THE UNIVERSITY *of* TENNESSEE **UT** KNOXVILLE

A Path Forward for Research Supporting Top 25

WORKING DRAFT

Top 25 Research Advisory Committee
April 3, 2013

Dr. Taylor Eighmy

Developing Consensus
--- Work in Progress---

- Feedback from AVP Melissa Shivers (1/11/13)
- Feedback from Chancellor Cheek (1/18/13,2/1/13)
- Feedback from Cabinet retreat (1/31/13)
- Feedback from Top 25 ITL (2/15/13)
- Initial feedback from the new Top 25 Research Advisory Committee (2/20/13)
- Feedback from ORE SMT (2/20/13)
- Input from ORE Staff (3/13/13)
- Feedback from Cabinet (3/18/13)
- Working Session with Top 25 Research Advisory Committee (4/3/13)
- Will seek feedback from Research Council (4/10/13)
- Many additional working sessions planned with the Top 25 Research Advisory Committee
- Additional feedback from the Research Council if needed
- Will seek feedback from others, as appropriate

Top 25 Research Advisory Committee

Original Members (when Dr. Wes Hines was Chair):

Susan Ballentine (ORE), Chris Boake (ADR CAS), Chris Cimino (VCFA), Bill Dunne (ADR COW), Paul Montgomery (ORE), Margie Nichols (VCCM), Greg Reed (ORE), Carol Tenopir (CMC), Dave Washburn(UTRF)

New Additional Members:

Alexandra Brewer (GSS/GSA), Bill Brown (UTIA), Marc Gibson (UT Development), Lee Han (Chair, RC), Dave Irvine (AVCRFA), Tom King (ORNL/COE), Tony Mezzacappa (JICS), Sally Morris (UT Development), Stacey Patterson (UTS AVPR), Bob Porter (ORE), Charlie Senn (ORE), Melissa Shivers (Chancellor's Office), John Zomchick (Provost's Office), still need undergraduate representative, others planned

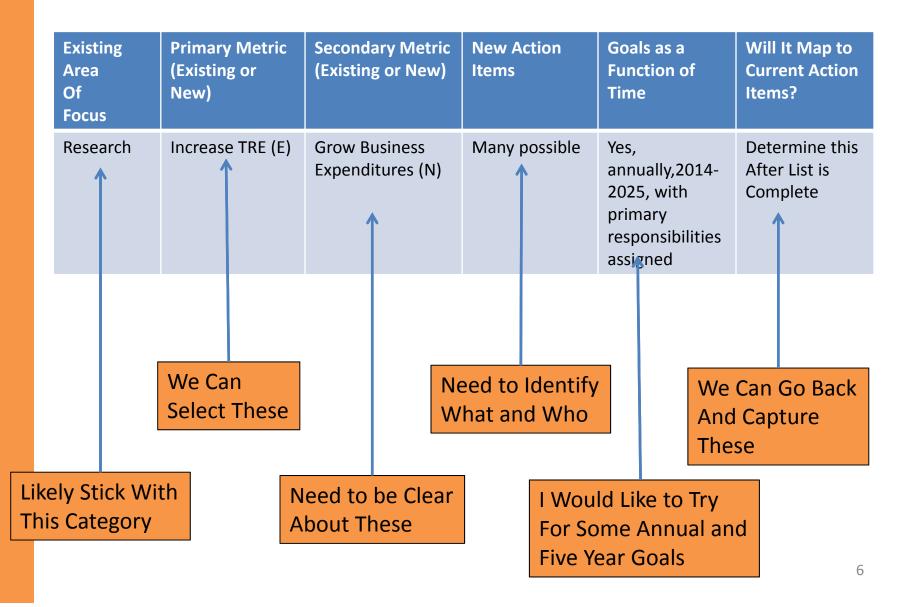# Current Top 25 Research-Related Metrics and Goals (primary)

Existing Area Of Focus	Existing Primary Metric	Original Goal 2010	2012	Original Goal 2015	Original Goal 2020
Grad Ed	Ph.D.s Graduated	277	270	360	486
Grad Ed	MS & Professional Graduated	1,845	1,726	2,000	2,130
Research	Federal Research Expenditures, $M	70	109	105	182
Research	Total Research Epeditures, $M	165	208 (170)	247 (?)	427 (?)
Faculty	Undergraduates/Faculty	20	20	?	?
Faculty	Awards	10	10	?	32
Resources & Infrastructure	T&SE/Student	16,100	17,698	?	25,898
Resources & Infrastructure	Endowment/Student	14,380	16,250	?	40,250

A Note on TREs and FREs

- **NSF HERD Annual Survey of 741 Institutions:**
  - *Total research expenditures (TREs)*
    - *Plus components like federal, state and local, industrial (business or corporate), institutional, and not-for-profit (foundation)*
  - *Federal Research Expenditures (FREs)*
    - *Plus components like DOD, DOE, HHS, USDA, NSF and All Other Federal Agencies*

Points for Brainstorming

Existing Area Of Focus	Primary Metric (Existing or New)	Secondary Metric (Existing or New)	New Action Items	Goals as a Function of Time	Will It Map to Current Action Items?
Research	Increase TRE (E)	Grow Business Expenditures (N)	Many possible	Yes, annually,2014-2025, with primary responsibilities assigned	Determine this After List is Complete

Likely Stick With This Category

We Can Select These

Need to be Clear About These

Need to Identify What and Who

I Would Like to Try For Some Annual and Five Year Goals

We Can Go Back And Capture These

Example Outcome

Existing Area Of Focus	Primary Metric (Existing or New)	Secondary Metric (Existing or New)	New Action Items	2013	2014	2015	2020
Research	Increase TRE State & Local (E)	GCs (E)	Fully Hire the 10 Remaining GC Slots (E) (SAC, Deans, Provost, VCRE)	+5	+3	+2	-

This is a Necessary Metric

Does This Clearly Identify What and Who?

Is it Best to Use This Area? If Not, We Can Give to Another ITL

Is This Clear?

Are These Reasonable Annual Goals? We can Adjust Downstream As We Go

Some Proposed Top 25 Research-Related Action Items

Primary Metric (E or N)	Secondary Metric (E or N)	Action Item (Leads)	2013	2014	2015	2020
Increase TRE State + Local (E)	GCs (E)	Fully hire 10 Remaining GC Slots (SAC, Deans, Provost, VCRE)	+5	+3	+2	-
Increase TRE State + Local (E)	GCs (N)	Seek additional 10 new GC Lines (UTK, UT System, ORNL)	-	-	-	+10
Increase TRE State + Local (E)	Research Infrastructure	State support of HPC (UT System)	+$10 M	+5M	+5M	-
Increase TRE State + Local	?	Others TBD	?		?	?
Increase TRE Corporate (E)	Partnerships (E)	New annual substantive corporate partnerships (Gibson & Eighmy) *	+2	+3	+4	+5
Increase TRE Corporate (E)	Partnerships (E)	New annual corporate R&D grants/contracts (Ballentine & Eighmy) *	+5	+7	+10	+20

* Maps to the current 12

Some Proposed Top 25 Research-Related Action Items

Primary Metric (E or N)	Secondary Metric (E or N)	Action Item (Leads)	2013	2014	2015	2020
Increase TRE Corporate (E)	Gifts (N)	Increase gifts for research, including R designated capital projects (Rabenold & Deans)	+2	+3	+4	+5
Increase TRE Corporate (E)	Licensing (N)	Increase R&D funding from licensing partners (Washburn & Eighmy) *	+$1M	+$2M	+3M	+$5M
Increase TRE Corporate (E)	Licensing (N)	Increase annual royalty for R&D (Washburn & Eighmy) *	+$1M	+$2M	+3M	+$5M
Increase TRE Corporate (E)	?	Others TBD	?	?	?	?
Increase TRE Institutional (E)	Accounting (N)	NCUBO Separately budgeted (Cimino & Eighmy)	?	?	?	?
Increase TRE Institutional (E)	Accounting (N)	R coding confirmation (Cimino & Eighmy)	?	?	?	?
Increase TRE Institutional (E)	?	Others TBD	?	?	?	?

Some Proposed Top 25 Research-Related Action Items

Primary Metric (E or N)	Secondary Metric (E or N)	Action Item (Leads)	2013	2014	2015	2020
Increase TRE Foundation (E)	Partnerships	New annual substantive foundation partnerships (Morris & Eighmy) *	+2	+3	+4	+5
Increase TRE Foundation (E)	Partnerships	New annual substantive foundation projects for research (Morris & Eighmy) *	+2	+3	+4	+5
Increase TRE Foundation (E)	Partnerships	New foundation gifts for research (Morris & Eighmy) *	+1	+2	+3	+5
Increase TRE Foundation (E)	?	Others TBD	?	?	?	?

* Maps to the current 12

Some Proposed Top 25 Research-Related Action Items

Primary Metric (E or N)	Secondary Metric (E or N)	Action Item (Leads)	2013	2014	2015	2020
Increase FRE DOD	DOD (N)	New annual DOD R&D grants/contracts (Montgomery & Eighmy)	+10	+15	+20	+30
Increase FRE DOD	DOD (N)	UARC Designation (Eighmy)	-	+1	-	+1
Increase FRE NNSA/DHS	NNSA/DHS	Joint Faculty with Y-12 (COE, Eighmy)	+2	-	-	-
Increase FRE NNSA	NNSA/DHS	Joint Institute with Y-12 (COE, COB, Eighmy)	1	1	-	-
Increase FRE NSF	NSF	ERC/STC/MRCT/IUCRC (Deans, RDT & Eighmy)	+2	+3	+4	+5
Increase FRE NSF	NSF	AGEP-like Awards (Deans, RDT & Eighmy)	+2	+3	+4	+5
Increase FRE NSF	NSF	Increase basic awards (Deans, RDT & Eighmy)	+10	+20	+30	+50

* Maps to the current 12

Some Proposed Top 25 Research-Related Action Items

Primary Metric (E or N)	Secondary Metric (E or N)	Action Item (Leads)	2013	2014	2015	2020
Increase FRE NIST/DOC (N)	NIST/DOC	NNMI IMI (COE, RDT, Eighmy)	-	+1	-	-
Increase FRE USDA (N)	USDA (N)	New R&D Collaborations with UTIA (Brown & Eighmy)	+2	+2	+2	+2
Increase FRE HHS (N)	HHS (N)	New R&D collaborations with UTMC (TBD) *	+2	+3	+5	+10
Increase FRE HHS (N)	HHS	New R&D collaborations with UTMC (TBD) *	+2	+3	+5	+10
Increase FRE HHS (N)	HHS	New NIH Center Initiatives (TBD) *	+1	+1	+2	+5
Increase FRE	?	TBD	?	?	?	?

* Maps to the current 12

Brainstorming For Next Meeting

Area Of Focus	Metric	Action Item (Leads)	2013	2015	2020
Grad Ed/ Research	Increase Ph.D.s graduated	Increase RAs on grants & contracts (Hodges)	+25	+50	+100
Faculty/ Research	Undergraduates/Faculty	New faculty hires (Zomchick)	+10	?	?
Faculty/ Research	Undergraduates/Faculty	Hire National Academy Members (TBD)	+1	+2	+3
Faculty/ Research	Awards	New CAREER Awards (Porter & Reed) *	+5	+10	+15
Faculty/ Research	Awards	New NEH Fellowships (Rutenberg, Porter & Reed) *	+3	+4	+5
TBD	TBD	TBD	?	?	?

* Maps to the current 12

Brainstorming for Next Meeting

Area Of Focus	Metric	Action Item (Leads)	2013	2015	2020
Faculty/ Research	Awards	New Fulbright Fellowships (Rutenberg, Porter & Reed) *	+5	+5	+5
Faculty/ Research	Awards	New Guggenheim Fellowships (Rutenberg, Porter & Reed) *	+1	+1	+1
Faculty/ Research	Other	Faculty Professional Development * (Porter & Reed)	+?	?	?
Undergraduates /Research	Research Fellowships	New AY Fellowships (Pound & Eighmy)	+10	+10	+10
TBD	TBD	TBD	?	?	?

* Maps to the current 12

THE UNIVERSITY *of* TENNESSEE **UT** KNOXVILLE

Brainstorming For Next Meeting

Existing Area Of Focus		Metric (Existing or New)	New Action Items	Goals as a Function of Time	Will It Map to Current Action Items?
Research		Research space (N)	Many possible	Yes, annually,2014-2025, with primary responsibilities assigned	R11
Research		Core Facilities (N)	Many possible	Yes, annually,2014-2025, with primary responsibilities assigned	R10, R12
Research		Enterprise Systems (N)	Many possible	Yes, annually,2014-2025, with primary responsibilities assigned	R10, R12
TBD	TBD	TBD	?	?	?

15

Thoughts?

All input is welcome!

Appendix A
Current Top 25 Research Action Items

UTK Action Items for Research Within the Plan

Action Item	Initiative (Lead)	R1 Specific Action Plan Steps
R1	Research Services (G. Reed)	(a) Formalize funding for search engine (b) Prepare more faculty with advanced proposal writing skills (c) Formalize funding for Director of Foundation and Corporate Relations position (d) Establish and publish performance metrics

UTK Action Items for Research Within the Plan

Action Item	Initiative (Lead)	R2 Specific Action Plan Steps
R2	Commun-ications (G. Reed, M. Nichols)	(a) Identify key external audiences and target messages (b) Advertise in targeted publications (c) Increase support for professional design and content creation for research web sites (d) Enhance UTK's image at high profile conferences through branding (e) Build on the power of social media and continue relationships with traditional media (f) Implement a "research success awareness" campaign

19

UTK Action Items for Research Within the Plan

Action Item	Initiative (Lead)	R3 Specific Action Plan Steps
R3	Government Relations (W. Hines, P. Montgomery)	(a) Develop policy to connect researchers with UTK's GR firm (b) Arrange visits in DC for discussions with agency program officers (c) Assist with appointments to agency advisory boards

UTK Action Items for Research Within the Plan

Action Item	Initiative (Lead)	R4 Specific Action Plan Steps
R4	IP and Innovation (D. Washburn and A. Miller)	(a) Form a task force of the UT System, UTRF and the campus to evaluate alternatives and adopt a model for T2 (b) Build close ties among OR, UTRF, the Anderson Center, and other entities (c) Identify and adopt best practices for patent application and business incubation (d) Identify practices to track and report related data through the STAR metrics program

UTK Action Items for Research Within the Plan

Action Item	Initiative (Lead)	R5 Specific Action Plan Steps
R5	Partnerships (W. Hines, P. Montgomery, S. Ballentine)	(a) Identify potential partnerships with local companies and federal agencies (b) Identify potential strategic partners and recruit them to Cherokee Farm (c) Develop basic ordering agreements and joint appointment agreements with new partners

UTK Action Items for Research Within the Plan

Action Item	Initiative	R6 Specific Action Plan Steps
R6	Multi-disciplinary Research (B. Dunne, Top 25 Team)	(a) Revise UTK distribution of institutional resources (e.g., ORU) (b) Institute faculty hiring practices where appropriate (c) Revise faculty performance and promotion review (d) Revise academic program review criteria and metrics (e) Institute a Chancellor's Award for Research

UTK Action Items for Research Within the Plan

Action Item	Initiative	R7 Specific Action Plan Steps
R7	F&A Distribution (W. Hines, C. Cimino)	(a) Developing F&A policies for University-level centers and institutes (b) Remove the three-year rolling average for RIF (F&A) return (c) Disburse F&A quarterly for high growth cases (d) Revise RIF (F&A) carry over policy to increase flexibility (e) Implement a plan to increase Office of Research distribution as F&A grows

UTK Action Items for Research Within the Plan

Action Item	Initiative	R8 Specific Action Plan Steps
R8	Administrative Efficiency (C. Tenopir, C. Cimino)	(a) Task force to review procedures and recommend changes (b) Staff members assigned responsibility to streamline research procedures with legal constraints (c) Initiate streamlined procedures

UTK Action Items for Research Within the Plan

Action Item	Initiative	R9 Specific Action Plan Steps
R9	Research Incentives (W. Hines, B. Dunne)	(a) Implement research incentive plan (b) Institute a Chancellor's Award for Multidisciplinary Research (c) Coordinate with Communications Team to highlight faculty research success stories

UTK Action Items for Research Within the Plan

Action Item	Initiative	R10 Specific Action Plan Steps
R10	Infrastructure - Core Facilities (C. Boake, Core facilities Committee)	(a) Establish a standing core facilities committee, including a responsible chair (b) Conduct an inventory of current core facilities and other expensive multi-user equipment (c) Work to evaluate business models for core facilities at peer institutions (d) Develop business models that include organizational and funding considerations (coordinate between VCR and VCFA) (e) Develop written procedures for creating, funding, and closing core facilities

UTK Action Items for Research Within the Plan

Action Item	Initiative	R11 Specific Action Plan Steps
R11	Infrastructure-Space (W. Hines, C. Cimino)	(a) UTK Space Committee includes research leadership (b) Plan for research space on Cherokee Farm Campus for collaboration with private and government entities

UTK Action Items for Research Within the Plan

Action Item	Initiative	R12 Specific Action Plan Steps
R12	Research Information Technologies (W. Hines, Top 25 Infrastructure Team)	(a) Coordinate with Faculty Implementation Team on metrics and data gathering needs related to research productivity (see Faculty Plan) (b) Engage OIT in a review of current state of research enterprise software support, including TERA