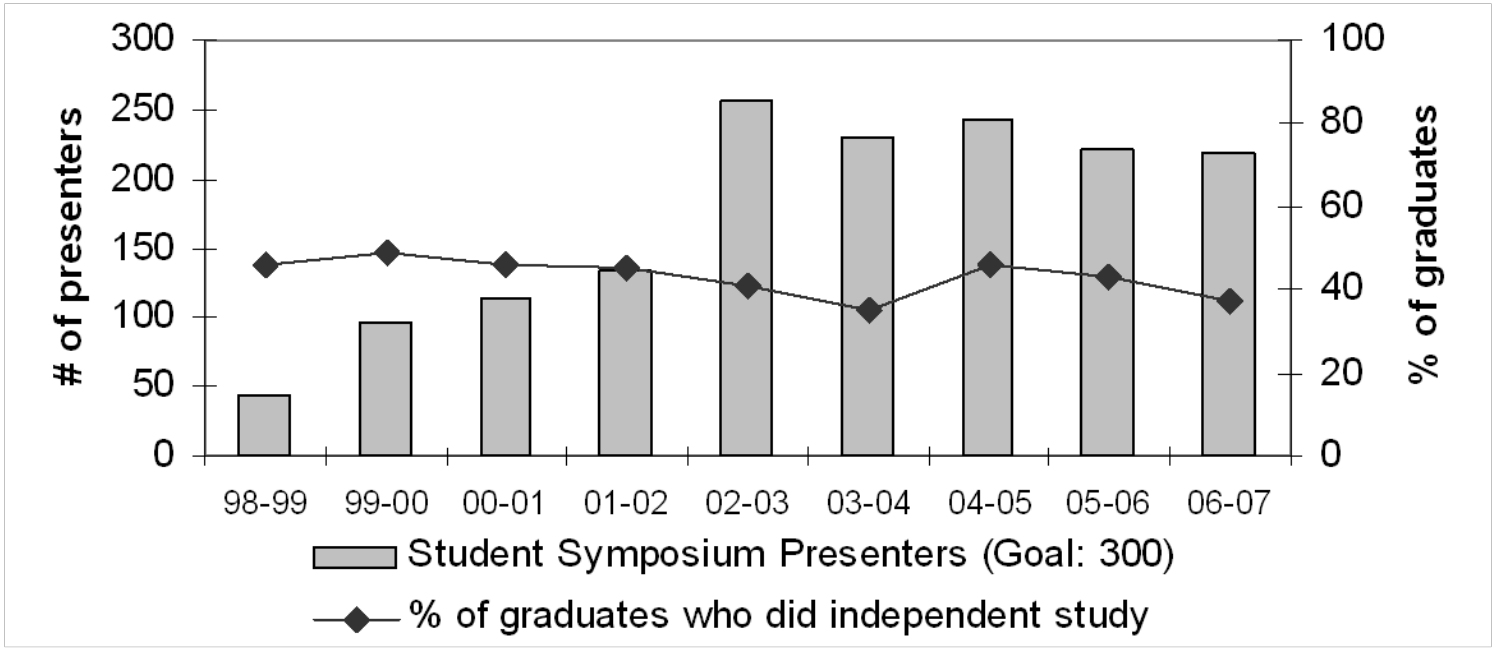
Research Awards

Year	Total Research Awards* (millions)	Return per GPR Dollar Invested **	Average Faculty Research Award***
2002-03	$583.5	$9.9	$361,735
2003-04	$704.8	$12.7	$436,846
2004-05	$769.8	$13.9	$481,787
2005-06	$703.0	$12.4	$439,517
2006-07	$724.7	$12.1	$435,446

*Includes some multi-year grants awarded in single year.
**Total research awards divided by GPR supported research.
***Average award for faculty members receiving awards that year.
In any given year, approximately two-thirds of UW-Madison faculty members are principal investigators on extramural research projects.

Undergraduate Teaching and Learning

Participants in Undergraduate Research



Undergraduate Teaching and Learning

Participation in Engagement Activities
Bachelor's Degree Recipients

Academic Year	Percent participating in at least one activity	Percent participating in more than one activity	Degree Recipients
2002-03	69%	34%	6,107
2003-04	73%	46%	6,156
2004-05	80%	52%	6,289
2005-06	84%	57%	6,256
2006-07	82%	58%	6,017
Target	100%	--	--

Includes the following activities as recorded on the student record: lived in a residential learning community, participated in a first-year interest group, studied abroad, took a service learning course, participated in research with a faculty member, completed a for-credit internship, took an honors or an independent study course. .

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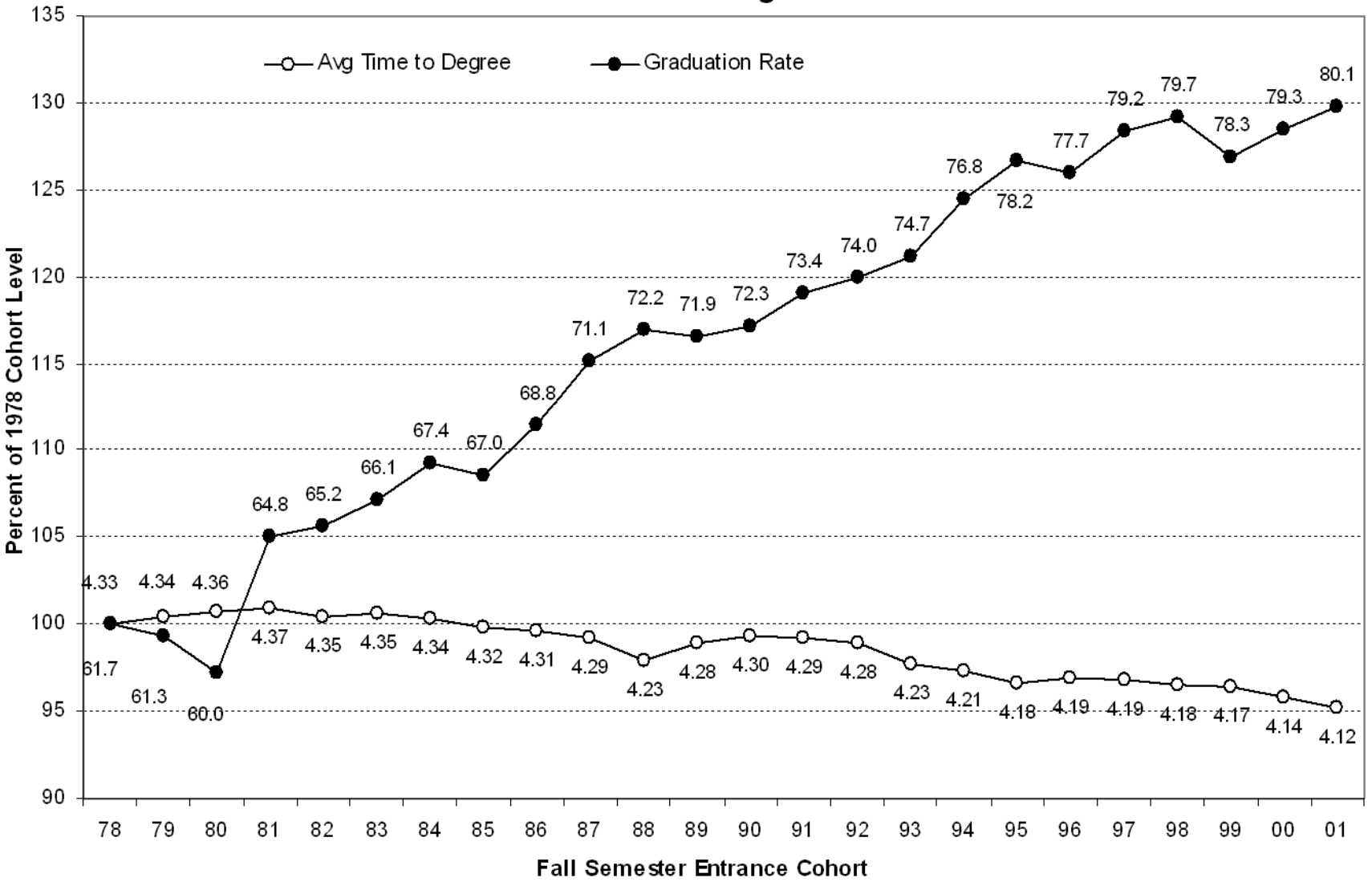
Trend in Average Time to Degree and Graduation Rates

Within Six Years After Entering as New Freshmen



Other Evidence of Success

- **Research**:
  - Over 40 NAS members, 16 NAE members, 8 IoM members
  - 8 or 9 NIH Traineeship Grants; next closest is about 3
  - Stem cells to DARE (Dictionary of American Regional English)
- **Research/Teaching**:
  - CIRTL/DELTA to develop the next generation of faculty
  - WISELI (NSF ADVANCE) for recruiting and retaining female faculty in STEM fields
  - MMSD/UW project to assess HS math (funded by MMSD and UW-Madison gift funds)
- **Teaching**:
  - UW Madison recently honored as a Truman campus (3 recipients in last 2 years)
  - Whole campus Teacher Education (Science and Math)
  - In top 5 for PhD production

Wisconsin Alumni Research Foundation (WARF)

In 2006-07, WARF:

- Processed over 410 invention disclosures made by UW-Madison faculty and staff
- Filed 300 U.S. patent applications on UW-Madison technology
- Obtained nearly 115 issued U.S. patents
- Gave $50.0 million to UW-Madison to support research
- Signed 60 new license and option agreements
- Took equity in 3 new UW-Madison spin-off companies, and currently hold equity in 40 UW-Madison spin-off companies

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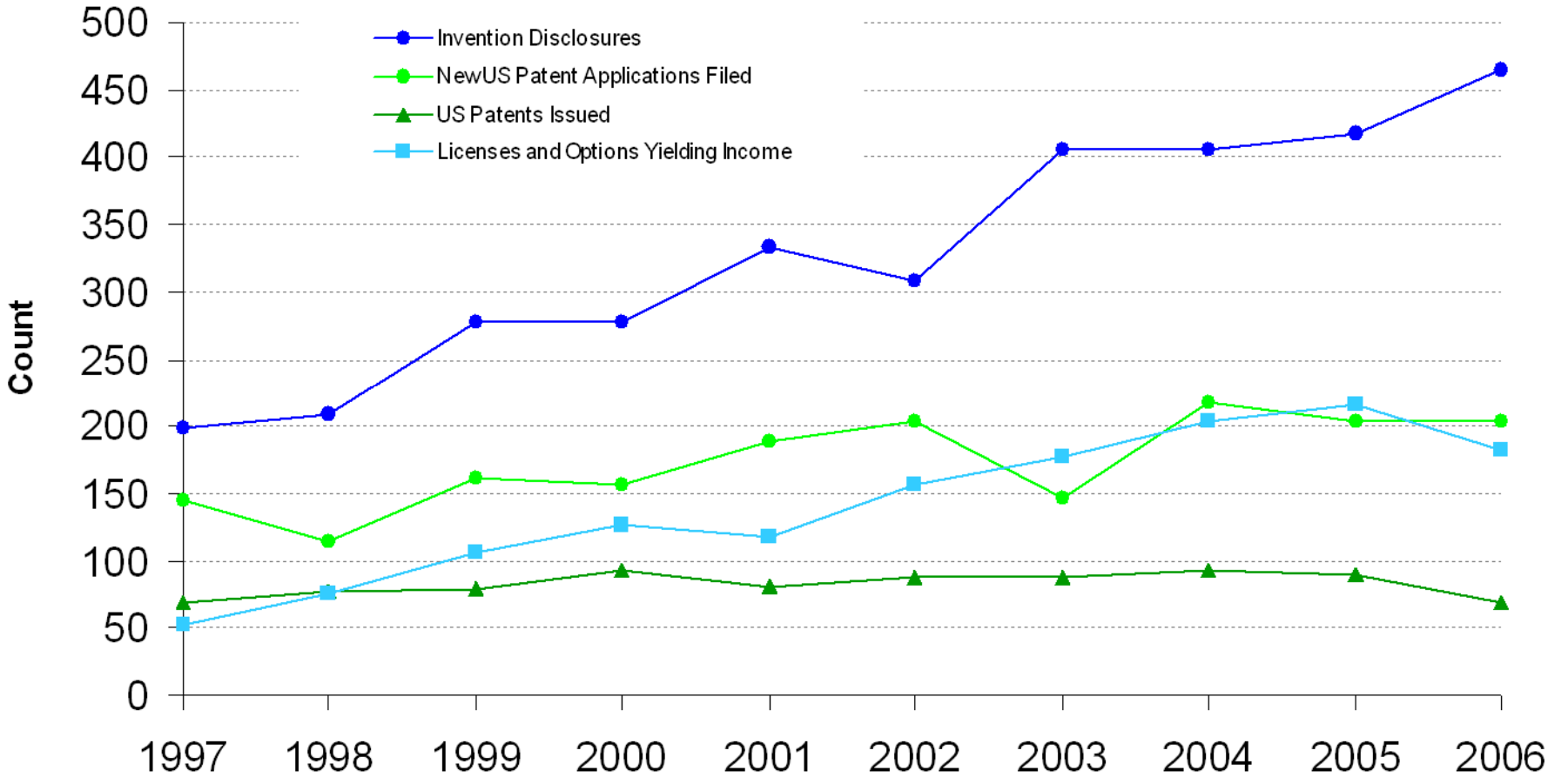
WARF – Technology Transfer



Challenges

1. We work in a very, very competitive environment.
2. Our array of constituents has varied, dynamic, and sometimes conflicting expectations.
3. The current revenue model does not adequately support 1 & 2.
4. We are over-constrained in terms of our ability to deal with 1, 2, and 3.
5. The landscape for public research universities is changing—quickly; those who are currently successful are not assured of being successful in the future. “Do more with less” is not sustainable.

Sample External Forces That May Have a Substantial Effect on UW-Madison

- Federal:
  - Dept. of Education accountability initiatives
  - Limits on tuition increases
  - Cap on indirect cost recovery for research (DoD, USDA, NIH…)
  - Mandated “cost-share” for federal grants (traineeships)
- State:
  - Possible acceptance of oversimplified outcomes assessment
  - State controls GPR/Tuition revenue, yet limits flexibility for institution to increase other revenue and decrease costs

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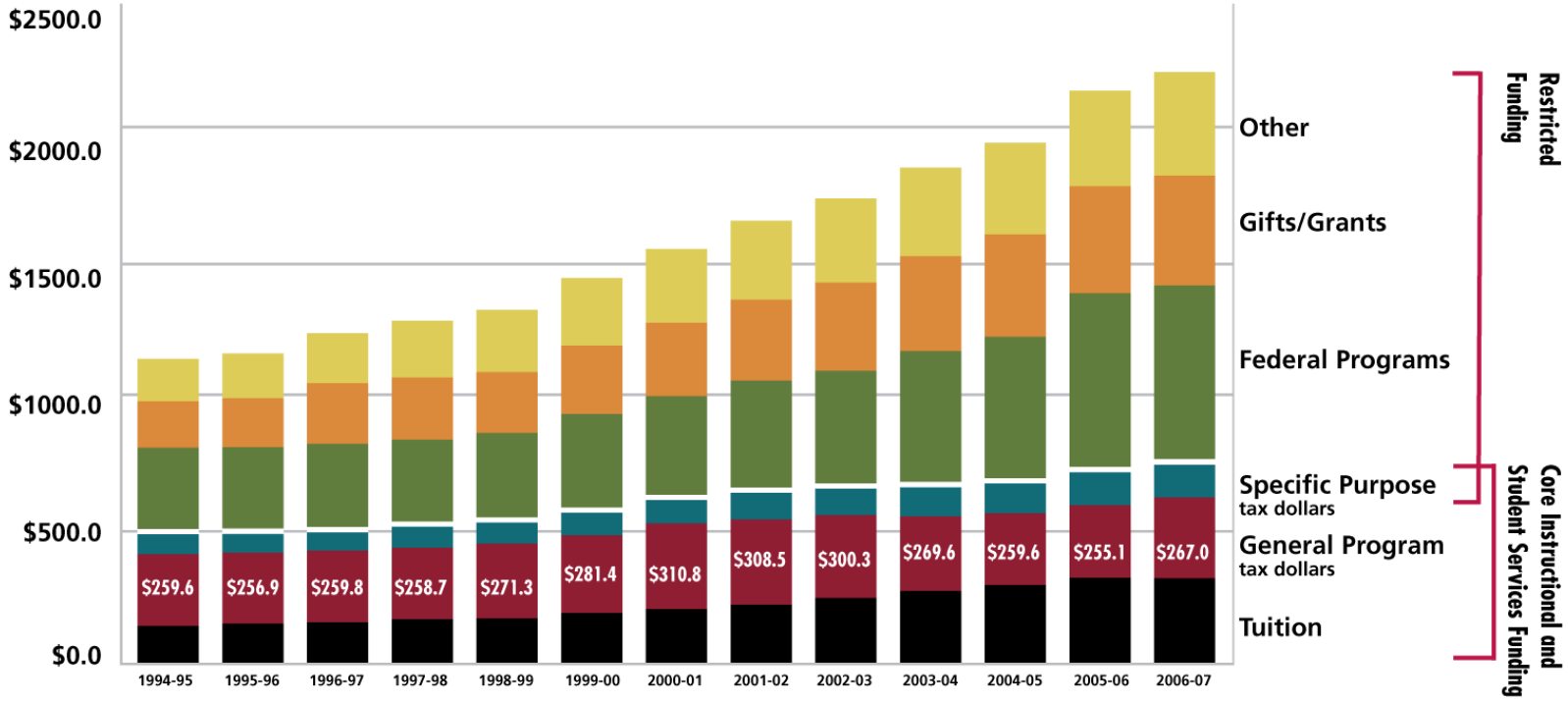
Operating Budget by Source of Funds (in millions; actual dollars not adjusted for inflation)



UW-Madison received less general-program tax support in 2005-06 than it did in 1994-95, a significant steady reduction of funds when adjusted for inflation.

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2007-2008 Academic Year Tuition & Required Fees at Public Big Ten Universities

	Undergraduate				Graduate			
	Resident		Non-Resident		Resident		Non-Resident	
University	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank
Penn State University	$12,844	1	$23,712	4	$14,508	2	$25,710	2
University of Illinois	11,130	2	25,216	2	11,216	4	24,056	5
University of Michigan	11,111	3	32,400	1	15,747	1	31,657	1
Michigan State University	9,912	4	23,714	3	10,330	5	20,440	7
University of Minnesota	9,598	5	21,228	9	11,388	3	18,486	10
Ohio State University	8,676	6	21,285	8	9,972	6	24,126	4
Indiana University	7,837	7	22,316	5	7,207	9	19,390	8
Purdue University	7,416	8	22,224	6	7,416	8	22,224	6
University of Wisconsin	**7,188**	9	**21,438**	7	**9,642**	7	**24,913**	3
University of Iowa	6,293	10	19,465	10	7,158	10	19,144	9
Average Excluding UW-Madison	9,424		23,507		10,549		22,804	
Midpoint Excluding UW-Madison	9,598		22,316		10,330		22,224	
UW-Madison Distance From the Midpoint	-2,410		-878		-688		2,689	

Notes: All of the public Big Ten Universities assess additional fees, beyond those shown above, for undergraduates enrolled in specific academic programs, such as engineering or buiness. Sources: AAUDE Survey of Academic Year Tuition & Required Fees at AAU Public Universities, and the University of Virginia Survey of Academic Year Tuition & Required Fees.

So…what do we do about it?

- Understand keys to past and future success; they are likely to be different
- Identify major *external* constraints and get help to remove them, if possible
- Identify *internal* constraints and reexamine them
- Identify strategic choices and make appropriate decisions
- Figure out how to extract more value from existing investments
- Build partnerships
- Plan carefully, and execute

"A Great Public University in a Changing World"

UW-Madison Special Emphasis Self-study for Reaccreditation in 2009 with the Higher Learning Commission

Self-study Themes

- Rethinking the Public Research University
- Integrating the Processes of Discovery and Learning
- Creating an Impact and Shaping the Global Agenda
- Preparing Global Citizens and Leaders of the Future
- Building a Welcoming, Respectful and Empowered UW-Madison Community
- Being a Responsible and Sustainable Public Institution

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UW System's Strategic Framework to Advantage Wisconsin

Core Strategies

Prepare Students

Ensure that students are prepared with the integrative learning skills, multicultural competencies, and practical knowledge needed to succeed in and contribute to a rapidly changing, increasingly global society.

Enabling Strategies

Resources
Balance, diversify, and grow the university's financial resources and facilities while developing its human talent.

Operational Excellence
Advance operational excellence by becoming more flexible, nimble, responsive, and cost efficient.

Collaborations
Further leverage UW System's strengths and impact through collaborations among the campuses and with other Wisconsin partners.

Advantage Wisconsin

People	**More Graduates** Increase the number of Wisconsin graduates and expand educational opportunities through improving access and increasing retention and graduation rates.
Jobs	**High-Paying Jobs** Increase the creation of high-paying jobs by expanding the university research enterprise while linking academic programs to entrepreneurship and business development.
Communities	**Stronger Communities** In partnership with communities, address Wisconsin's greatest challenges and priorities through intensified engagement, research, and learning.

Take-away Messages:

- UW-Madison is an extraordinarily successful public research university in its education, research, and outreach missions. You should know this and be quite proud of it—we are.
- There is no guarantee that the success of UW-Madison will continue.
- To attain and maintain that level of excellence requires internal effort, discipline, and focus, as well as external help.
- Regents/UW System can play a major role in enabling us to remain successful.

For more information regarding data in this presentation, please contact:

- UW-Madison Graduate School for data in slides 4 & 5
- Chancellor John Wiley for data in slide 6
- UW-Madison Office of Academic Planning and Analysis for data in slides 8, 9, 11, and 17.
- WARF for data in slides 13
- Office of Budget, Planning and Analysis for slide 16

UW Madison Reaccreditation website: www.greatu.wisc.edu

Thanks to University Communications for use of photos.

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