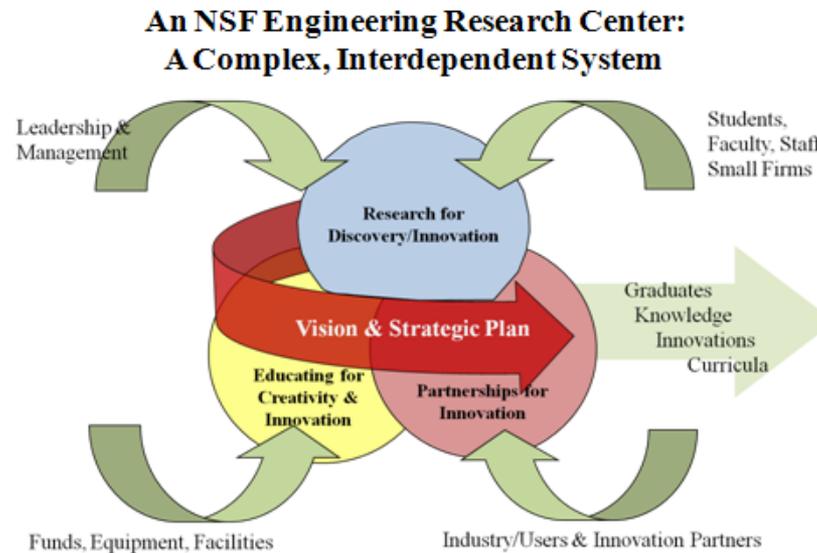




National Science Foundation Engineering Research Centers

D. Keith Roper

Engineering Education and Centers, National Science Foundation



March 16, 2015



Engineering Research Centers: Education & research in a system/discipline frame

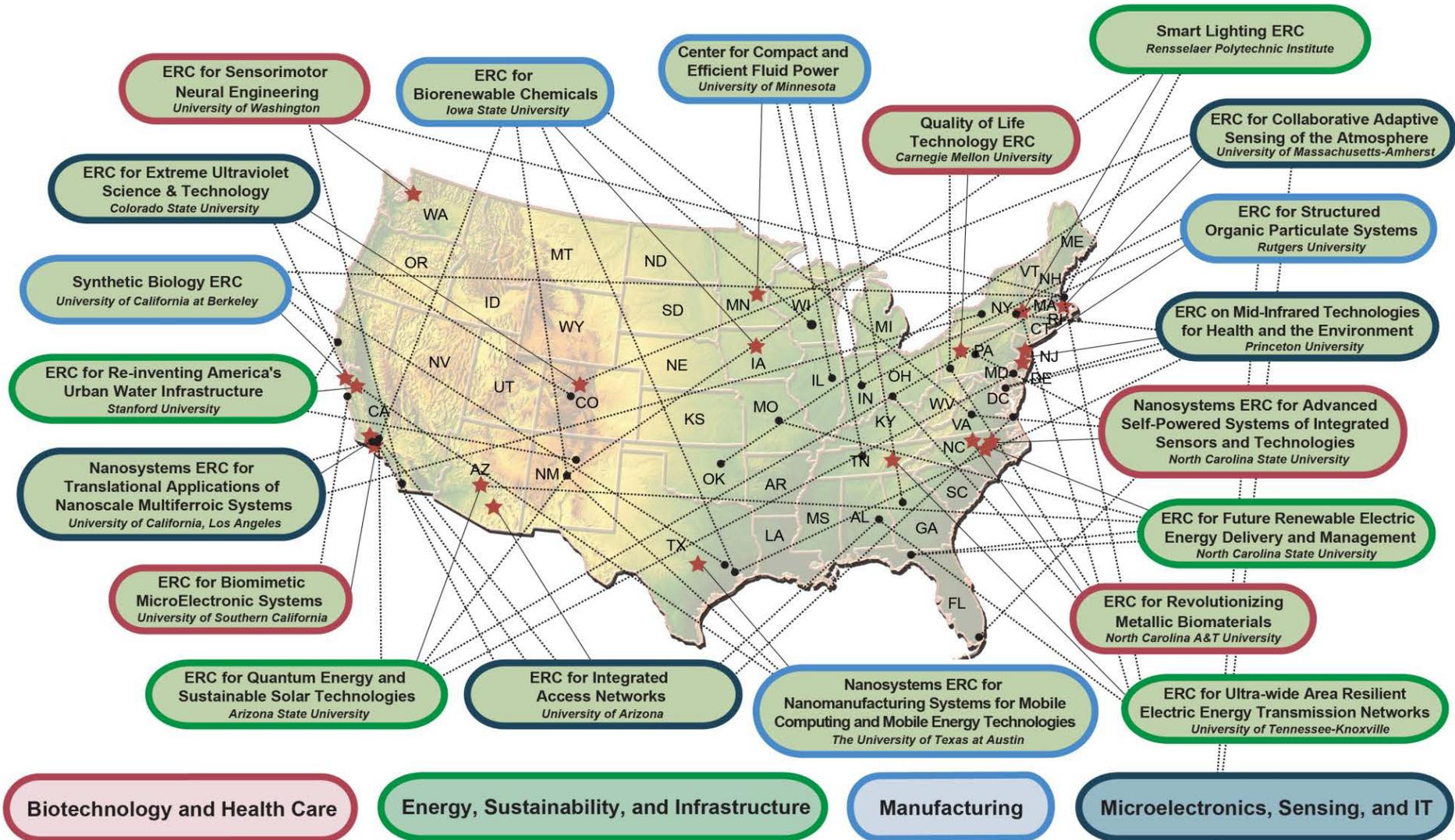


1984 - present

An NSF Engineering Research Center: A Complex, Interdependent System



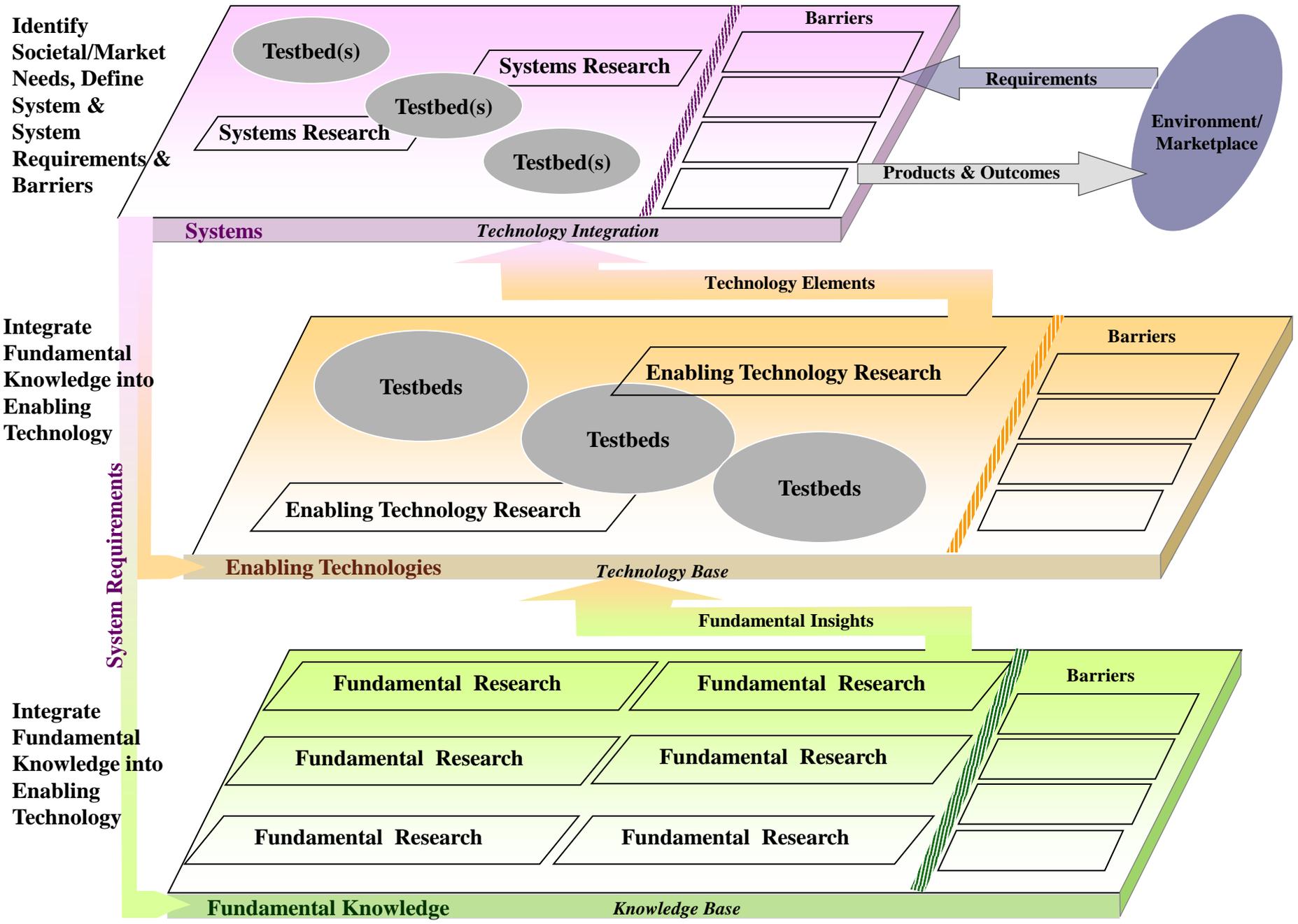
NSF's FY 2013 Engineering Research Centers Lead Institutions ★ and Core ● Partners



Note: All centers are multi-university partnerships; university shown is lead institution.

University of Puerto Rico-Mayaguez ●

ERC Strategic Framework: *It's not an ERC if you don't do all three*

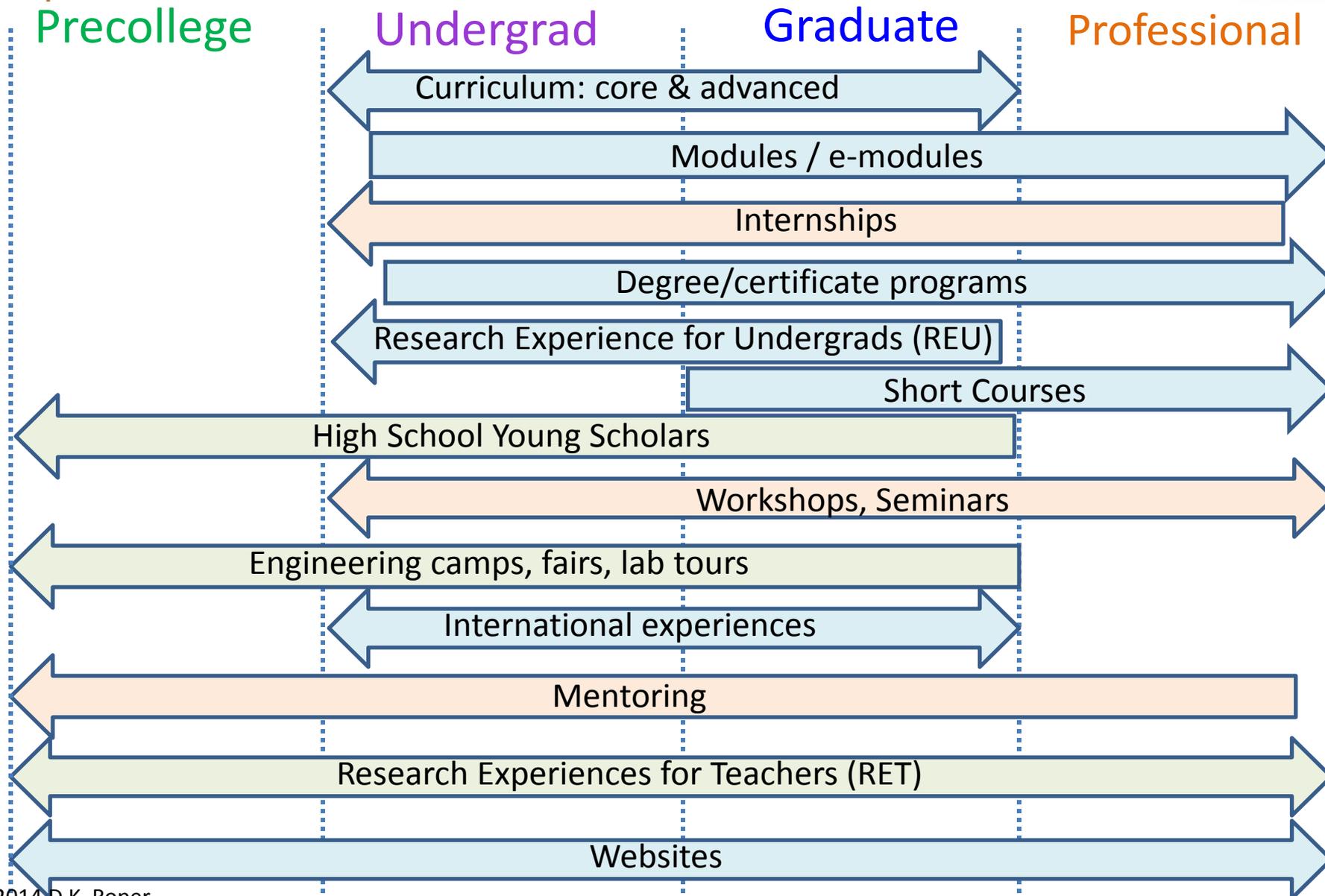




Implementation

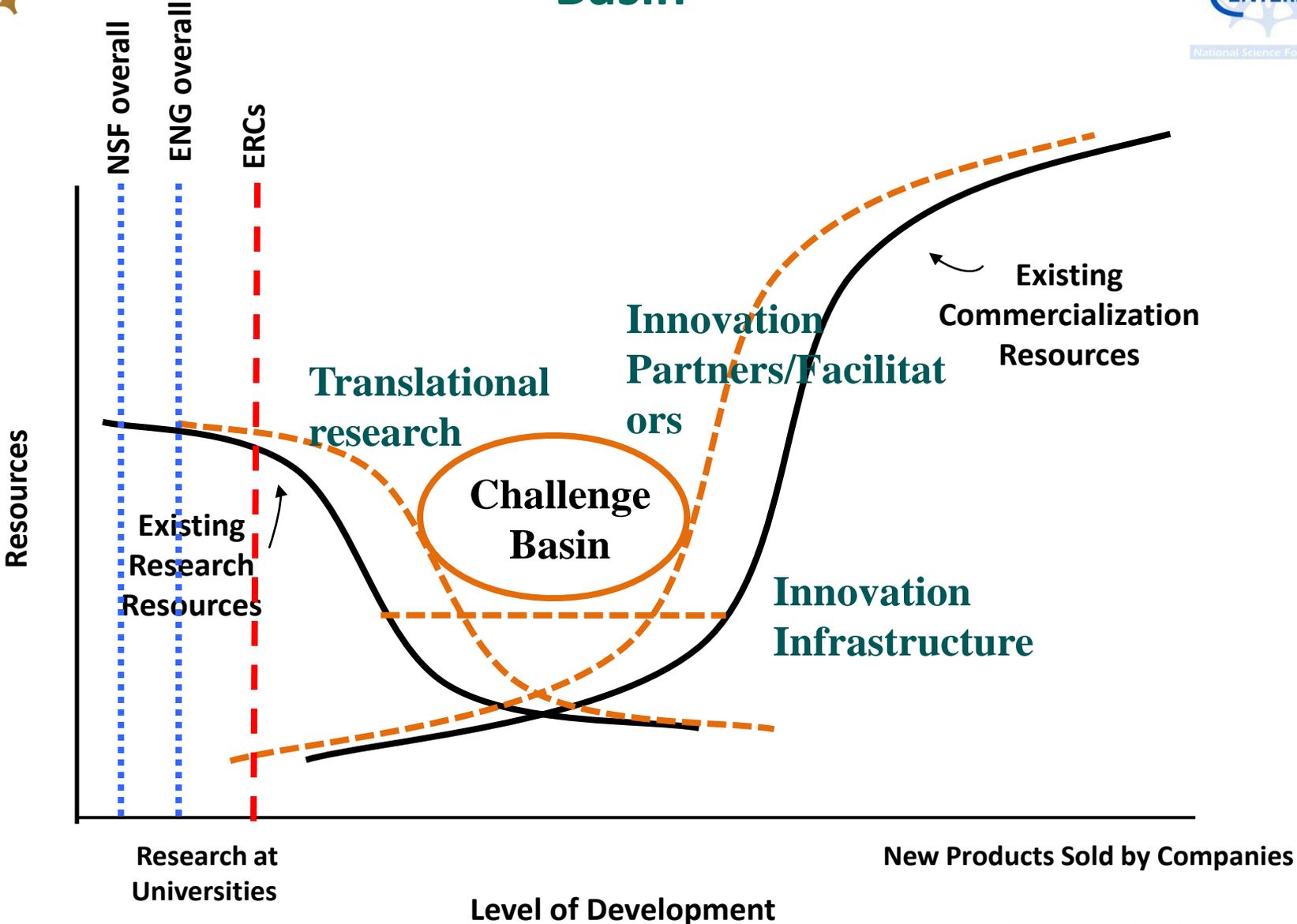


Mature ERC Education Program





Gen-3 ERCs Convert “Valley of Death” into “Cha- Basin”



Adapted from chart by Deborah Jackson, ERC Program Director



Division of Engineering Education and Centers



Don Millard
Division Director
(Acting)

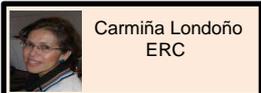


Vacant
Deputy Division
Director

Centers – ERC, NCN



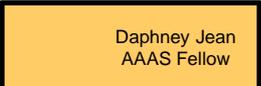
Program Directors ERC



ENG Education



AAAS Fellows



ENG Workforce



Administrative Staff





Engineering Research Center Products



Curricula

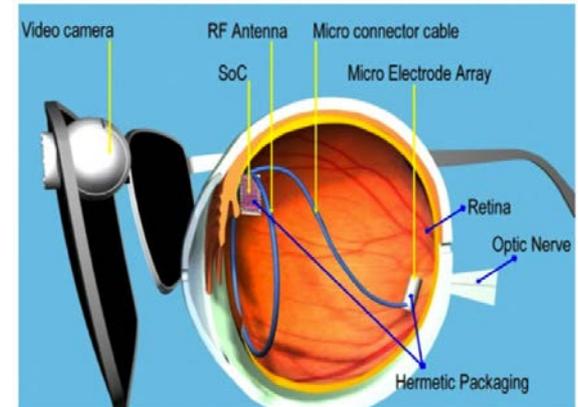
New Courses	717
New Modules/Course materials	1,273
New Textbooks	188
New Degree/Certificate Programs	140
ERC graduates	12,000



Innovation

Patents Awarded	382
Licenses Issued	669
Spinoff Companies	171
Employees	1500

Argus II Retinal Prosthesis



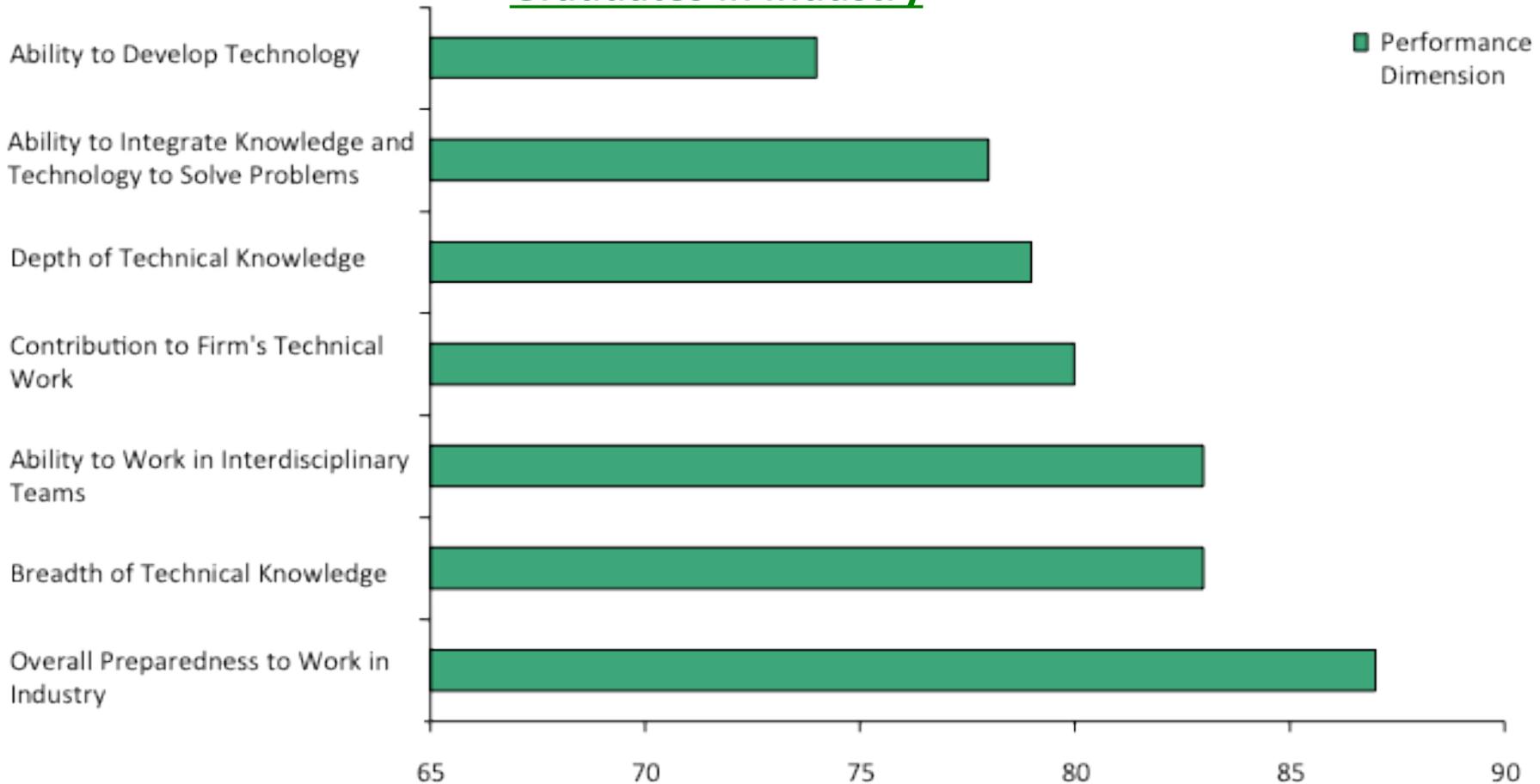


Engineering Research Center Products



>12,000 degrees awarded

Graduates in Industry



* Percentage of industrial supervisors rating the former ERC students/graduates hired by their firms as "Better Than" or "Much Better Than" equivalent hires without ERC experience