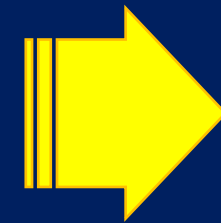
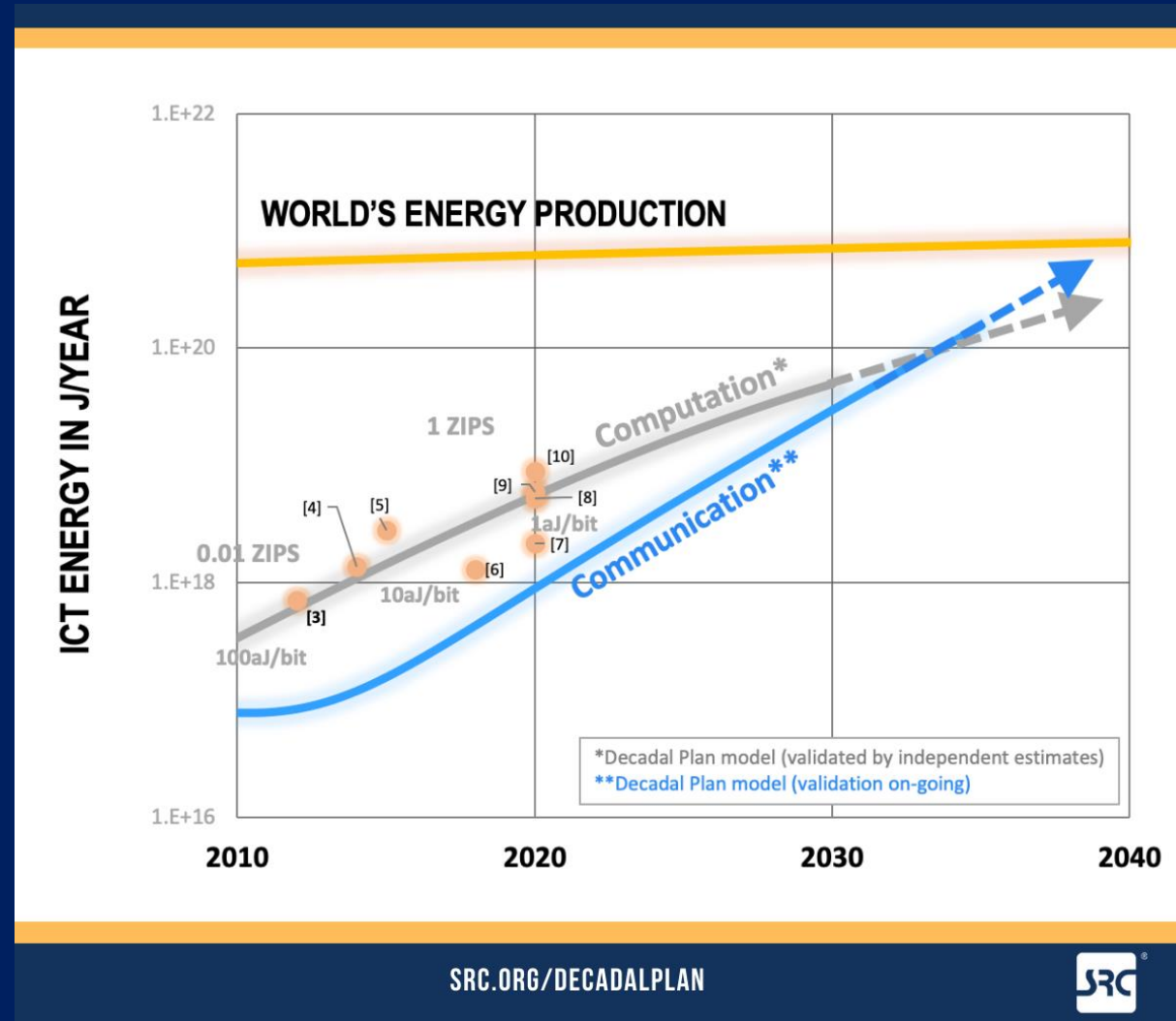


A large iceberg floats in a blue ocean under a blue sky with white clouds. The top of the iceberg is visible above the water, while the much larger, submerged part is visible below the surface. The text is overlaid on the left side of the image.

WORKFORCE DEVELOPMENT AT THE NEXUS OF EES2 AND US DEMOGRAPHIC DISRUPTIONS

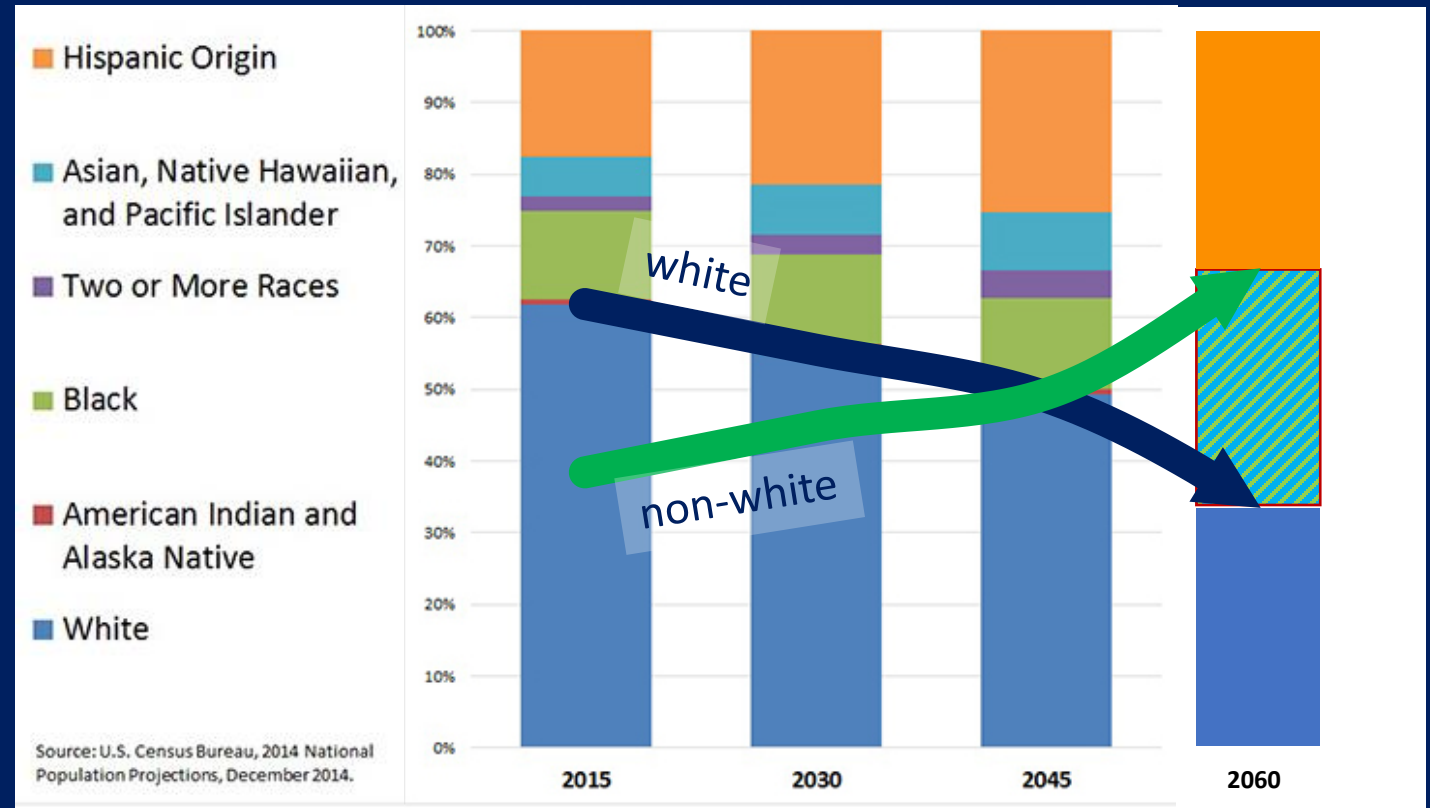
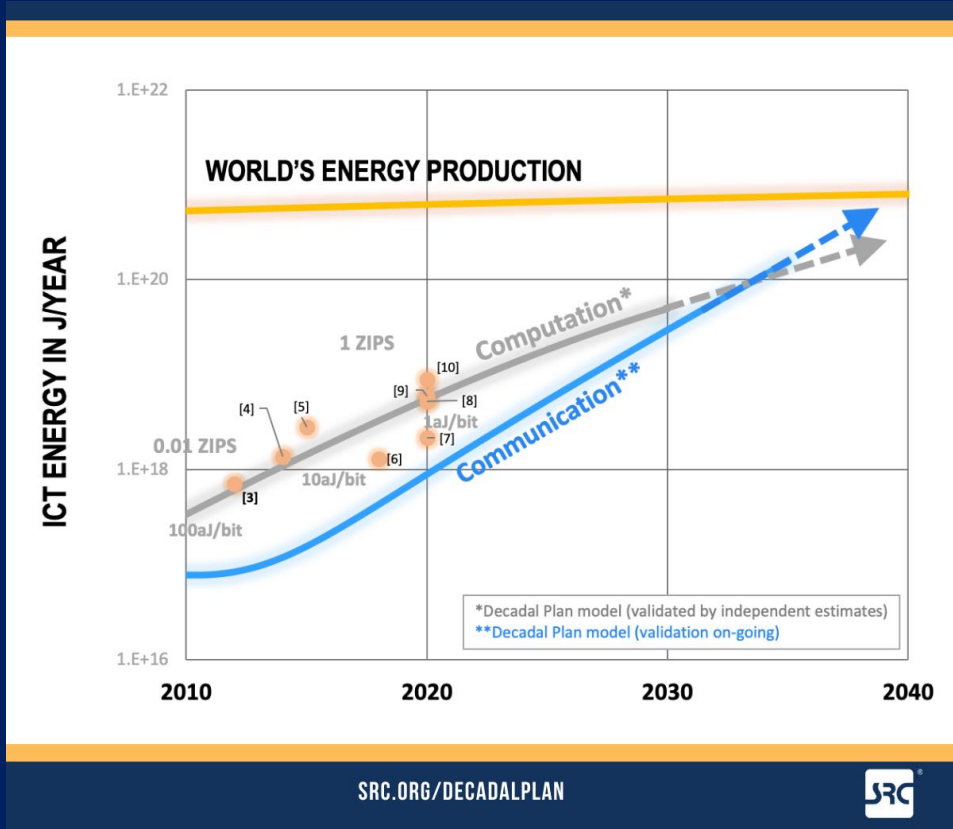
*Timothy (Tim) Wei
Caecilia Gotama, Bill Gervasi
BRDG Bridge-to-Connect*

GRAND CHALLENGE 1: By 2045, energy requirements for electronics will exceed what the world can produce.



EES2

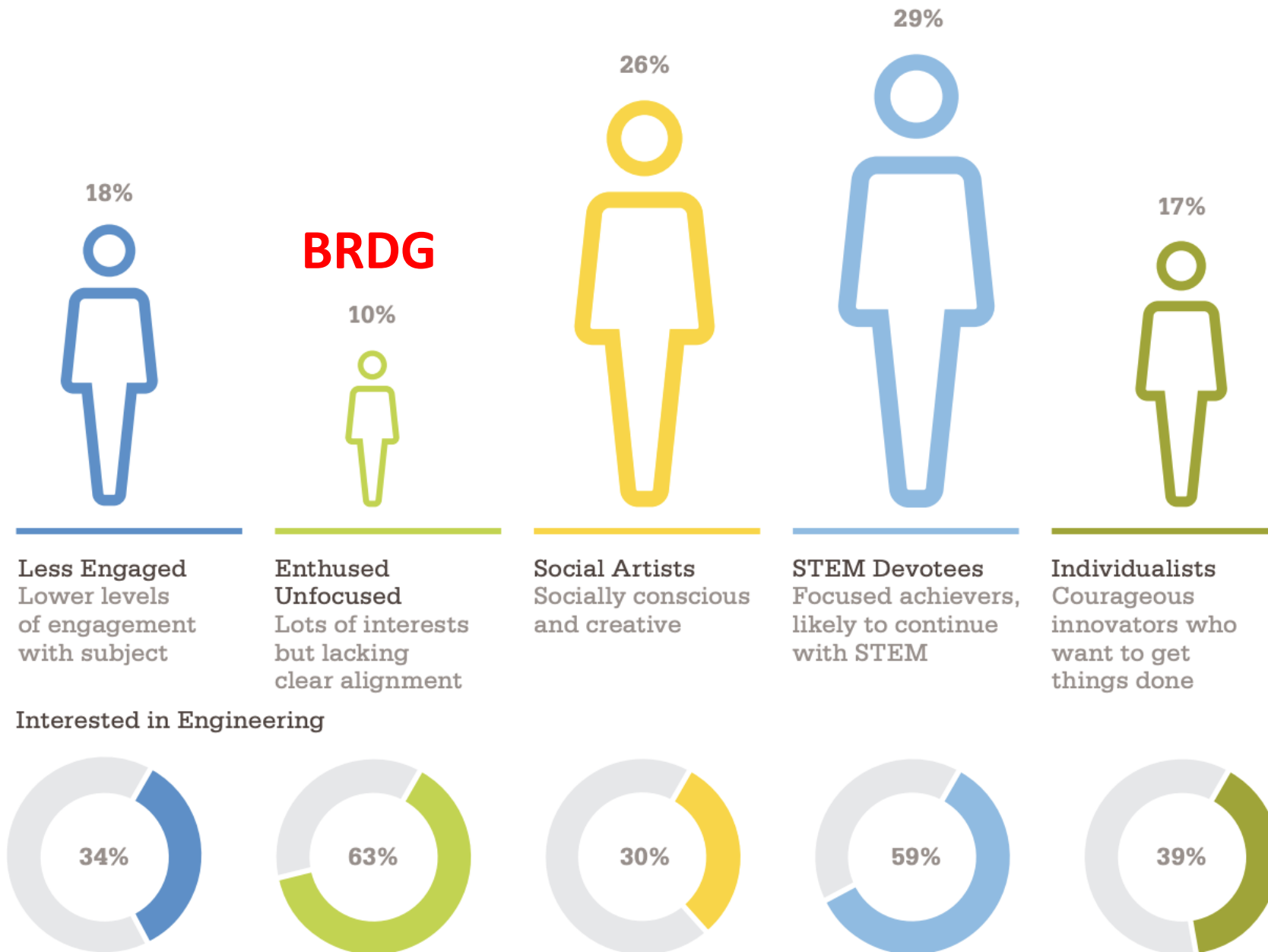
GRAND CHALLENGE 2: By 2045, the US will no longer be a white majority nation (\approx invested vs disinvested).



These two grand challenges are occurring exactly in parallel and are integrally coupled.

NEWS FLASH: Kids not all alike!

- *STEM devotees*, the primary source of engineers, could shrink by 30-50% by 2045.
- *Less Engaged and Enthused Unfocused* could double to over 50% of youth in that time.



<https://www.imeche.org/policy-and-press/reports/detail/five-tribes-personalising-engineering-education>

21ST CENTURY TECHNICAL WORKFORCE: Growing an iceberg

engineering talent

*Train future technology leaders
(community colleges, universities,
career creation, economic development)*

engineering and technology literacy

disinvested / disconnected

*Make people aware that engineering and
technology is ubiquitous in their daily lives.
(K12, marketing, community engagement)*

*Equip and empower people to
leverage that technology.
(K12, continuing education,
community engagement)*

THE CALLING, THE OPPORTUNITY, AND THE WHY:

GRAND CHALLENGE 1: Energy Efficiency Scaling

+ GRAND CHALLENGE 2: Engaging and Elevating Society = EES2²

... engineering workforce at the intersection of technology and society.

THE CALLING, THE OPPORTUNITY, AND THE WHY:

GRAND CHALLENGE 1: Energy Efficiency Scaling

+ GRAND CHALLENGE 2: Engaging and Elevating Society = *EES2²*

- You can build on a reputation for having identified and addressed a truly global grand challenge.
- You are the only ones who can show how the two grand challenges are integrally coupled.
- It's a once in a lifetime opportunity to position yourselves as transformative thought leaders.
- ... *and, oh by the way, you'll have laid the groundwork for an engineering workforce development paradigm at the intersection of technology and society.*