

# Jackson School of Geosciences Strategic Investment Plan 2025

*Jackson School Executive Committee*

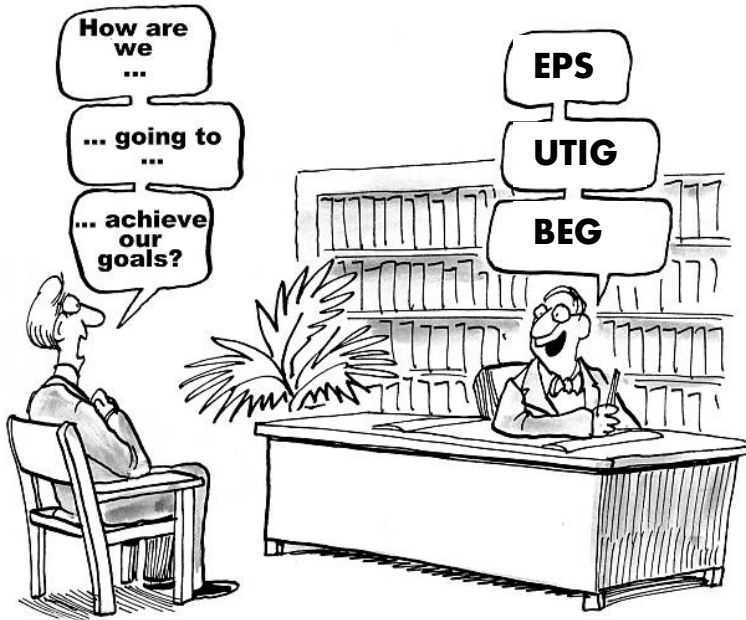
*January 2025*



The University of Texas at Austin  
Jackson School of Geosciences

# Jackson School Strategic Investment Plan 2025

## Purpose of Jackson School Executive Retreat



### Based on unit strategic plans

- Identify common themes
- Derive strategic research areas for investment
- Define tactical pathway for achieving goals
- Invest

### Intended Outcomes

- Leverage impact of research already happening in parallel across the units
- Support new research opportunities integrating/leveraging multiple units
- Raise the leadership and distinction of the Jackson School

### *Participants*

*Jackson School Leadership:* Dean Mora, ADR Michael Young, UTIG Dir Demian Saffer, BEG Dir Mark Shuster, EPS Chair Danny Stockli

*Faculty:* T Becker, P Flemings, S Gulick, S Hosseini, J Kipper, T Larson, M Locmelis, L Moscardelli, D Rempe, D Touma, H Van Avendonk

## Unit Strategic Plans

# The Guiding Principles of the Jackson School



John "Jack" and Katherine Jackson

**We are stewards of an amazing *legacy***

**The Jackson School was formed for a clear purpose:**

*"Pursue sustained leadership and highest distinction in the subjects of geology; geophysics; energy, mineral and water resources; as well as broad areas of the earth sciences, including Earth's environment...."*

**Mr. Jackson was clear:**

*"The endowment is not a gift, but an investment in the future of Texas."*

# The Jackson School came with Operating Instructions

**Lots of smart people considered how it should operate and they were clear:**

*Federated school of strong units that are true to their missions*

***AND WHICH HAVE*** a commitment to realizing synergies and advancing the success of the joint enterprise

***Integration of the strengths of the units is critical***

*The School/Dean upholds quality and drives those synergies/success through*

*Hiring/promotion/tenure authority*

***AND*** executive authority over use of the endowment

***JE should never be used in a way that eviscerates the incentive to compete for resources and distinction...not daily bread but to provide an edge in competition. – UT Pres. Larry Faulkner***

# Progress by Dean towards those principles since 2020?

## Focus on Jackson's vision and build the Jackson School brand

- Emphasize the School over Unit. Move towards greater unity of purpose
- Build respect for all that we do. Level the playing field for faculty across the units
  - Research faculty reclassification
  - Broader distribution of endowed funds
  - All units represented in school leadership
- Support high-quality degree programs that give students broad opportunity
  - Build an effective student services team
  - Support UG curricular reform
  - Reinvigorate EVS and EER
  - Raise support for graduate students
- Higher visibility on campus
  - Strong ADR
  - Vigorously push for representation in campus initiatives
  - KBH partnership

## Firm the long-term economic viability of the school

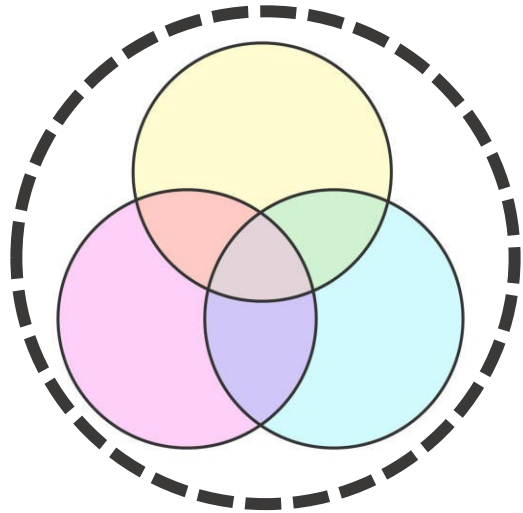
- Renegotiate past commitments
- Rebuild development and UDO relationship
- Improve program efficiency and impact (student affairs, GeoFORCE, educational esp. EVS, EER)
- Establish quasi endowment to build liquidity, generate payout to replace income from royalties

## Strategic use of the Jackson Endowment

- Bring some funds back to school/dean's office
- Move from FRSA to unit block grants; Unit-level strategic funds
- JE budget discussions: accountability, transparency and open discussion
- Strong ADR office funded as part of regular budget, not one-time
- **Focus Jackson School investments on research and actions that anticipate changes in our discipline, in student job opportunities and in the priorities of funding agencies**

The intended outcomes of the Strategic Investment Plan align with the guiding principles and unit and school goals

What have unit *bottoms-up* discussions identified as strategic research directions? What are the **common threads** between units?



Icy worlds      Energy Minerals      Polar Science      Energy resources

Planetary dynamics      Multi-hazard systems      Hazards and risks of extreme events

Measurement, Monitoring, Verification      Carbon cycle and global change

Water resources and drought      Hydroclimates – multiple scales, Earthquake dynamics, regions, esp Texas

Quaternary to 2100      Seamless earth models      Geomicrobiology

Texas Imperative      Energy transition      Geohealth/Dell collaborations

Drought and wildfire      AI/ML solutions

hazards and      Permafrost dynamics      Data analytics

Economic minerals      Hydrogen and Helium      Value from collections and networks

Coastal dynamics & sea level rise      Environmental monitoring, cal/val      Value from field stations

# Three Jackson School Strategic Research Themes

- ➔ **Earth hazards from physics to risk – *Understanding the challenges of extreme events to society***
- ➔ **Bridging energy, resources, and global change – *Balanced solutions for our growing society***
- ➔ **Planetary dynamics and habitability – *Space exploration, observations, and opportunities***

Common themes not included here are not forgotten! Some are means to an end; some are translational targets

- Environmental monitoring and computational geoscience are critical tools; hallmarks of Jackson School science
- Geohealth is a potential outcome of this research and can inform human research and issues



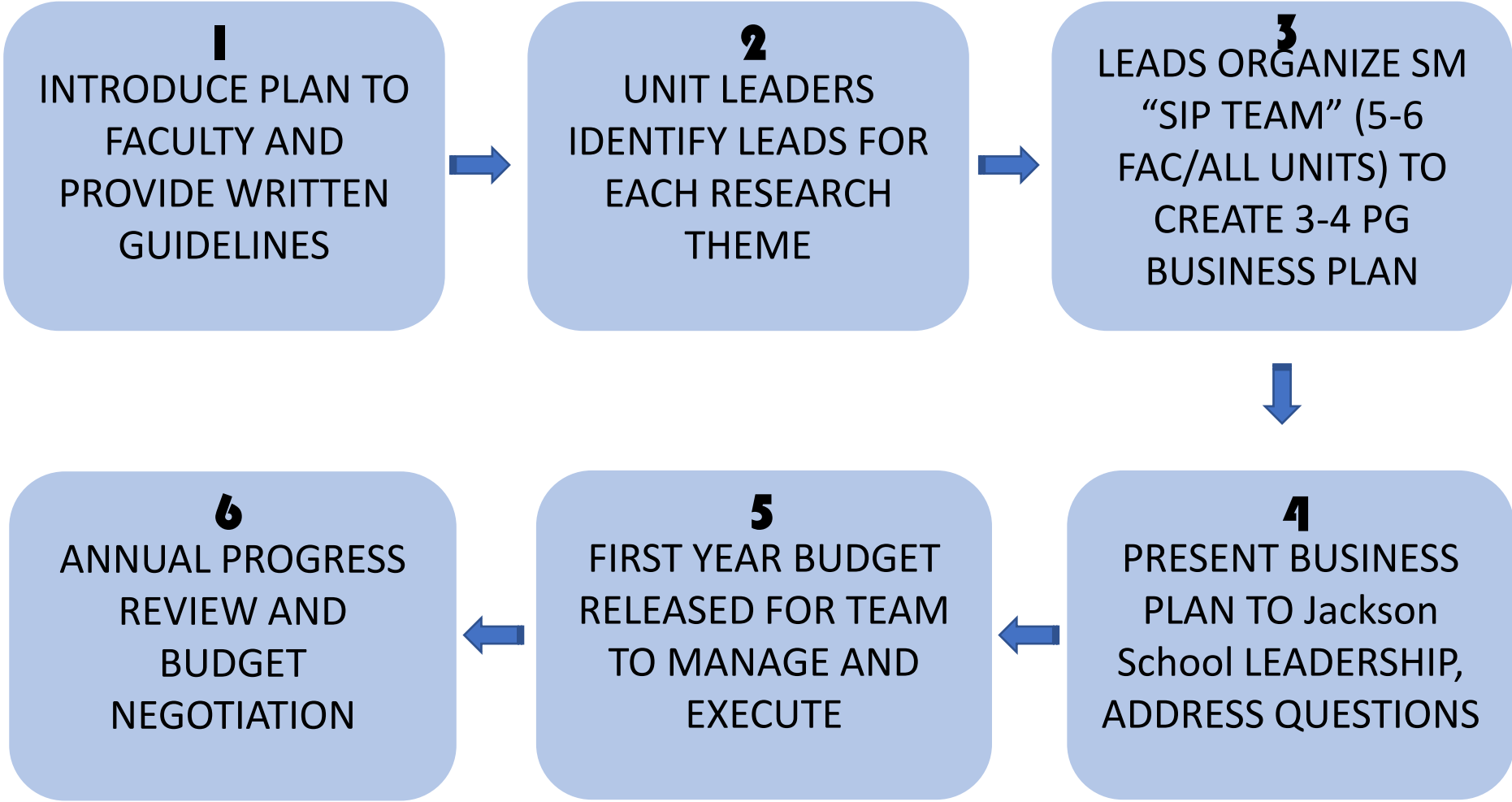
# Goal of the Strategic Investment Plan (SIP)

Jackson School investments in the strategic theme will yield

- Global leadership and visibility
- Societal and social Impact
- Increase external funding
- Papers and other evidence of translation
- Major partnerships with other institutions and government  
(We want them to come to *us*)

These themes will build on a strong foundation of existing research programs and capabilities, while spurring new innovation and exploratory approaches through x-unit collaborations.

# Implementation of the Strategic Investment Plan



*Timeline??*

**Ways to address impact to the SIP teams?**

- Teaching buy-out?
- Staff realignment from other projects?
- Buy-out of RESA support time?
- Temporary Co-location of team?
- Separate funding for equipment/analyses/TACC time (e.g., so ongoing projects are not negatively impacted?)

# Elements of a successful business/investment plan

## **BRIEFLY DEFINE THE PROBLEM**

- What issues need to be addressed and why are those issues important to society? What are the most significant scientific knowledge gaps?
- Assess Jackson School SWOT in this general area and for the identified issues. Who are the major stakeholders? The major university players? Where are potential alignments across UT, Texas, US?

## **PLAN OF ACTION and TACTICS TO ACHIEVE LEADERSHIP**

- What does your team propose to do to advance Jackson School in this area. Think broadly: workshops, in-house seed research, targeted RFP, partnerships to try to build.
- How well can we meet the demands of research in this area with people and infrastructure that are in house?
- What are the biggest barriers to success for Jackson School in this area?
- What would be needed to enable and/or accelerate research in this area? People? Infrastructure? Realignment of infrastructure or commitments? TACC or other IT infrastructure?

## **EXPECTED GOALS AND OUTCOMES**

- What are you LONG TERM goals and objectives and how do they align with the end-game goals defined by Jackson School leadership (e.g., societal/scientific impacts, academic metrics, translation to the educational portfolio, major partnerships, et.?)
- How will the goals/objectives of your plan differentiate and elevate Jackson School relative to other organizations working in the area?

# Elements of a successful business plan, cont.

## **PLAN TIMELINE**

- Define your program timeline, intermediate goals and outcomes expected (e.g., deliverables) for each step, first year and any subsequent year.
- Where possible, set gates to determine whether project is meeting a level of success appropriate for next step funding

## **BUDGET and JUSTIFICATION**

- Define the budget for your plan using typical budget elements (salary, fringe, equipment, travel)
- Have budget reviewed by lead unit's Grants and Contracts Office
- Budget justification should highlight particular expertise of each investigator and how their skills can be combined and leveraged into a team that is greater than the sum of its parts

## **WHAT WILL THIS PLAN DELIVER TO Jackson School – WHAT VALUE WILL BE ADDED?**

- Where will the research lead the Jackson School in 3-5 years? Consider the SIP goals.
- What research and plan outcomes will we see that could not have been achieved without this strategic investment and effort?

# SIP versus Research Proposal

## **PLAN OF ACTION and TACTICS TO ACHIEVE LEADERSHIP**

- What does your team propose to do to advance Jackson School in this area. Think broadly: workshops, in-house seed research, targeted RFP, partnerships to try to build.
- How well can we meet the demands of research in this area with people and infrastructure that are in house?
- What are the biggest barriers to success for Jackson School in this area?
- What would be needed to enable and/or accelerate research in this area? People? Infrastructure? Realignment of infrastructure or commitments? TACC or other IT infrastructure?

### **A SIP is not a scientific research proposal. It defines**

- How we prepare to take advantage of opportunity
- How we build our own opportunities
- How we establish research leadership

### **So**

- Some research (proof of concept) may be needed
- May need GS or PD support to gather new data or analyze existing data

### **But**

- Any research done is limited to what is necessary to accelerate towards an externally-funded program, major proposals, visibility

# What is Jackson School commitment to the SIPs?

3 SIP teams

~\$350k per year per team

Up to 3 year commitment

We know what success might look like. What about failure?

Not everything works when you go big and bold

Consider why things aren't working, adjust SIP or redirect to a new SIP effort

*If we are working together to be better –to be best– then we have already won*

Why now?

Because we can—we now have the collective will and the financial resources

Because we need to prepare for a more challenging funding environment

## **We want Jackson School to be ambitious!**

Jackson School must leverage its talents and endowment to *“achieve leadership and highest distinction”*

There is resilience in our quality, breadth and depth– but we must always move together toward future opportunities, be more nimble

Make big investments with lofty goals

Keep SIP investments transparent and promote breaking opportunities broadly across school

Over past 5 years, we have made the changes that will allow us to do this.

***Let's see where we can get in next 5 years!***



**Ambitious, Important**