

METRICS –

The Art of Measure

Leadership Academy - 2007

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Executive Summary



- Our Charge:
 - How to organize metrics to measure the progress toward goals outlined in the UCAR Strategic Plan.
- Our Focus:
 - Develop and improve assessment tools
 - Align metrics to the UCAR Strategic Plan
 - Assess performance in multi- and inter-disciplinary research

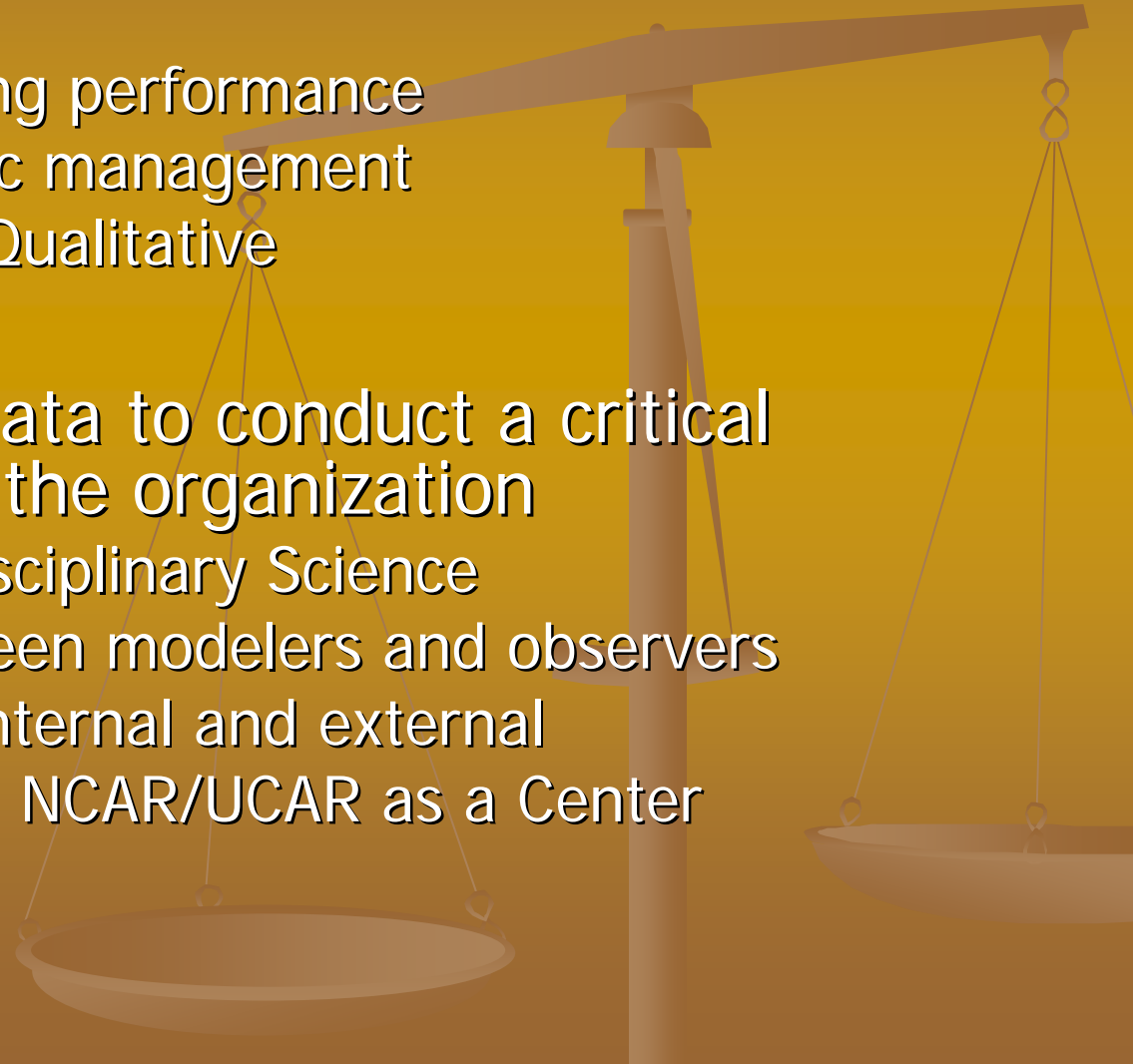
Current State of Metrics



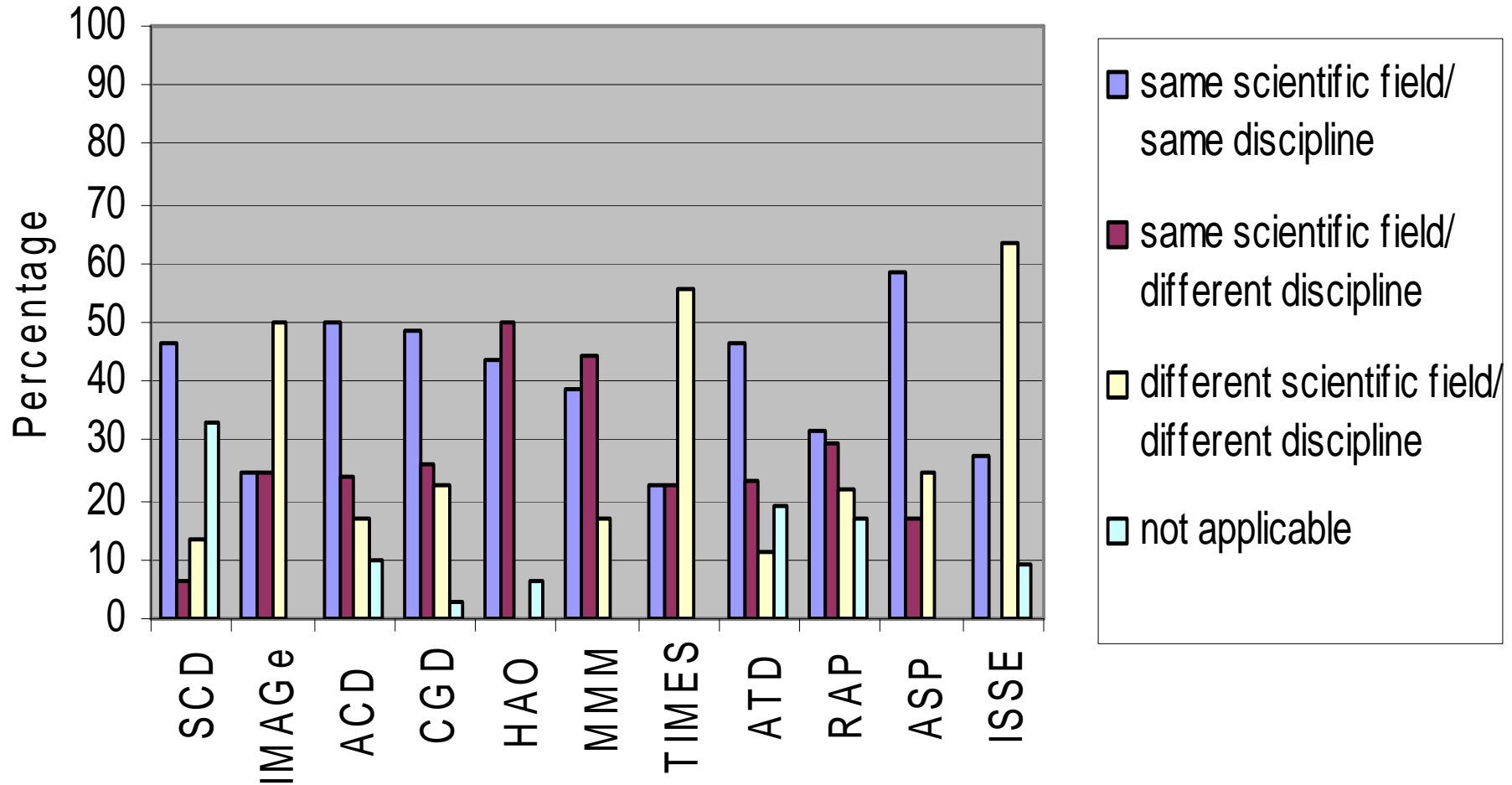
- Relevant materials reviewed by our team:
 - LA 06 Metrics Report
 - NCAR Annual Report (NAR)
 - UCAR & NCAR Strategic Plans
 - Report of the UCAR Metrics Committee
 - Advisory Boards / External Reviews
 - Surveys – SSRC Report
- Findings:
 - Limited tools in place to roll up existing metrics to corporate level
 - Internal measurements need to be improved to capture appropriate data

Ideal State of Metrics

- Keep it Simple
 - Useful in measuring performance
 - Useful for strategic management
 - Quantitative and Qualitative
- Need to capture data to conduct a critical internal review of the organization
 - Multi- or Inter- Disciplinary Science
 - Interactions between modelers and observers
 - Collaborations – internal and external
 - Projects unique to NCAR/UCAR as a Center

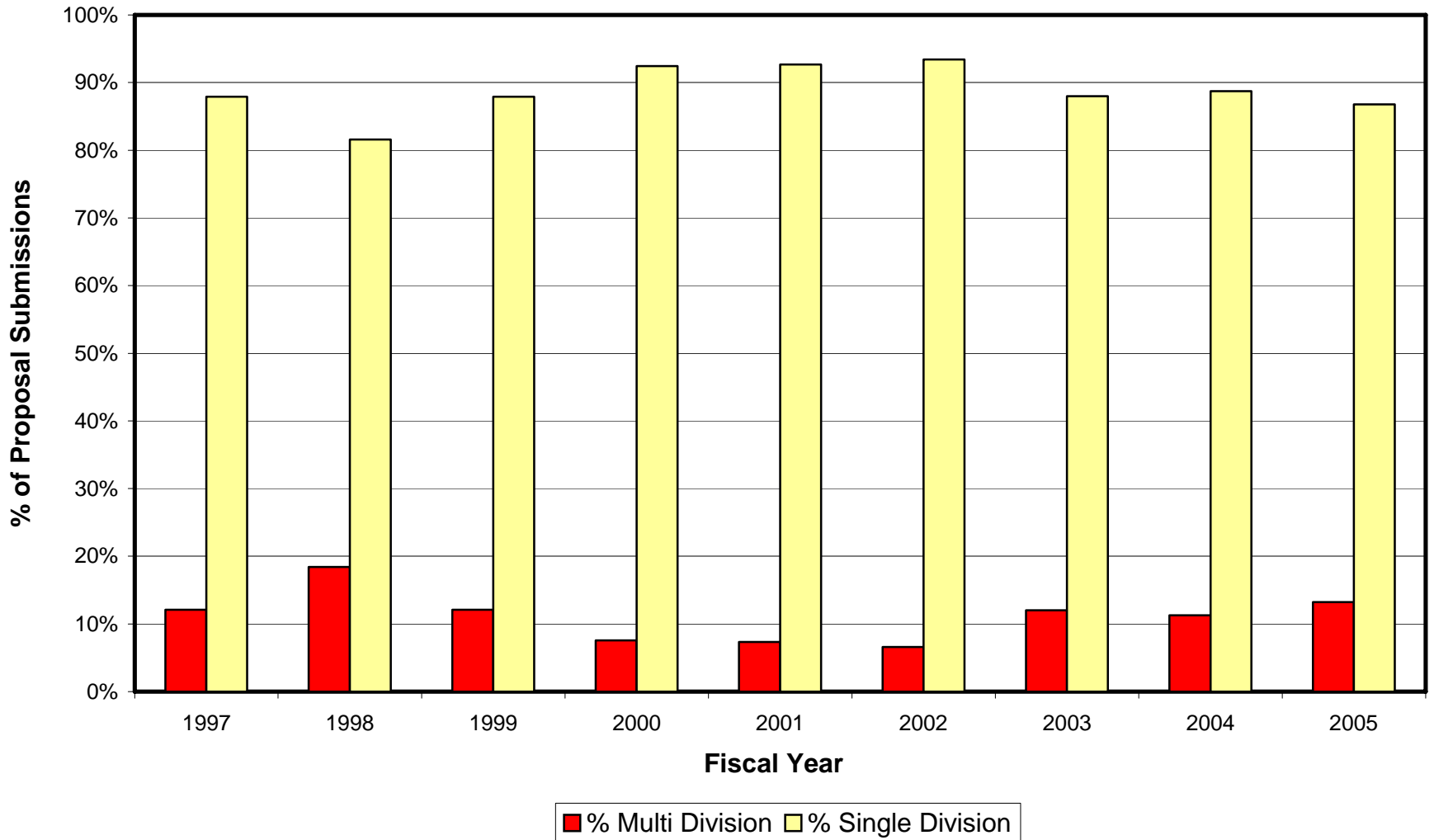


Interdisciplinary Collaboration by Division

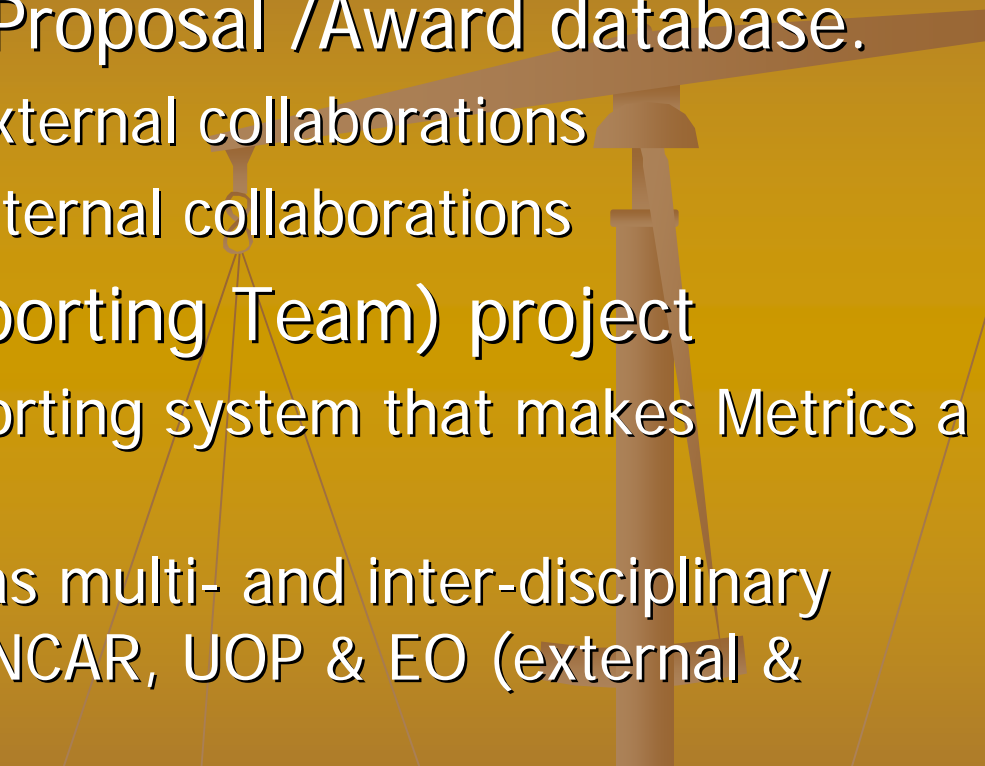


From Report to NCAR: The Reorganization & Collaboration of NCAR Science: Stage I Analysis. January 2006 Diana Rhoten (SSRC); Andrew Park (Stanford University)

% of Multi Divisional Collaborative Proposals vs. % of Single Divisional Proposals

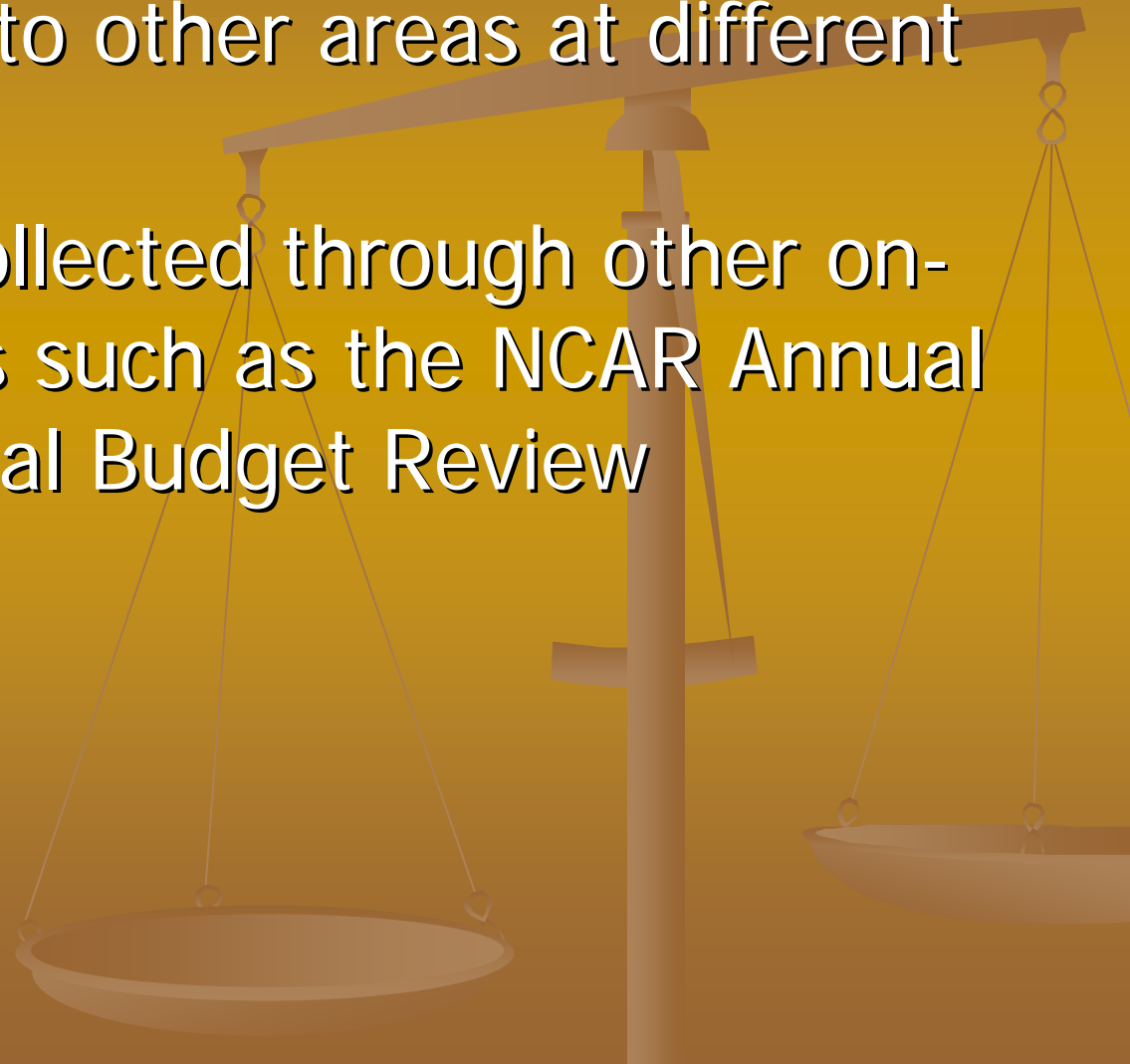


Recommendation - Fin Tools

- Enhancements to Proposal /Award database.
 - Capture data on external collaborations
 - Capture data on internal collaborations
 - The Fin Tools (Reporting Team) project
 - Must design a reporting system that makes Metrics a priority
 - Collect data such as multi- and inter-disciplinary collaborations for NCAR, UOP & EO (external & internal)
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Recommendation – Score Card

- Can be applied to other areas at different levels
- Can use data collected through other on-going processes such as the NCAR Annual Review or Annual Budget Review

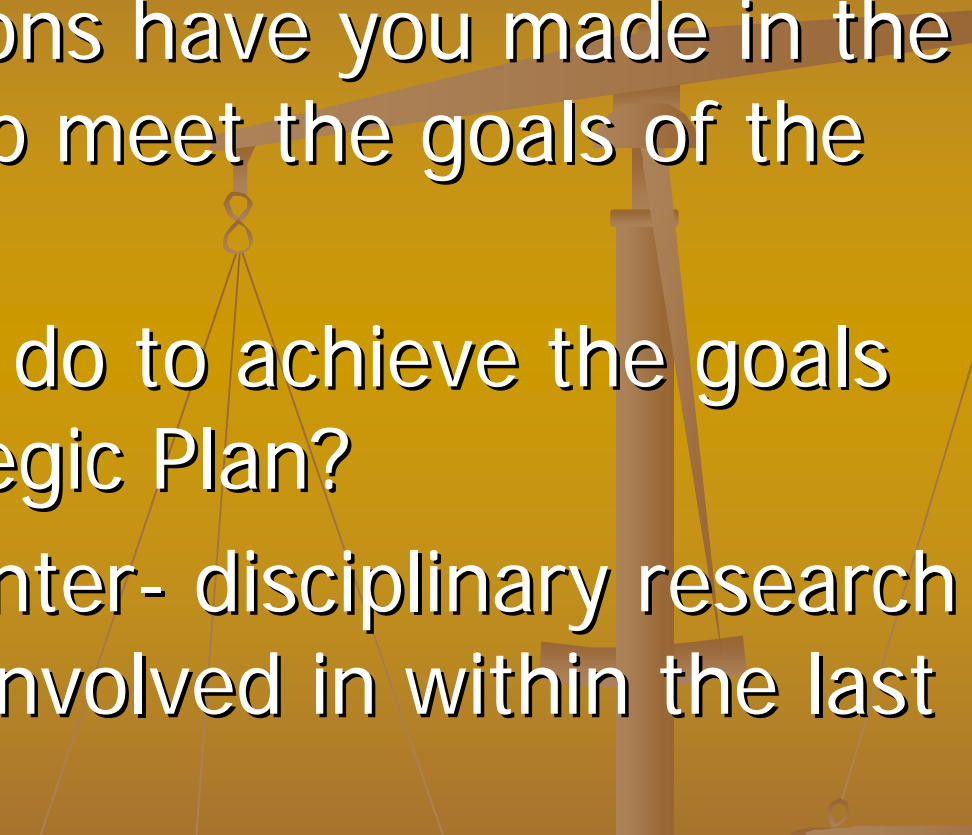


Recommendation – Score Card

Develop and employ increasingly capable observing systems that fuel discovery and understanding.

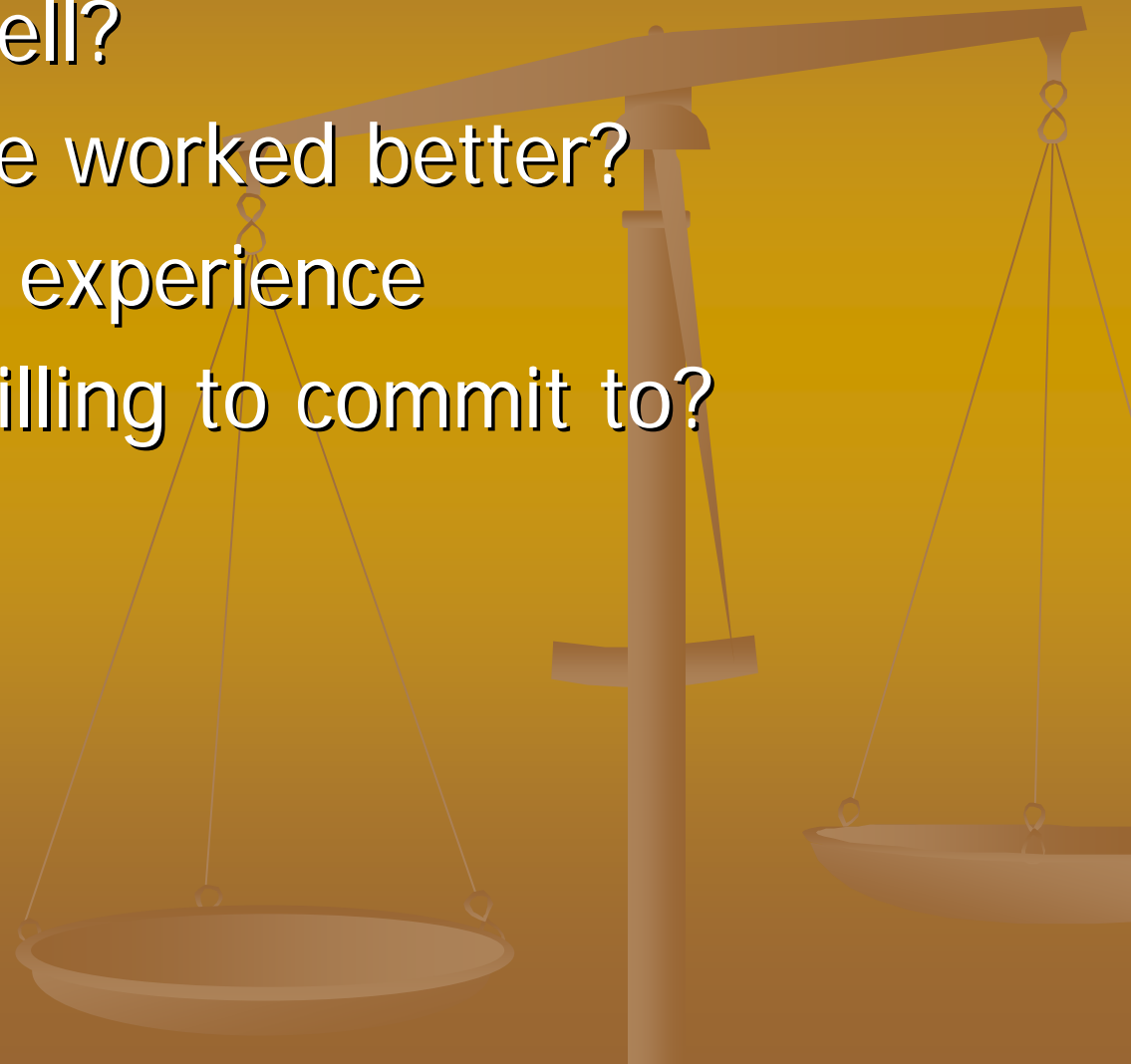
Strategic Goal	Primary Metric Category	Item of Measurement	Unit of Measure	Accountability - Group Responsible	Indicator (scorecard)	Measure of Impact		
			Qualitative		Green = Meets Goal	Output	Outcome	Impact
			Quantitative		Yellow = Needs Improvement			
					Red = Not Meeting Goal			
Contribute to the development of a global Earth observing system that includes GPS technologies, radar and aircraft measurements, solar coronal observations, and instruments to measure trace gases and particles.	Observational Facilities: 1) deployment; 2) development	Number of field projects supported	# / period Quantitative	EOL	Total field projects supported in FYXX increased by XX% from the previous FY.	X		
		Number of users, total and of each item	# / period, (metric) / \$ Quantitative	EOL	Number of users exceeded last year's goal of XXXX by XX%.	X		X
		Amount of funding & fiscal management	Total \$, \$ / user, (metric) / \$ Quantitative	EOL	Funding was not received by funding agency on XXXX project by XXXX date. Will resolve with funding agency by XX/XX/XXXX	X	X	
		User (PI) assessments	Evaluation / survey Qualitative	EOL	Survey results not completed. Will report results by XX/XX/XXXX		X	X

Recommendation – Questions at Annual Review Time

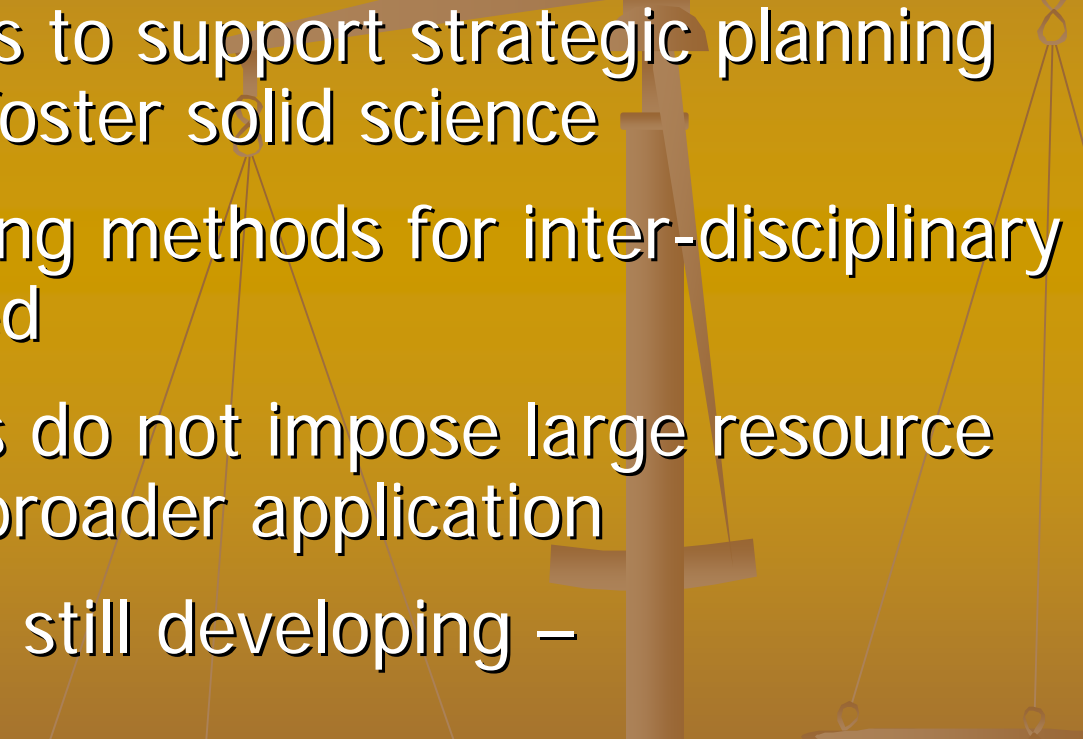
- What contributions have you made in the past year to help meet the goals of the Strategic Plan?
 - What can UCAR do to achieve the goals within the Strategic Plan?
 - What multi- or inter- disciplinary research have you been involved in within the last year?
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Team Experience

- What worked well?
- What could have worked better?
- Cross Divisional experience
- What is team willing to commit to?



In Closing

- Meaningful metrics to support strategic planning and analysis and foster solid science
 - Qualitative reporting methods for inter-disciplinary research suggested
 - Recommendations do not impose large resource impact and have broader application
 - FinTools project is still developing – Now is the Time!
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■ Questions?

