Enabling researcher and accelerating research

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How AWS enables research

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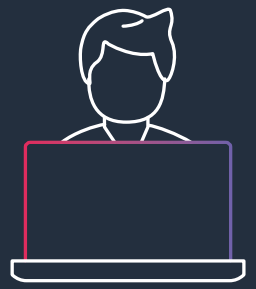
Observations

Strategic

- R&D growth
- Recruitment and retention
- Rankings and perception



Resources

- Availability
- Access
- Scale

Infrastructure

- Instrumentation
- Compute and data
- Laboratories
- Collaboration

Security

- Funding requirements
- IP protection
- Ransomware

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Anecdotal observation

Virtually every school we visit has a plan to…

- Become an R1 if they are an R2 by doubling research spending in the next 5-10 years.
- Cross the 1 or 2 billion dollar R&D spend threshold if they are an R1.

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In context

Higher education R&D spend ($ millions)												
2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
58,083	60,087	60,876	61,511	62,318	64,604	67,777	71,115	74,890	78,157	80,823	85,787	91,451
Adjusted, constant 2017 dollars: Growth averaged 1.7% annually (2010-2022)												
64,802	65,682	65,328	64,905	64,631	66,386	68,991	71,115	73,212	75,145	76,695	77,838	77,519
-	880	-354	-423	-274	1,755	2,605	2,124	2,097	1,933	1,550	1,143	-319

Source: NSF 24-317, January 22, 2024

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In context

Something virtually anyone in U.S. research has noticed

- Business performed 18 percent of basic and 39 percent of total U.S. research in 2011.

  By 2021, that share had risen to 34 percent and 49 percent respectively.

- Higher education’s share of basic research has fallen from 54 percent to 46 percent during that same period.

Source: NSF 24-317, January 22, 2024

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Research needs are not the same as the enterprise

Enterprise IT	Research IT
Same problems, different priorities	
1. Reliability 2. Manageability 3. Cost 4. Performance	1. Performance 2. Cost 3. Manageability 4. Reliability
User / management engagement	

• Users:
  • Want complete solutions
  • Minimize disruption
  • Consistency
• Management:
  • How does this fit with everything else?
  • How does it save money
	• Users:
	  • Want access to technology
	  • Want a partner to understand their problem and develop solutions WITH them
	  • No “constraints”
	• Management:
	  • How do we accelerate grants

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Q&A

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Thank you!

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