



Proposing the Next ADVANCE for Women Faculty

Tailoring Data-driven Programs
for Career Achievement and Success

Progress during first ADVANCE grant: Headcount of Male and Female Faculty 2009-2012

Year	Coll of Eng		Coll of S&A		Sch of Biz		SFRES		Sch of Tech		MTU Total	
	F	M	F	M	F	M	F	M	F	M	F	M
2012-13	21	113	59	91	8	16	4	17	2	15	94	254
2011-12	21	115	58	94	8	16	5	18	1	16	93	259
2010-11	21	115	55	93	7	13	5	18	1	12	88	251
2009-10	16	106	55	91	8	13	4	18	2	14	85	242

Institutional Analysis MTU Fact Book

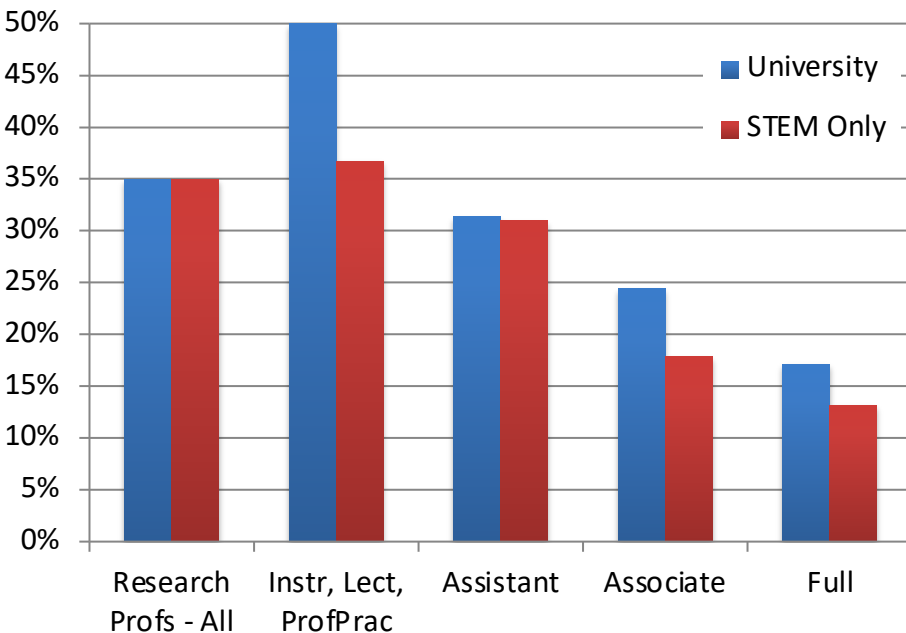
- Went from 26% women to 27% women in 4 years
 - STEM data on next slide
- Male to female ratio far from 1:1

STEM Fields Only: Male and Female Tenure/Tenure-Track Faculty by Rank 2013

Fall 2013	Coll of Eng		Coll of S&A (STEM)		SFRES		Sch of Tech		STEM Total		%F
	F	M	F	M	F	M	F	M	F	M	
Assistant Prof	11	28	10	16	1	5	2	8	24	57	30%
Associate Prof	8	43	7	21	0	5	0	9	15	78	16%
Full Prof	4	46	7	27	1	6	0	0	12	79	13%

http://www.admin.mtu.edu/ia/faculty/Faculty_Department_Rank_Gender_2013.pdf

Percent Women vs. Rank (Fall 2013 data)

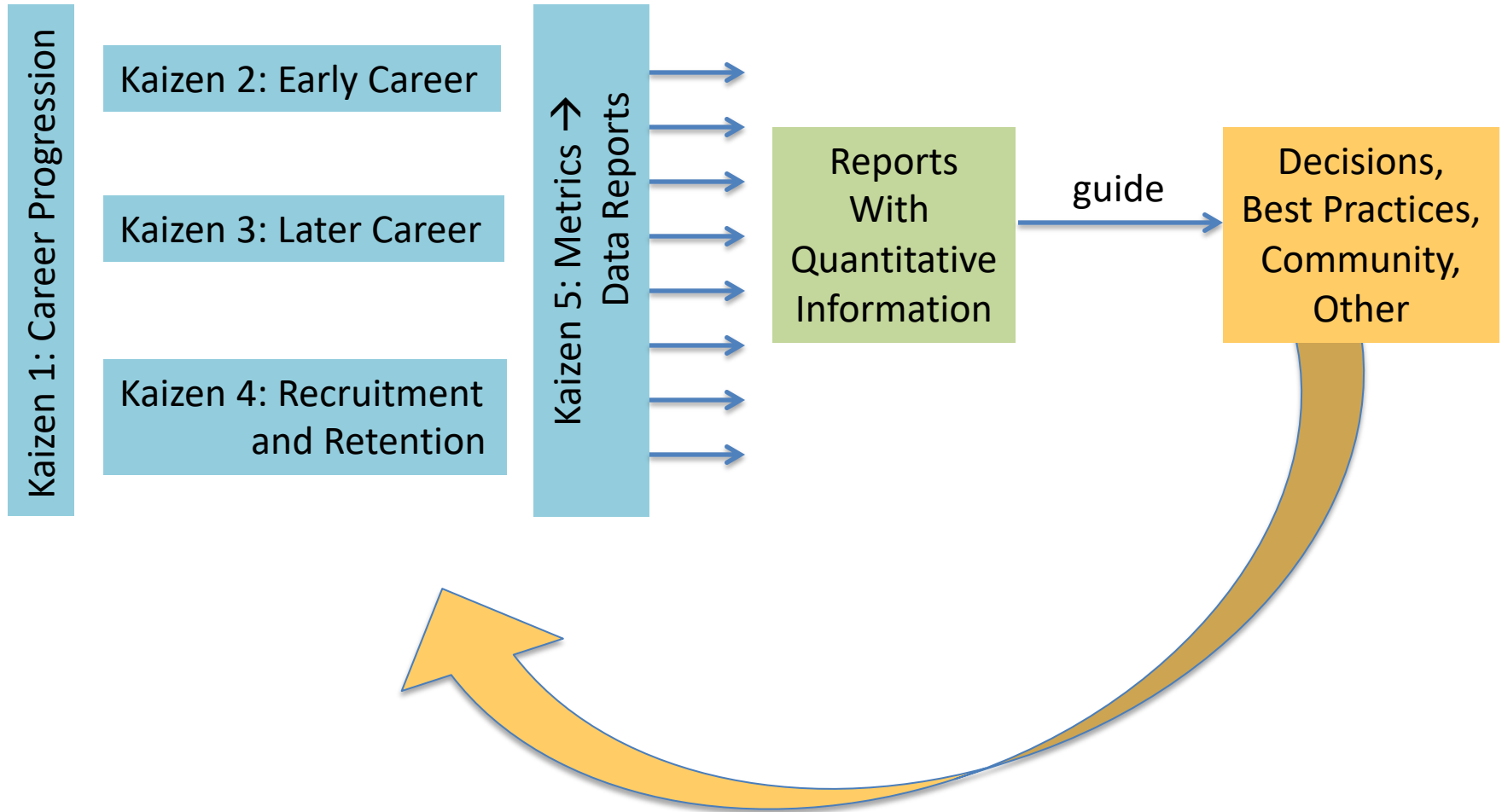


- Male to female ratio not 50%
- Attrition and plateauing of women faculty

Kaizen Series

Date	Topic
September 24 ✓	#1: Career Path Mapping
October 29 ✓	#2: Pre-tenure career progress, obstacles and possible programs
December 2 ✓	#3: Post-tenure career progress, obstacles and possible programs
February 5 ✓	#4: Recruitment and retention
March 5 ✓	#5: Data Excavating: Map metrics to data sources
Summer 2015	Spin off Kaizen(s) – coordinating/compiling data
Fall 2015	#6: Creating a shared responsibility system for managing interventions
Jan 2016	<i>Submit proposal</i>
	After grant funding: Kaizens on implementation

The ADVANCE Kaizen Process



Introduction to Basic Lean Concepts

- **Lean-** Critical thinking resulting in continuous improvement
- **Kaizen-** a Japanese term that means “improvement” or “change for the better”
- **Kaizen Event-** A structured, team-based, problem solving activity that engages a team in identifying waste and the root cause of a problem, followed by identifying and implementing countermeasures to stop the problem

Continuous Improvement website: <http://www.mtu.edu/improvement/>



Kaizen 4 and 5 Report Out

Kaizen 4: Recruitment and Retention
Cartographers (Feb. 5, 2015)

Kaizen 5: Data Excavators (March 5, 2015)

Kaizen 4 Team Members

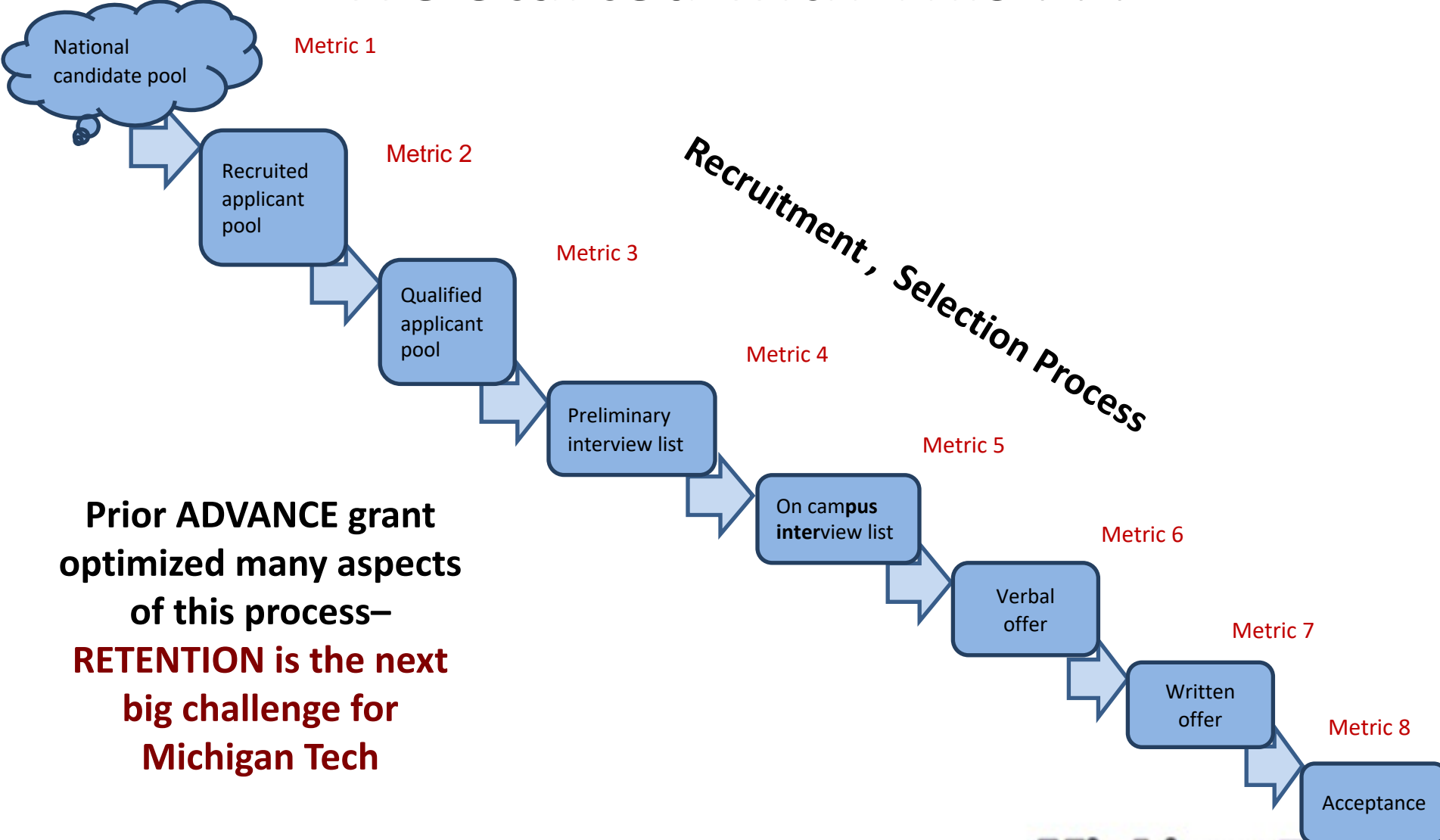
- Date: February
- Focus: Recruitment, selection, and retention strengths, weaknesses, and possible programs
- Team Members:
 - Adrienne Minerick, Patty Sotirin, Team Leaders
 - Jill Hodges, Renee Ozanich, Team Members
 - Ellen Horsch, Champion
 - Mark Gockenbach, Audrey Mayer, Cecile Piret, Customer/Outside Eyes
 - Jennifer Linderman, Ruth Archer, Observer/Outside Eyes
 - Theresa Coleman-Kaiser, Facilitator

Problem Statement

Kaizen 4:

We need an explicitly delineated map of recruitment, selection, **onboarding, and retention** of new faculty.

We Started with This . . .



Prior ADVANCE grant optimized many aspects of this process—**RETENTION is the next big challenge for Michigan Tech**

Kaizen 4 Results: Obstacles

Kaizen 4

Phase	Obstacle
Recruitment (improvements)	<ul style="list-style-type: none">• Need to <i>actively</i> search and not just advertise• Generational differences in recruiting options• Search committee overload• Awareness of networks that potential candidates may use to gather information about open positions (online listservs, etc.)
Retention	<ul style="list-style-type: none">• MTU culture re. maternity leave, family obligations• Collaboration is often based on disciplinary and social relationships so participation not uniform• Traditional gender role campus: worklife is for women, administration is for men• Willingness to accommodate/facilitate
Exit	<ul style="list-style-type: none">• Need a reliable exit interview; not just who leaves but why<ul style="list-style-type: none">• Distinguish who leaves for their advantage and who we push away

Kaizen 4 Results: Interventions

Kaizen 4

Phase	Intervention
Early Stage Recruitment	<ul style="list-style-type: none">• Communication about dual careers, community resources to committees and candidates• Search committee training on EEO tools and proactive recruiting• Rubric for selection criteria• Staff person outside the search evaluate diversity of pool• Master list of advertising best practices
Late Stage Recruitment (Campus visit)	<ul style="list-style-type: none">• Change approach: e.g., How can I help you make your decision?• Train faculty, graduate students on: how to optimize the interview; micro-aggressions/affirmations & body language• Sell the campus: emerging scholars, dynamic and energetic (but don't alienate older candidates)• Create experiences of "fitting in," e.g., meeting with woman faculty outside the department for women candidates; Partner/spouse with their own visit schedule

Kaizen 4 Results: Interventions cont.

Phase	Intervention
Onboarding	<ul style="list-style-type: none"> • Provide opportunities for connections with faculty, collaborative opportunities, affinity groups, e.g., C3 lunches • Facilitate learning faculty role: Launch committee and advocates; peer support and mentors • Follow through on hiring promises, including for spousal accommodation • Manage expectations when circumstances change (e.g., when chairs change)
Retention	<ul style="list-style-type: none"> • Cultivating networks and community • Responsiveness to new directions • Lateral moves for advanced faculty • Creative rewards, e.g., course releases, grad student support , faculty career awards • Social integration, e.g., C3 lunches

Problem Statement

Kaizen 5:

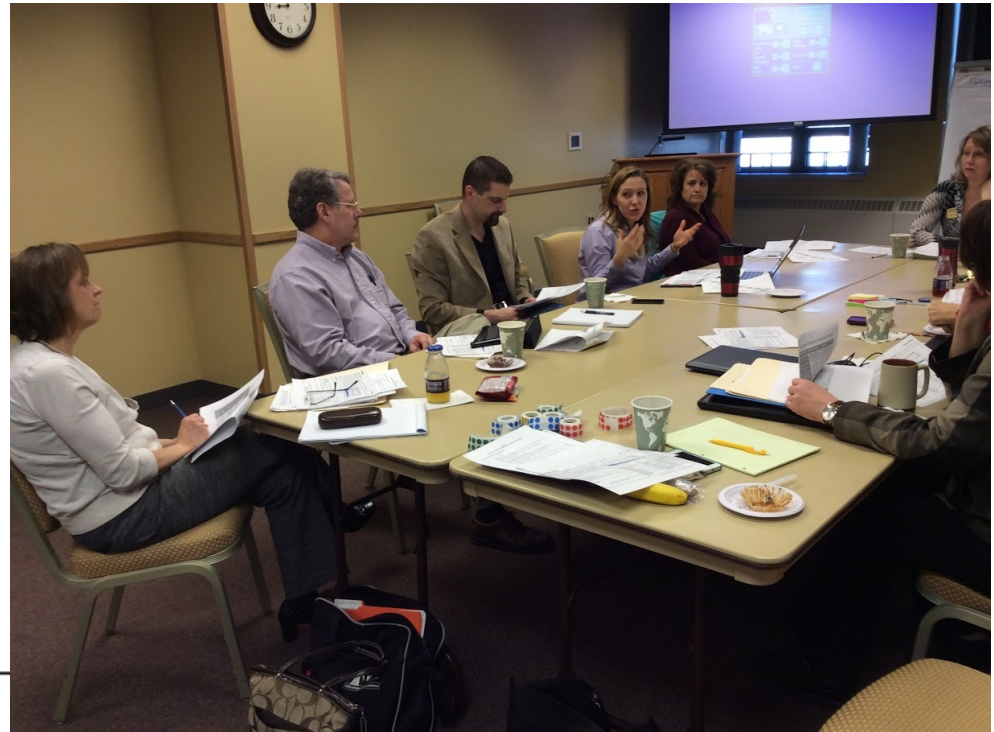
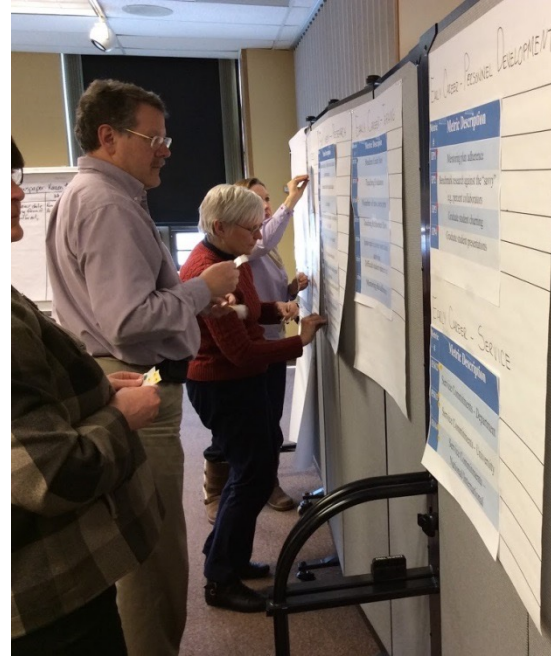
We need to map the metrics we have identified in early career, later career, retention onto the database - or information sources - collecting the data.

Kaizen 5 Team Members

- Date: March 5
- Focus: Identify sources/location of data to track metrics from Kaizens 1 through 4.
- Team Members:
 - Sonia Goltz, Adrienne Minerick, Patty Sotirin, Team Leaders
 - Jill Hodges, Valerie Holzberger, Patricia Kyllonen, Mary Jane Lowney, Anita Quinn, Cayce Will, Team Members
 - Leonard Bohman, Champion
 - Theresa Coleman-Kaiser, Facilitator
 - Ruth Archer, Observer/Outside Eyes

Team Pictures

Kaizen 5



We Started with the Suggested Metrics from K1-K4

- New Phds and post-docs (where applicable) in field
- Applicants applying for the position
- Applicants meeting listed qualifications
- Applicants interviewed by phone or at a conference
- Applicants interviewed on campus
- Applicants provided a verbal job offer
- Applicants provided a written job offer
- Applicants who accepted the job offer
- Faculty in Year 1 (first major review)
- Faculty in Year 2 (first major review)
- Faculty in Year 3 (second minor review)
- Faculty in Year 4 (second major review)
- Faculty in Year 5 (third minor review)
- Faculty receiving early tenure
- Faculty seeking and receiving tenure year 6
- Faculty not seeking tenure
- Faculty receiving delayed tenure (years 7-8)
- Service Commitments - Department
- Service Commitments - University
- Service Commitments – National/International
- # Nominations for national/international scholarly awards
- # Distinguished Lecturers
- # Endowed Chairs
- Involuntary termination rate
- Lead vs Asked to Collaborate on Projects
- Research faculty to Tenure-track faculty conversion rate
- \$ amount of start up packages
- Lab space
- Time from arrival that space is available (office & lab)
- Percent of Start up funds spent
- First proposal submission
- Percent of successful research grant proposals
- Percent of grants converted to research publications
- Mentoring plan adherence
- Benchmark research against the “savvy” e.g., percent collaborators
- Graduate student churning
- Student Credit Hours
- Teaching Evaluations
- Number of new course preps
- Teaching Refinement Efforts
- Innovative course instruction activities
- Difficult student interactions
- Mentoring plan adherence
- Benchmark research against the “savvy” e.g., percent collaborators
- Graduate student churning
- Graduate student presentations
- When eligible for sabbatical vs when sabbatical is taken
- MTU Leadership Positions (Dean’s Council, Senate, Upper Administrative positions)
- # of Fellows
- Graduate student committee assignments
- Offers declined
- When left (stage)
- Space assigned

And did this....

Page 1 Newspaper-Kaizen #5

Task	Who	Date
Move spreadsheet data needed from Val's spreadsheet to Oracle Table (2, 3, 5, 7A, 8)	Contact Emmott Golde Val [redacted] 2014	Desire by June MTA Assess
Find out % of Depts using P/A	Renee O.	May 2015
Conversation w/ Carrie Richards to learn current state (5) & Plan up follow up	Advance Group Career	B/A Implementation Kaizen
Facilitate discussion about standard measurement of new PhD applicant Pool (1)	OIE Provost initiatives Chairs Advance Leaders	Before Fall Implementation Kaizen
Admin workflows & definitions same as staff (4)	HRIS Renee O.	July 1st
Begin collecting total value of Start-up package. And history if possible. What are the details? How to sustain? (19)	Anita TH Cathy Colare	Summer 2015

RECRUITMENT & SELECTION

Metric #	Metric Description	Notes
1	New Phds and post-docs (where applicable) in field	② Hained externally? NSF data for this purpose are we not post it to use access it? Manipulate if?
2	Applicants applying for the position	① we history still in ad sheet form
3	Applicants meeting listed qualification	① we history still in ad sheet form
4	Applicants interviewed by phone or a conference	③ history still in ad sheet just it done in FA history to the ad sheet (screening material)
5	Applicants interviewed on campus	①
6	Applicants provided a verbal job offer	① Parking Lot
7	Applicants provided a written job offer	① 7A 7B 7C 7D 7E 7F 7G 7H 7I 7J 7K 7L 7M 7N 7O 7P 7Q 7R 7S 7T 7U 7V 7W 7X 7Y 7Z
8	Applicants who accepted the job offer	①
RI	Reasons Offers declined-	① Parking Lot
12	What stage in their review they left, gender and race/ethnicity	①
13	If a person was given a terminal year	① How are we tracking & can we see history
14	Graduate student committee assignments	① Grad School

Finalists w/ Dual Career Needs (5)

Only gets reported daily if they know about it

Who has need more often M OR W

How often are needs met W OR M

Are we attracting dual career need applicants or finalists.

② Parking Lot - Kaizen #5

Business Analytics Group - Univ. Future Start

ER4 - Kaizen Opportunity - Necessary resources... are they available when needed.

Data integrity on minority reporting

Recommend improving Business Process to get publications & research \$'s into DM.

Could mentoring plan be added to DM or Start up reporting?

Sponsorship Program

Sample Kaizen 5 Results: Green (Easy)

1)	Recruitment & Selection	Move spreadsheet data needed from Val's spreadsheet to Oracle Table. Use 2008 as a baseline		
	2	Applicant applying for the position	Some history, still in spreadsheet form.	Ideally, have data from this year (2014-2015 academic year) as a benchmark for before the grant.
	3	Applicants meeting listed qualifications	Some history, still in spreadsheet form.	
	5	Applicants participating in a final interview	No history for people participating in screening interview	
	7A	Applicants extended a written job offer	women and UR minorities	
	8	Applicants accepting the job offer	Reconcile date between banner HR and OIEs system	
	E2	What stage in their review they left		
	E3	If a person was given a terminal year	How are we tracking and can we see history?	Going forward, this might be in banner.

Kaizen 5 Results: Early Career Progression (Green)

	Metric #	Metric Description	Status
8)	Early Career	Verify that each review date can be tracked going forward & historically. Account for early and delayed	
10)	Early Career	Meet with grad school regarding faculty advising. Current state and possible metrics	
	E4	Graduate student committee assignments	
11)	Early Career	Early career by cohort (W, M, URM)	Summer 2015
	E2	What stage in their review they left	
	E3	If a person was given a terminal year	
	9	Faculty in minor review years (Year 1)	
	10	Faculty in major review years (Year 2)	
	11	Faculty in minor review years (Year 3)	
	12	Faculty in major review years (Year 4)	
	13	Faculty in minor review years (Year 5)	
	14	Faculty seeking (M, W, URM) and receiving (M, W, URM) early tenure	
	15	Faculty seeking (M, W, URM) and receiving (M, W, URM) tenure in Year 6 (normal timeline)	
	16	Faculty seeking (M, W, URM) and receiving (M, W, URM) delayed tenure in Year 7-8	

Kaizen 5 Results: Early Career Metrics (Yellow)

12)	Early Career - Research	Begin collecting % successful research proposals	Summer 2015
	ER7	Percent of successful research grant proposals	
	ER6	First proposal submission	
13)	Early Career - Research	Lab Space for faculty, History?	Summer
	ER3	Lab space	
14)	Early Career - Research	Track progress of individuals \$ amount of start-up spent \$ converted to research publications	Summer
	ER5	Percent of startup funds spent by year	
	ER8	Money converted to research publications	
15)	Early Career - Research	Additional Misc. Items	
	ER1	Research faculty to tenure-track faculty conversion rate	
	ER4	Time from arrival that necessary resources are available (office, lab, equipment); Kaizen Opportunity	Parking Lot
	ER9=ET18=EP1	Mentoring plan adherence; Kaizen Opportunity	Parking Lot
	ER10=EP2	Build in metric to track each faculty against those who are savvy for early interventions	
	ER11=EP3	Graduate student churning; Kaizen Opportunity	

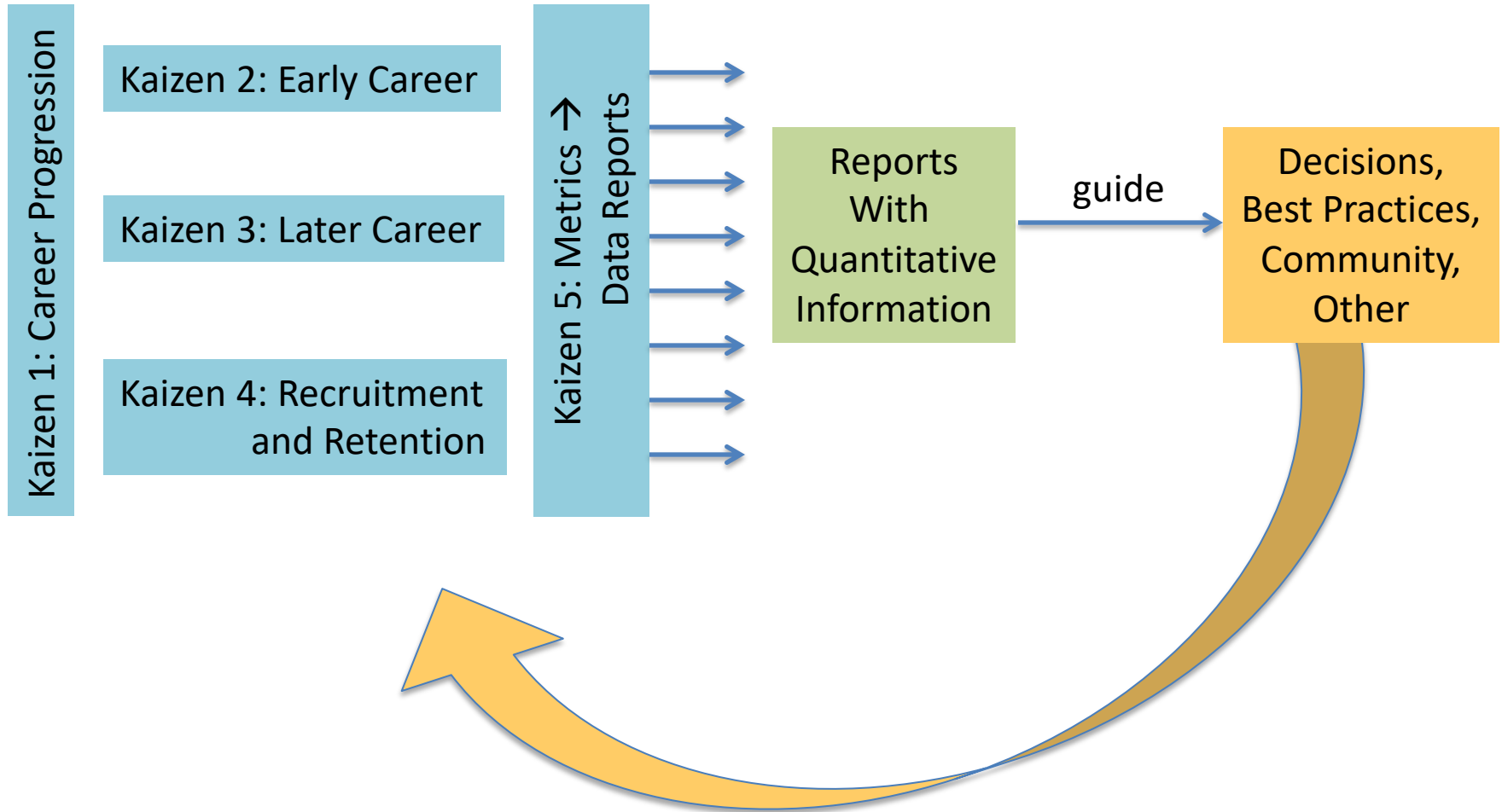
Kaizen 5 Results: Later Career Metrics (Red)

20)	Later Career	Investigate adding nominations as a category in DM
		L4 Nominations for national/international scholarly awards (should include internal awards too)
21)	Later Career	Tally M,W, URM taking sabbaticals, when (reference to max eligible and timing)
		31 Faculty taking sabbaticals
		L1 When eligible for sabbatical vs. when sabbatical is taken
22)	Later Career	Endowed Chairs
		L6 # Endowed Chairs by demographic (age too)
24)	Later Career	Digital Measures, Getting data and mining it into a useful report
		32 Faculty achievements for external recognition: editorships, endowed professorship, society fellows, national academy, etc.
		L3 # of fellows
		L4 Nominations for national/international scholarly awards (should include internal awards too)
		L5 # Distinguished lectures
		ES12 Service Commitments – (ES12= Department, ES12.5=Outreach, ES13=University, ES14=National/International)
25)	Later Career	Track demographics of PI vs. Co-PI
		L8 Lead vs. asked to collaborate on projects

Summary and Additional Resources

- Kaizen 4 helped us **understand challenges** to successful recruitment, selection, and retention, **possible interventions**, and how **metrics** about career progress can be collected.
- Kaizen 5 brought a team together to connect desired metrics to existing departments and databases that **compile reports to inform future decisions.**
- More information on the ADVANCE Institutional Transformation grant proposal planning process is available at: www.mtu.edu/ADVANCE
 - Please also provide your comments at the above site

The ADVANCE Kaizen Process





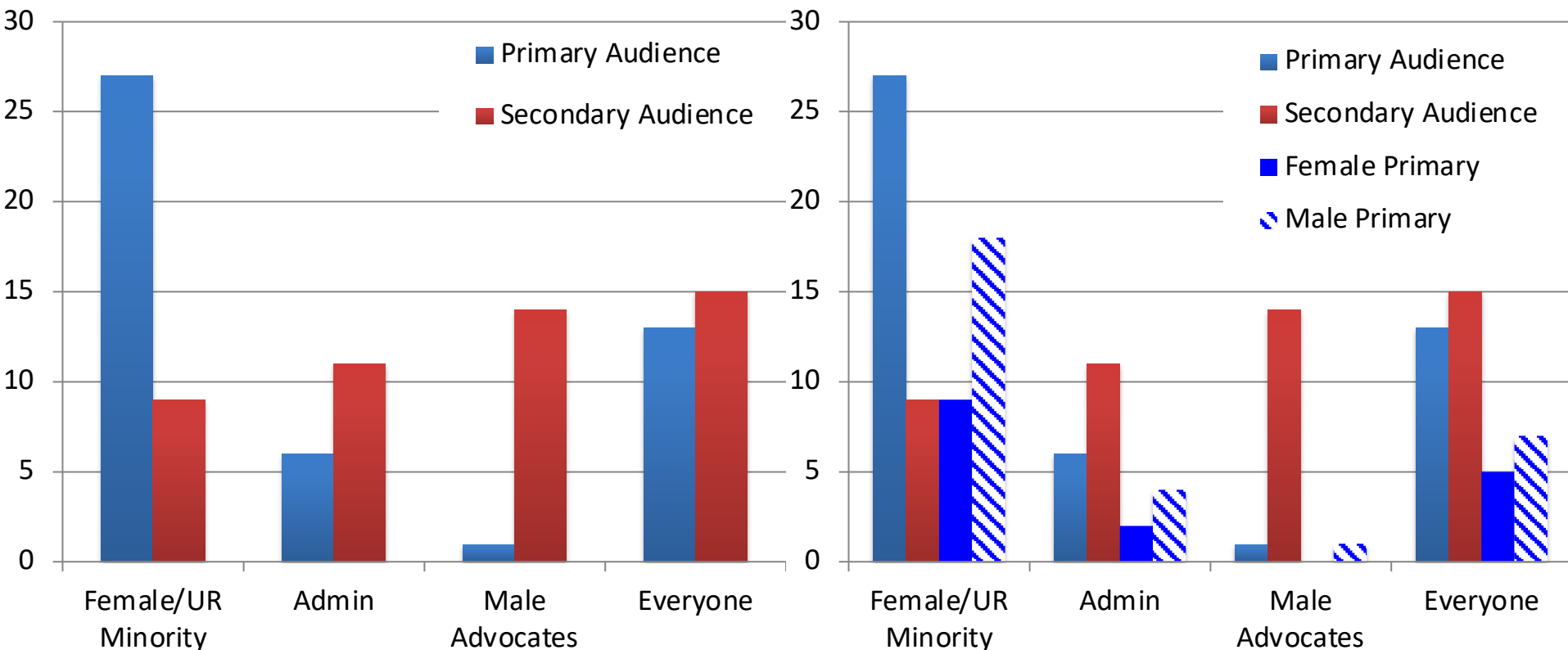
We need your feedback

- Please provide guidance to help prioritize next steps.
- Example feedback from Kaizens #2 and #3 Report out
 - Data reports to guide decisions

Feedback from Kaizen #2 and #3

Early and Later Career

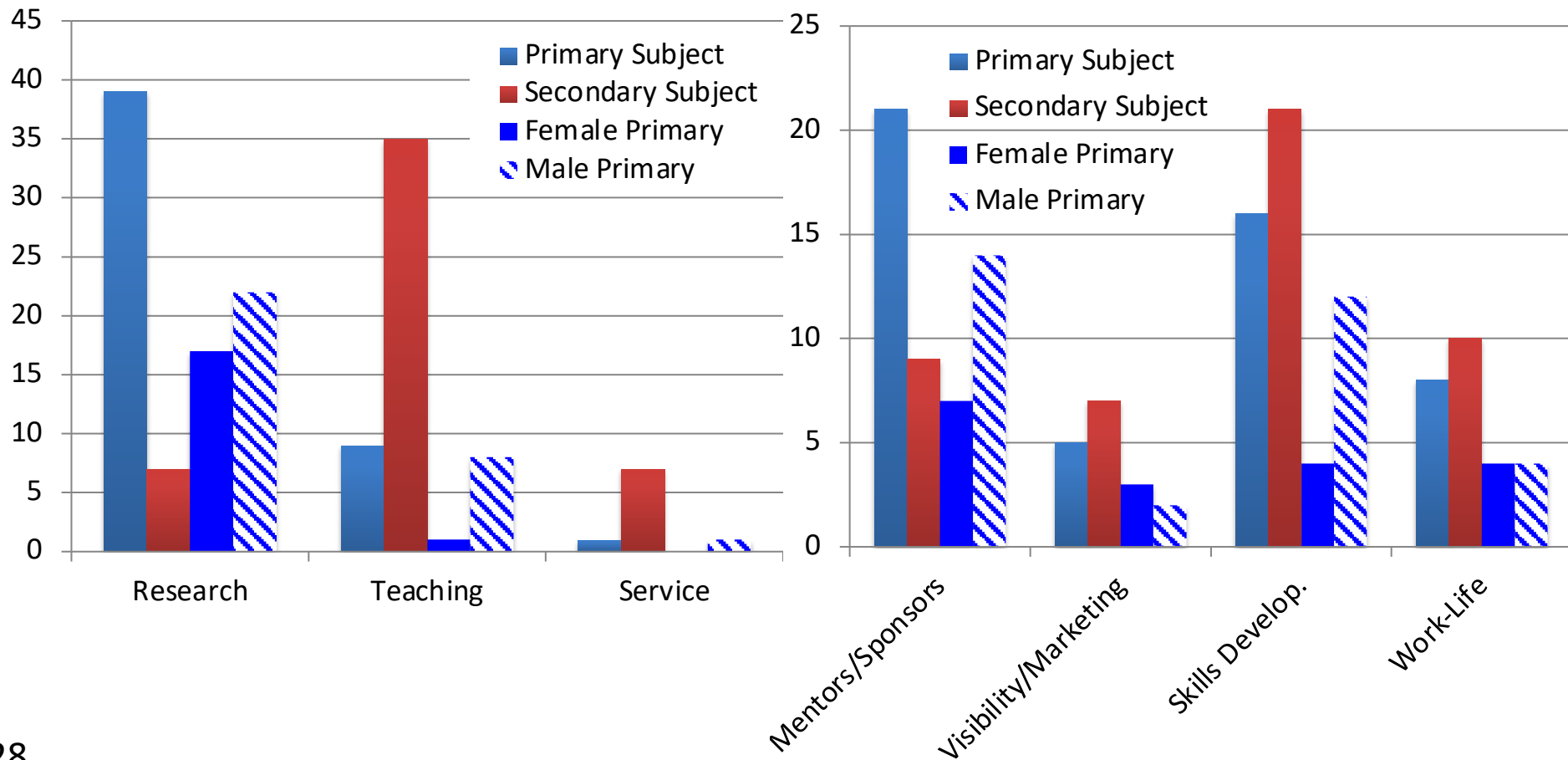
- Who should intervention programs target?



Feedback from Kaizen #2 and #3

Early and Later Career

- Best subjects for intervention programs?



In Groups: Data available by Fall 2015

1. Best delivery method (report, system, etc.) for multiple levels/agendas (faculty, chairs, deans)
2. How to ensure report best informs future?

** Copy of Early Career and Later Career Slides on your Table. PLEASE CHOOSE ONLY ONE.*

Early Career Progression

- Cohort Data
- Want to inform retention

Later Career Excellence

- Progression and Timing
- Want to enable mentoring/sponsorship



Your input and feedback is
strongly welcomed

Details of Kaizen results will be posted on the
ADVANCE Website.

www.mtu.edu/ADVANCE