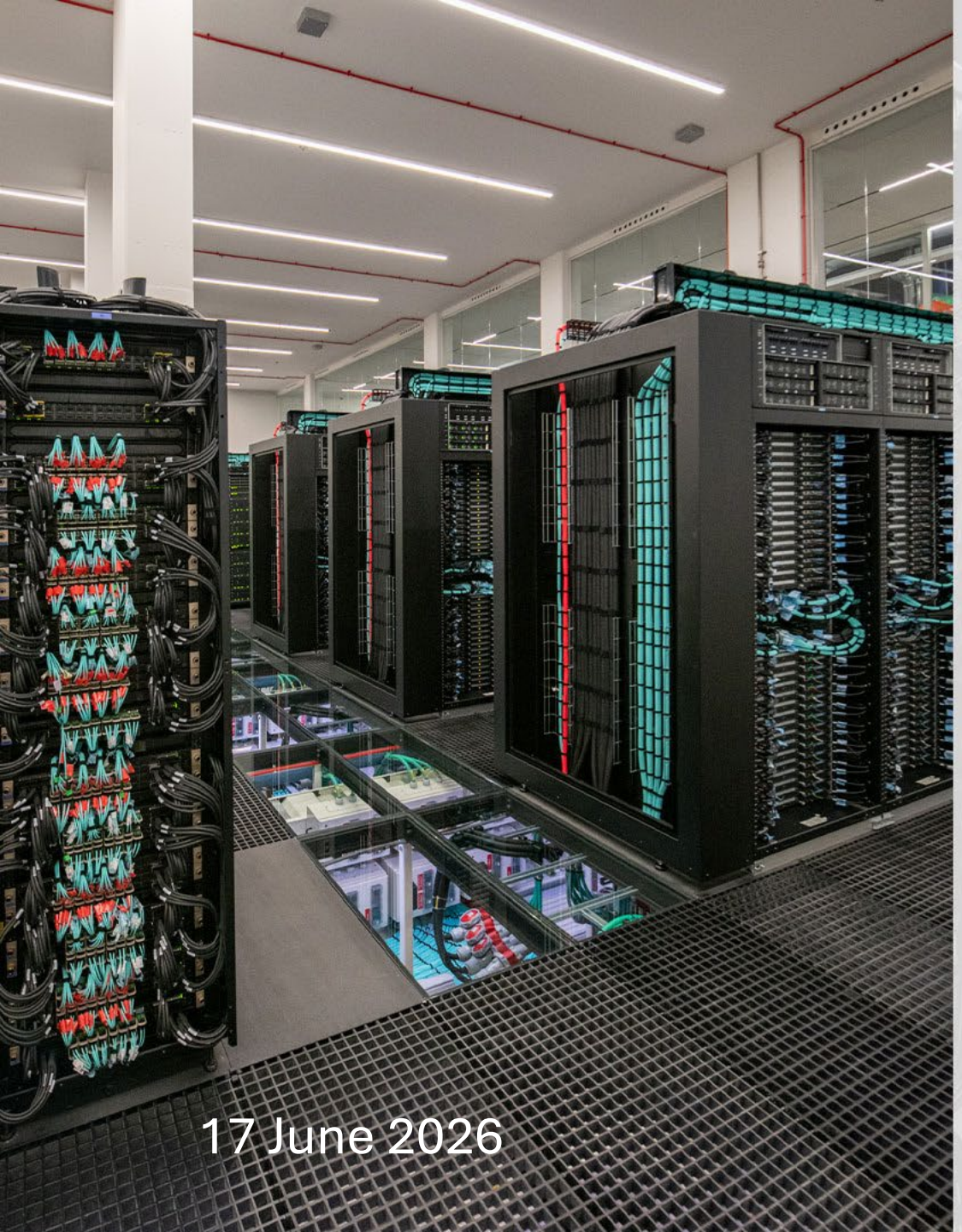

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# What Works? Academia & Industry in Collaboration

## Who, Why, and How

**Melyssa Fratkin**

**Stakeholder Liaison, BSC AI Factory**

17 June 2026

BSC AI Factory Partners

Affiliated entities

# Quick Introduction



- 25+ years in high tech and HPC
- ~1.5  years at BSC (July 1)
- 19 Years at TACC, launching and running the Industry Affiliates Program
- Fluent in Spanish (started at age 4), now learning Catalan
  - Rutgers University
  - Universidad de Salamanca
  - University of Maryland, Robert H Smith School of Business, MBA
- Traveling, Knitting/Crocheting, Cooking



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# What's in a Title?

Industry Programs Director (TACC) = Stakeholder Liaison (BSC)

| | |
|---|---|
| **SAME** | • Presentations ("Who we are and what we do")<br>• Creating connections<br>• Facilitating tech support<br>• 'selling' HPC time<br>• Giving tours<br>• Writing success stories |
| **DIFFERENT** | • Language(s)<br>• Office space<br>• Funding streams<br>• Department size (1 → 10+)<br>• Organization size (200 → 1400+) |

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# But… Why?



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# Academic-Industry Collaboration – Why?

- Diversify your funding streams (if needed)
- New research projects
  - Keeps research staff interested
- More public recognition
  - Public support for research is important



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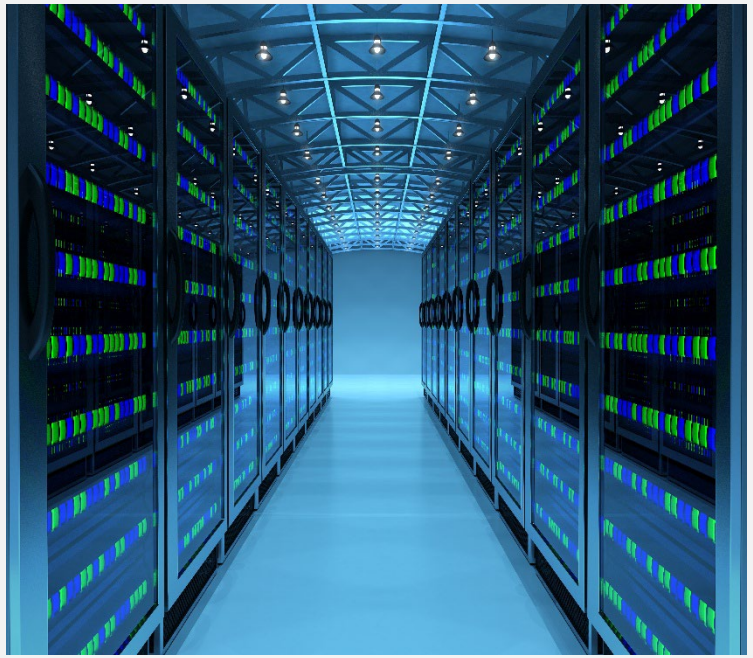
# Industry-Academia Collaboration – Why?



- No capital costs for systems, or electrical/infrastructure
- No need to hire additional sysadmins
- New ideas, fresh perspective
- Support – systems, code optimization, interns, technology testing, benchmarks

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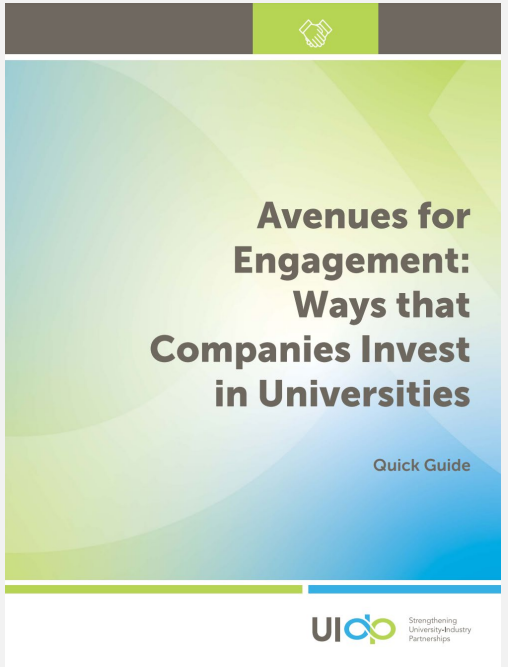
# *Avenues for Engagement: How?*

- Strong partnerships and collaborations have historically relied on **in-person communications and relationship-building**.
- **Site visits** provide time to discuss research needs and capabilities and align expectations. [Can be accomplished virtually]
- Main categories of engagement: **Events, Awards and Prizes, Research Sponsorship**, and **Talent Pipeline/Workforce**




https://uidp.org/

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# Finding partners



- There are lots of companies out there – large and small
- Work to your strengths
  - Engineering? Visualization? Chemistry? Physics?
- Start local – what industries are in your area?
  - TACC: Energy companies
  - NCSA & Ohio: manufacturing
  - San Diego: entertainment
- Small companies/startups
  - Interesting problems, but they need more help and have no money

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# Challenges to HPC Adoption

Council on Competitiveness study in 2005:

- Cost of “big iron” vs. quarterly earnings – ROI?
- Parallelized software & Legacy Codes
- Workforce who can use HPC (education & training)

Similar concerns about NSCI in 2016

- Who can afford big iron (outside the government)
- Modernizing code to run at scale
- HPC Workforce (competing with start-ups)




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# Challenges to AI Adoption

- Systems
  - Bridging the gap from Prototype to Production
  - Trust, Explainability, and Regulatory Compliance
- Codes
  - Data Challenges – Quality, Bias, Scarcity, Privacy
  - Long-Term High-Risk Innovation
- People
  - Talent shortage/Skills Gap
  - Cultural and Organizational Barriers





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# Best Practices for Industry-Academic Collaboration

Addressing the cultural gap between academia and industry

## Most Important Best Practice: Take Industry Seriously

- Ensure industry support is part of the center's mission
- Consider industry requirements for systems and services
- Hire experienced business personnel to lead the partnership program
- Focus on the domains that your staff know well

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# Key Success Factors for Collaboration



- Clear problem definition
- Mutual respect & IP clarity
- Interdisciplinary teams
- Focus on transfer
- Long-term horizon

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# Closing thoughts

- AI startups need help as much as the companies using HPC did four or five years ago
- European AI Factories are at the forefront, pushing EU sovereignty in data, LLMs, and agentic AI
- Academic centers can offer talent, theoretical insights, and responsible, long-term innovation
- …While maintaining humans in the loop to reduce risk (and minimize hallucinations)



*Yes, AI made this image for me.*

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AI Factories

# ¡Gracias!

Questions?

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