

The Competitive Edge in NSF Programs

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THE NSF

▶ The Agency

- ▶ All S&E Disciplines (basic research)
- ▶ Nation's supply of STEM professionals
- ▶ \$7.5 Bil annual budget
- ▶ 1/4 Federal support for basic research to academy
- ▶ University-like Structure (8 Directorates)
- ▶ NSF Program Officers manage funded portfolios

▶ NSF Proposals

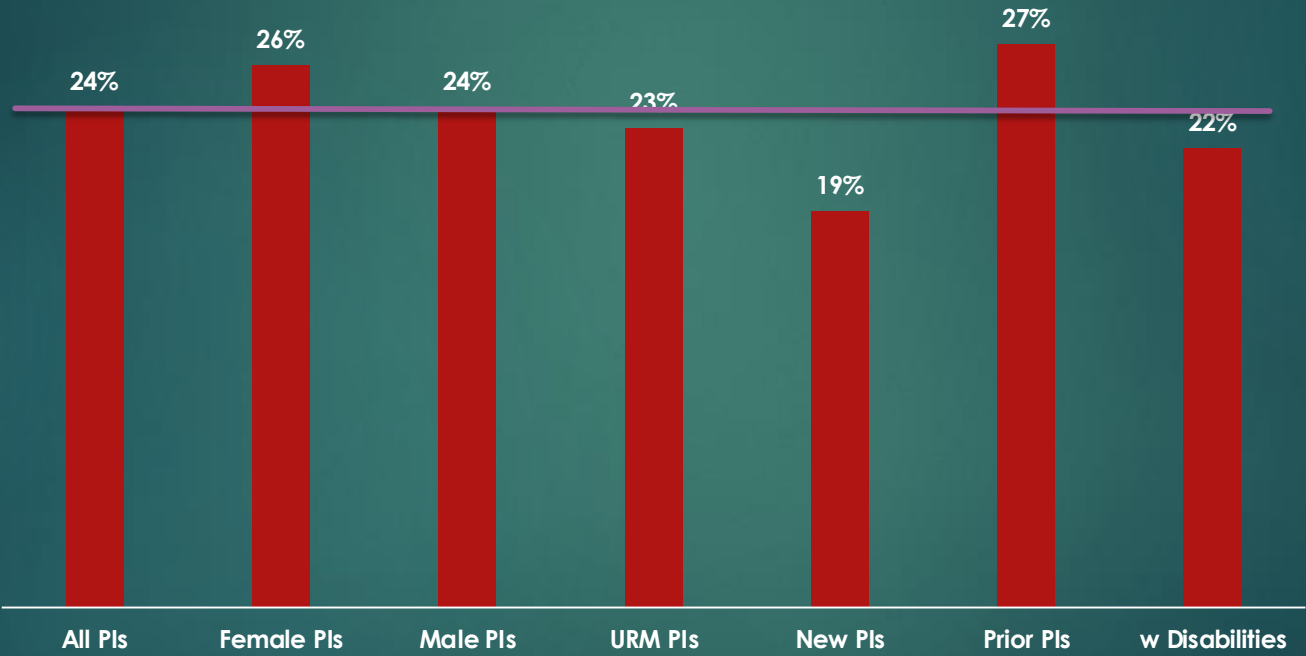
- ▶ 50,000 proposals annually
- ▶ ~ 11,000 proposals funded annually (22% success rate)
- ▶ 2,000 institutions/ orgs funded annually
- ▶ 50,000 advisors each year for proposal review
- ▶ NSF Program Officers make award recommendations
- ▶ Division of Grants and Agreements (DGA) make awards

Source: PAPPG (NSF 18-8), NSB-13-33



PI Success Rates Disaggregated

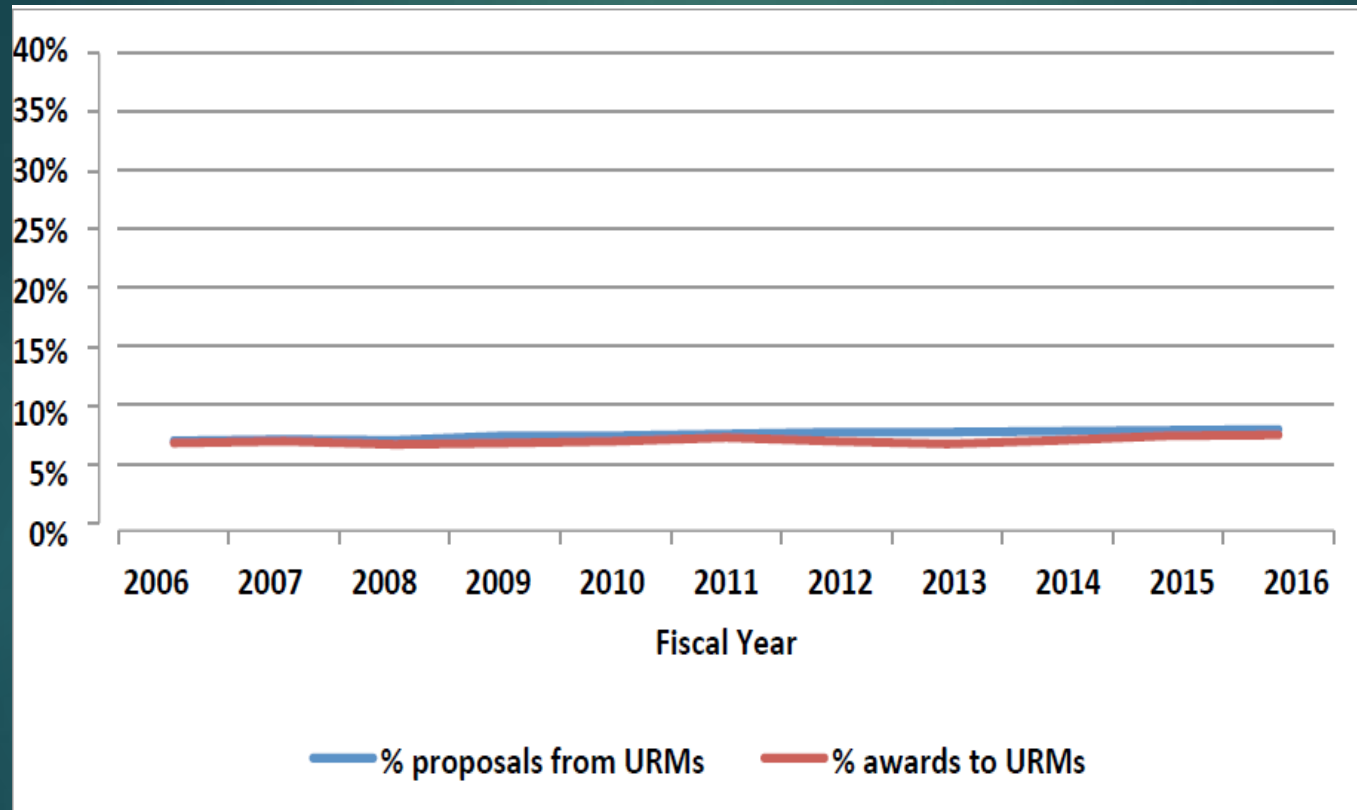
FY 16



Source: NSB-2017-16



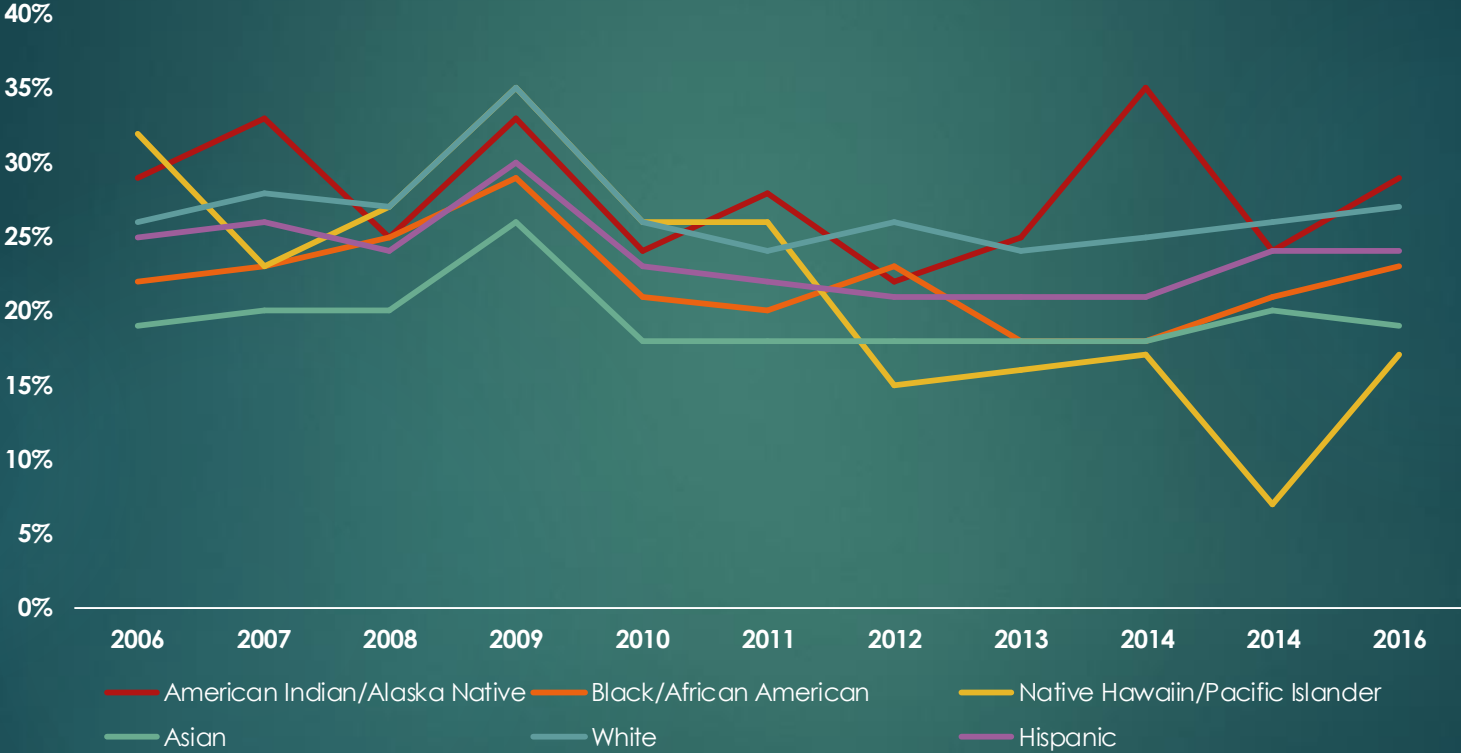
Proportion of NSF Proposals and Awards – PIs of URM Background



Source: NSB-2017-16



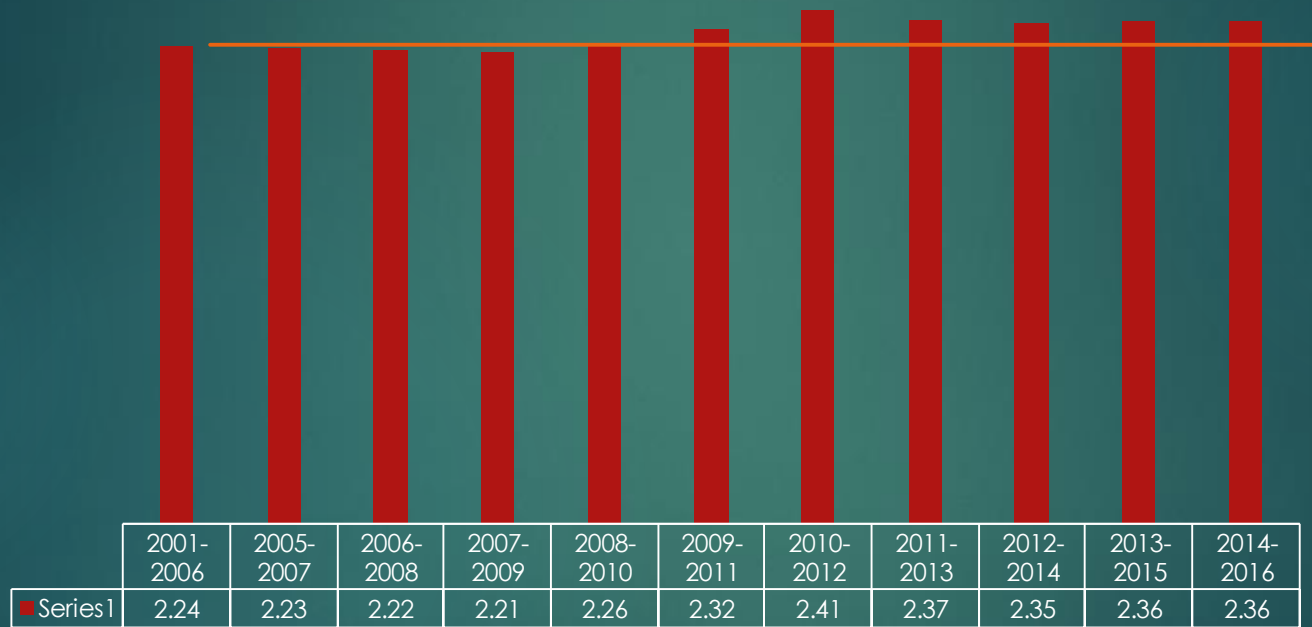
NSF Success Rates by Race and Ethnicity



Source: NSB-2017-16



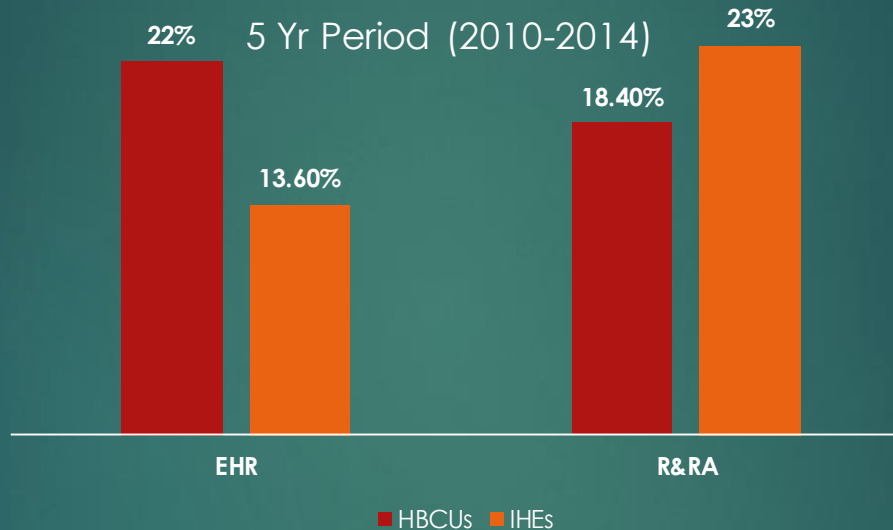
Average Number of Proposals Per PI Before Receiving One Award



Source: NSB-2017-16




HBCU Competitiveness



- 30% of all funded proposals to HBCUs are in HBCU-UP
- ~ receive 72% of NSF funding to HBCUs

Source: EHR Advisory Subcommittee, 2015





The general consensus was that the problem was not a lack of competitiveness of proposals submitted by HBCUs per se, but rather an overall lack of proposals from HBCUs.

-EHR Advisory Subcommittee (2015), p.8



Strategic Opportunity

Greater Broadening Participation Emphasis

- ▶ NSF Core Value – Inclusiveness (NSF18045)
- ▶ Broadening Participation Portfolio of Programs
- ▶ Foundation wide INCLUDES Program
- ▶ Congressionally Mandated Programs
- ▶ BP Programs in more Directorates
- ▶ Accessible Points of Entry (e.g., BP Focused, DCLs)
- ▶ Progressive Engagement (2.4 proposals to award)
- ▶ Multi-level Engagement (e.g., Webinars, PO, Panels)



Leveraging Pathways

HBCU-UP

Targeted Infusion

→ IUSE (DUE)

Implementation

→ ECR Core

→ ITEST/DRK-12

→ Noyce

→ S-STEM

→ CISE/Eng

BP Research

→ EHR Core

→ All of Above

RIA/EiR

→ R&RA

ENG & CS

Engineering
Directorate

→ BP in Eng

- K-16

- Research Project

- Demo Project

- Initial PO Contact

CISE Directorate

→ CSforAIRPP

- PK-14

- Research/
Practitioner

Partnerships

- R&D multi-size
proposals (sm-300K,
med-1M, large-2M)

BIOLOGY

→ DCL: Life STEM

- BP Focus

- Mandated by Congress

- 6 EHR Programs: AISL,
DRK-12, ECR Core, HBCU-
UP, ITEST, IUSE / EAGER

- K-16 R&D

- Biological Sciences /
Bioscience

- Outreach Workshops

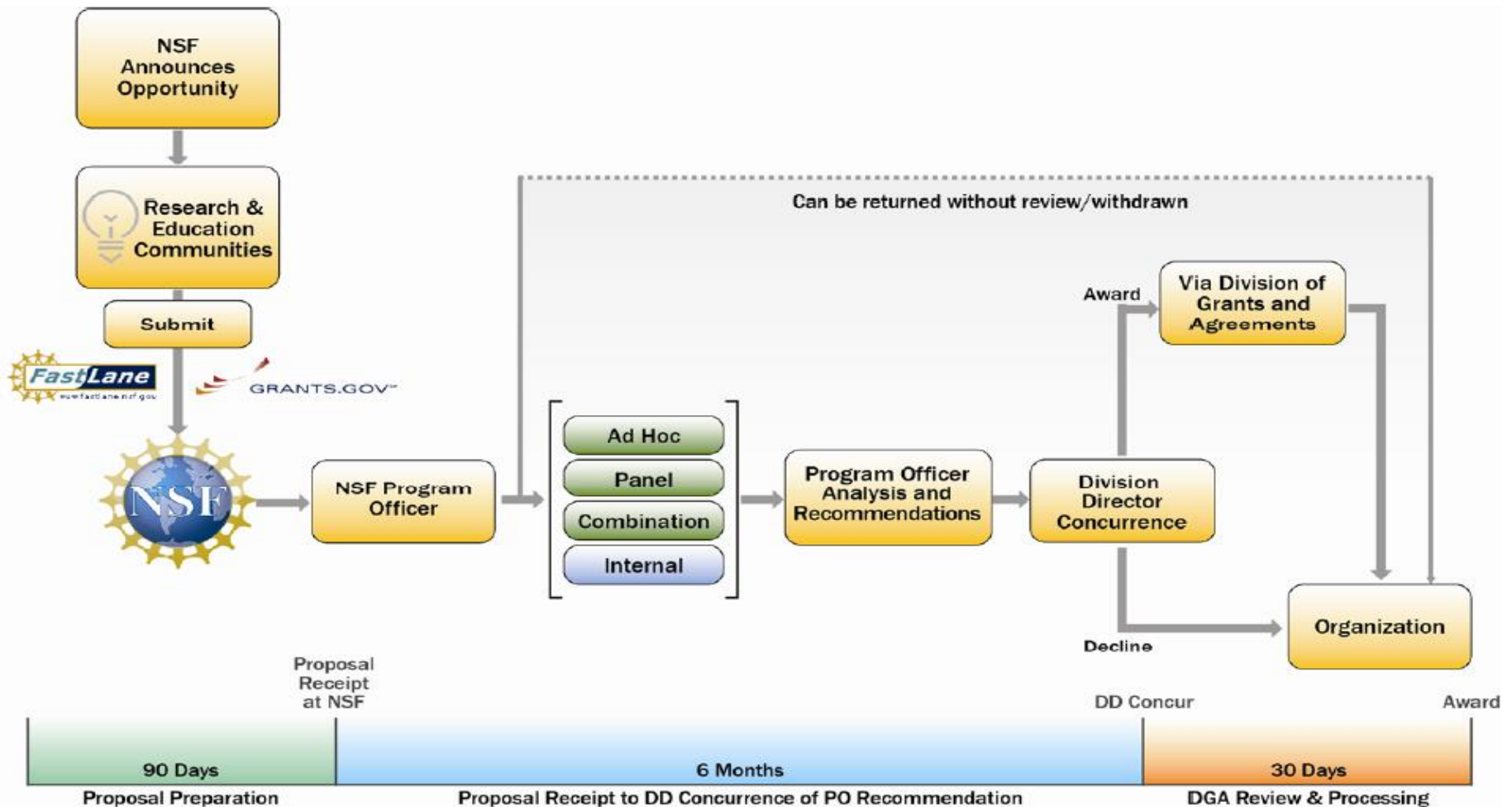
www.bp-msi-lifestem.org

Baltimore-lifestem2018.org



Competitive Essentials

Start Early – Engage for Duration



Competitive Essentials

- ▶ Read and Follow the Policies & Award & Procedures Guide (PAPPG) (NSF 18-1) [Download & Refer Often
- ▶ Read and Adhere to Solicitations
- ▶ Sign up for NSF E-Alerts
- ▶ Follow FVSU Guidelines, Procedures, & Protocols
- ▶ Sign up for NSF E-Alerts
- ▶ Prepare 1 Pager for NSF PO for guidance
- ▶ Notify SPO early of submission
- ▶ Address Merit Review Criteria (IM and BI)
- ▶ External Review Prior to Submission
- ▶ Use Available Resources
- ▶ Submit Days before 5pm Deadline / Fastlane
- ▶ Serve on a Panel
- ▶ Build Capacity – Collaborate, Team, Mentor, PD



Resources/Tools

- ▶ NSF Proposal Writing Toolkit – cadrek12.org/resources#proposals
- ▶ NSF Toolkit – www.nsf.gov/about/congress/toolkit.jsp
- ▶ NSF Outreach Dates – www.nsf.gov/about/congress/nsfdays/
- ▶ QEM/MERA June 2017 NSF Life STEM Workshops: Resources and Presentations – www.bp-msi-lifestem.org
- ▶ Morgan State University Feb 2018 Life STEM Workshop Presentations – baltimore-lifestem2018.org/workshop-presentations (Password:MSULifeSTEM2018)
- ▶ Having Success with NSF: A Practical Guide (Li & Marrongelle, 2013)
- ▶ NSF-funded Virtual Proposal Development Center – Jackson State University, Contact: Dr. Candis Pizzetta, candis.p.pizzetta@jsums.edu



Source References

National Science Board (NSB) (2017). Report to the National Science Board on the National Science Foundation's Merit Review Process, Fiscal Year 2016, (NSB-2017-26).

Available at: www.nsf.gov/nsb/publications/2017/nsb201726.pdf

NSF (2015). *National Science Foundation Report to Congress on Advancing Historically Black Colleges and Universities.*

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Available at: www.nsf.gov/ehr/Pubs/HBCU_Report_Oct_2015.pdf

NSF (2018). *Proposal and Award Policies and Procedures Guide (PAPPG)*, NSF 18-1.

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Thank you!

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