



# NSF CDIO Program Overview and Discussion

*Charles Barber, Chief Diversity and Inclusion Officer*

*National Science Board – Open Plenary*

*February 21, 2024*



# OUR APPROACH

# NSF DEIA PROGRAM FRAMEWORK

**PRESERVING  
GOOD WORK**



**CREATING  
FUTUREPROOF  
MODELS**

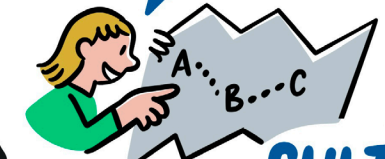


**HELPING OTHERS  
NAVIGATE**

## ORGANIZING DEIA



## SUSTAINMENT STRATEGY



## CULTURE INTELLIGENCE & PERFORMANCE



WITH DR. CHUCK BARBER

## NSF DEIA MODELS:

MATURITY  
MODEL

UNDER-  
REPRESENTATION  
MODEL



**DYNAMIC  
BENCHMARKS!**

## DATA DRIVEN APPROACH

EQUITY  
LENS

- GROUPS
- ON EVERY  
LEVEL
- STATISTICAL  
STANDARDS

## ASSESS

UNDER-  
REPRESENTATION

LET'S MAKE  
OUR DATA



## INCREASE BARRIER ANALYSIS



## IMPROVING

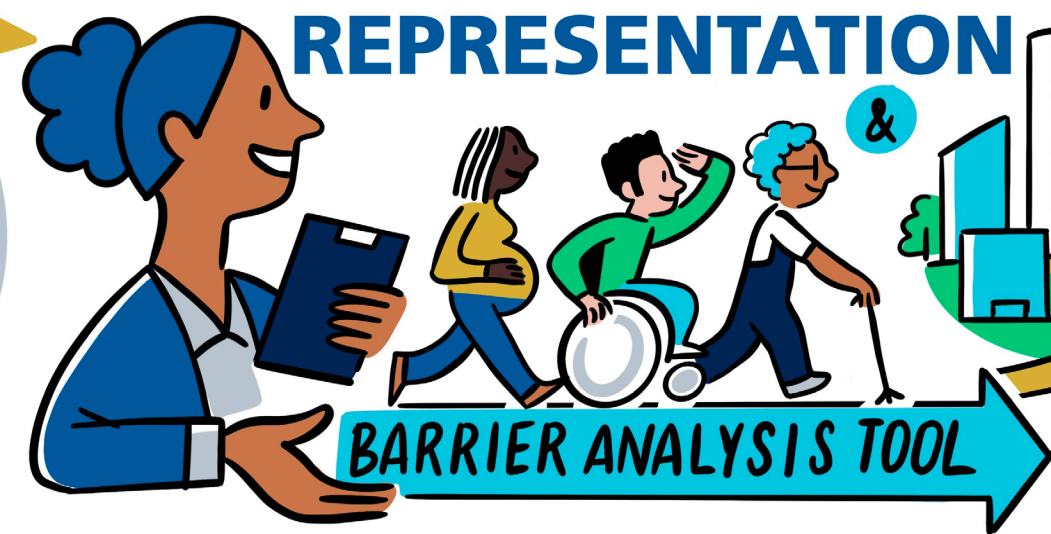
SYSTEMS  
POLICIES

**SOGI  
INITIATIVES:**  
● SOGI DATA  
● SGM DATA

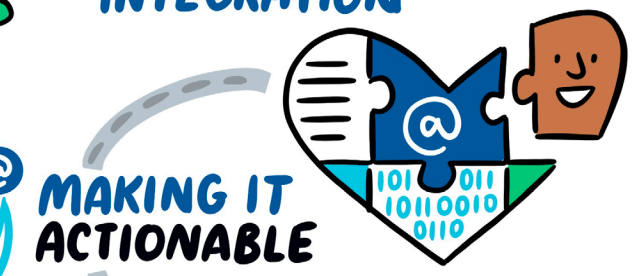


# NSF UNDER-REPRESENTATION

**FOCUS ON:**  
 ASSESSING UNDERREPRESENTATION WITHIN TALENT MANAGEMENT SYSTEMS  
 BALANCING WITHOUT COMPROMISING

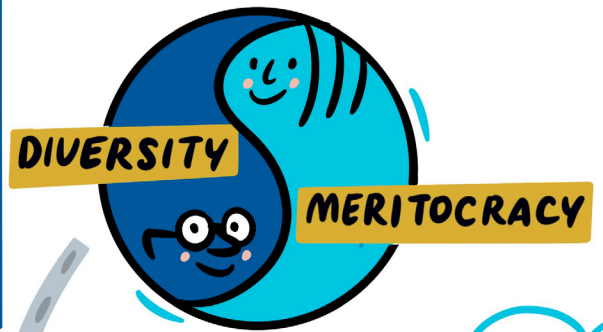


**DATA INTEGRATION**  
 MD-715 REPORT



**MAKING IT ACTIONABLE**

- TAKE A LOOK AT:
- GLOBAL TRENDS
  - WORK CHARACTERISTICS
  - MANAGEMENT CHALLENGES

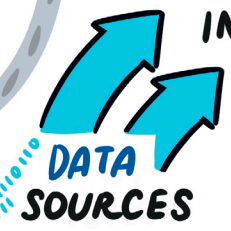


**DATA MAPPING**



**ARCHITECTURE & STRUCTURE**

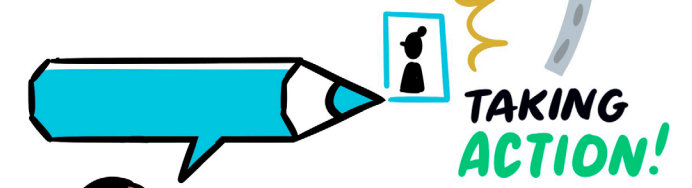
**DATA INTEGRATION**  
**DATA SOURCES**



**DATA ANALYTICS**  
**DATA INTEGRATION**

**NEXT LEVEL BARRIER ANALYSIS**

**PROOF OF CONCEPT FOR DATA VISUAL**



**DYNAMIC BENCHMARKS**

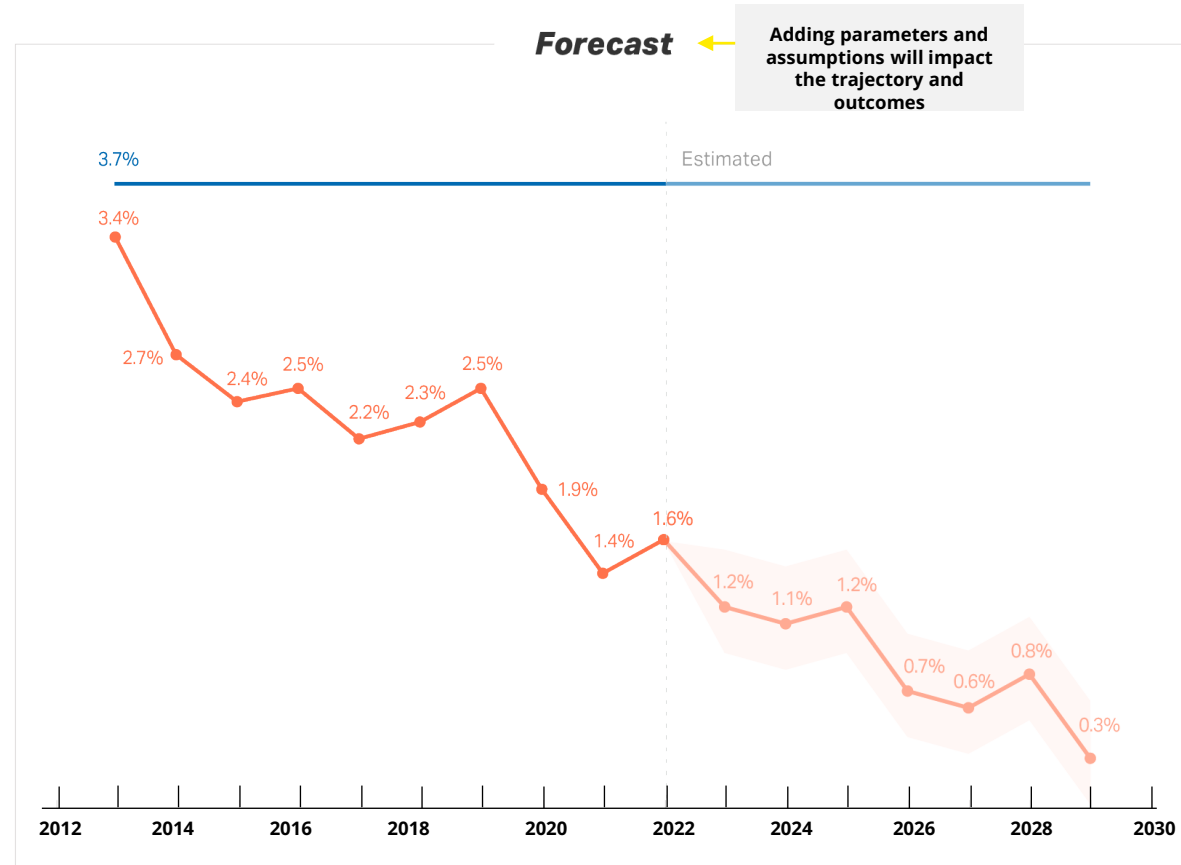
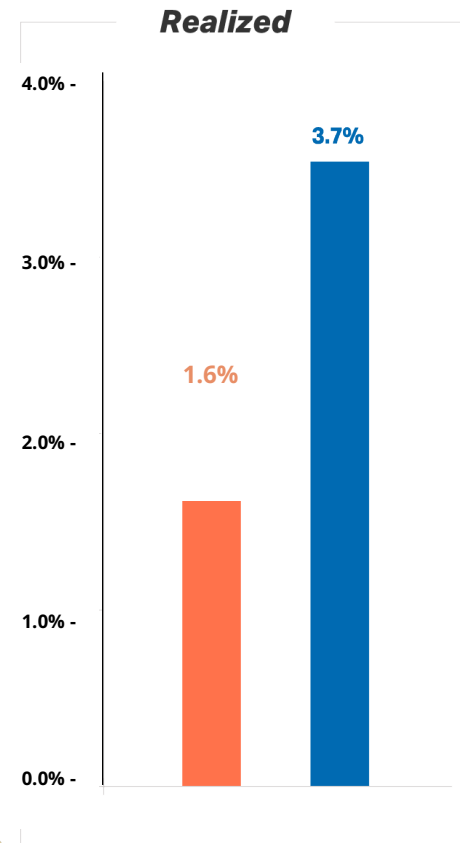
**PREDICTIVE ANALYTIC**



# Under-representation Framework

## Race/Ethnicity

● Observed ● Benchmark



- 🔍 Race/Ethnicity
- All
  - Americana Indian
  - ⊗ Black or African
  - Hispanic or Latino
  - None Specified
  - Two Or More Races
  - White

Note: Data used to derive benchmarks will incorporate employment profiles and diversity characteristics for each occupational specialty. This ensures that leaders can compare the estimated relevant labor force data with the weighted crosswalk to calculate benchmarks and representation for gender, race, and ethnicity.

Based on available data, under-representation occurs in the female, Hispanic, black and instances where individuals identify with two or more races.





# NSF DEIA MATURITY MODEL

**FOCUS ON:**



WITH DR. CHUCK BARBER



## LINES OF EFFORT:

**CULTURE**  
LEADERSHIP DEVELOPMENT

**OPERATIONS**  
POLICY STATEMENTS

**POLICY**  
DE&I MENTORING PROGRAMS

**TALENT MANAGEMENT**  
DIVERSITY RECRUITMENT, NEW EMPLOYEE SOCIALIZATION, ETC.

**LEADERSHIP REFLECTION / RESTORATIVE PRACTICE**

**SOGI INITIATIVES:**

SOGI DATA  
 SGM DATA



✓ SELF ASSESMENT  
 ✓ SELF REFLECTION  
 ✓ GOAL SETTING

FROM COMPLIANCE TO INCLUSIVE

**INCLUSIVE**

**COHESIVE**

**ACCEPTANCE**

**EVOLVING**

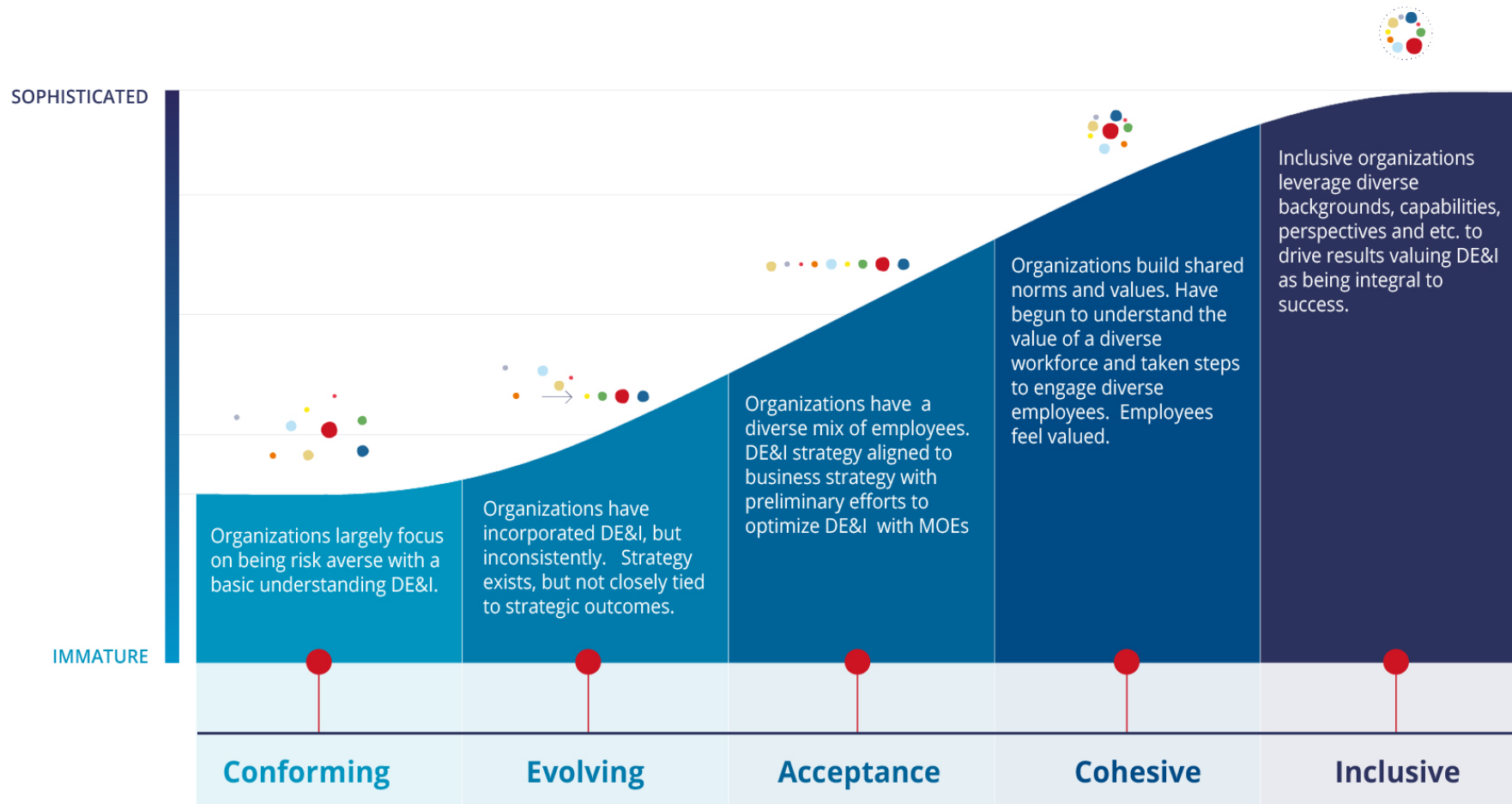
**COMPLIANCE**

**DIVERSE:**

- BACKGROUNDS
- CAPABILITIES
- PERSPECTIVES



# NSF DEIA Maturity Model





# NSF Culture Assessment and Linkage of DEIA Efforts to Culture

## ADAPTABILITY

Pattern, Trends,  
& Market

*Are we listening to the environment?*

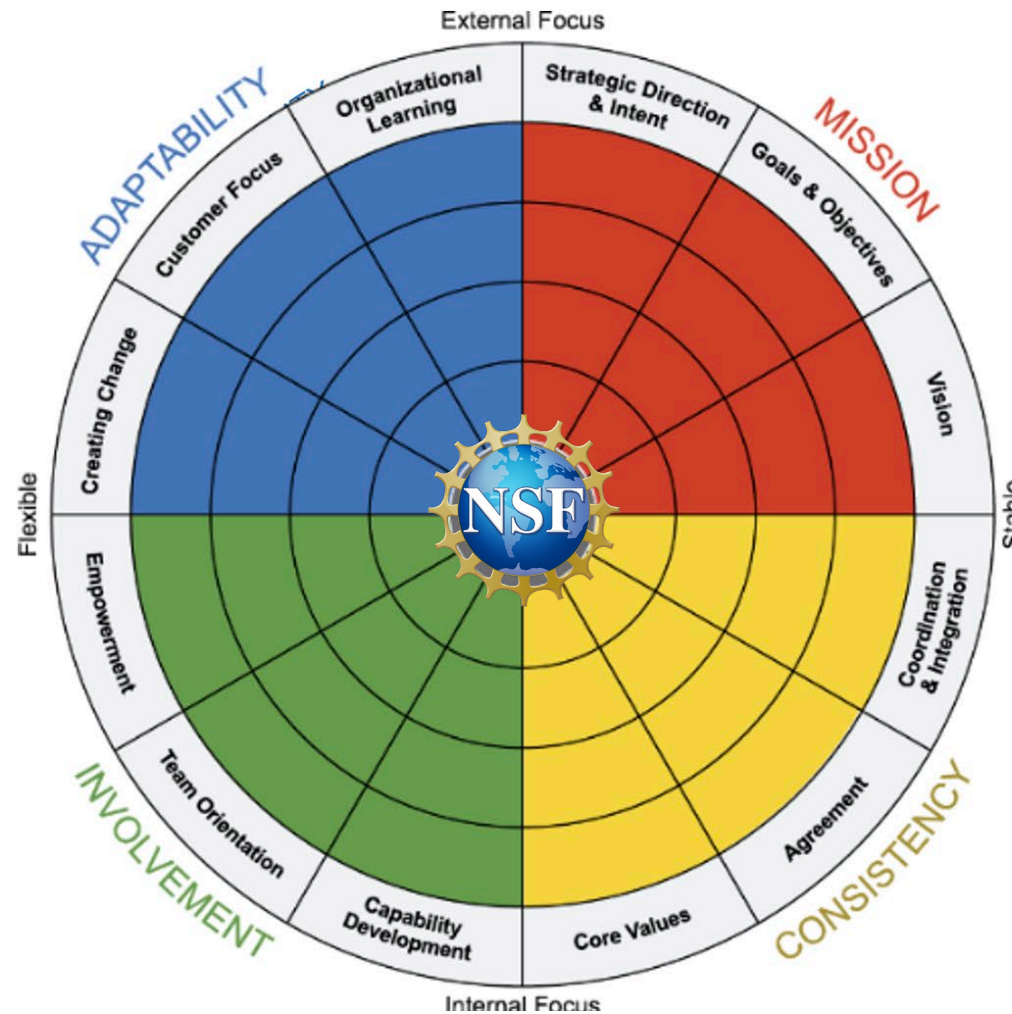
Translate the demands of the environment into action

## INVOLVEMENT

Commitment, Ownership,  
& Responsibility

*Are our people aligned and engaged?*

Build human capability, ownership, and responsibility



## MISSION

Direction, Purpose,  
& Blueprint

*Do we know where we are going?*

Define a meaningful long-term direction

## CONSISTENCY

Systems, Structures,  
& Processes

*Does our system create leverage?*

Define the values & systems, the basis of a strong culture



# Informal STEM CDIO Forum





