



eX

real world **futures**

#futureworking

#futurethinking

#futureliving

Build Brains Better:

Science-Inspired Investing for Brain Health and Skills for the Future

With

A/Prof Harris A. Eyre

Hon Jay Weatherill AO

Adjunct Professor Michael Hogan

Lori Rubenstein

Matthew Wright

Wednesday, 10 November 2021



PRESENTED IN COLLABORATION WITH



Thriving
Queensland
Kids
Partnership





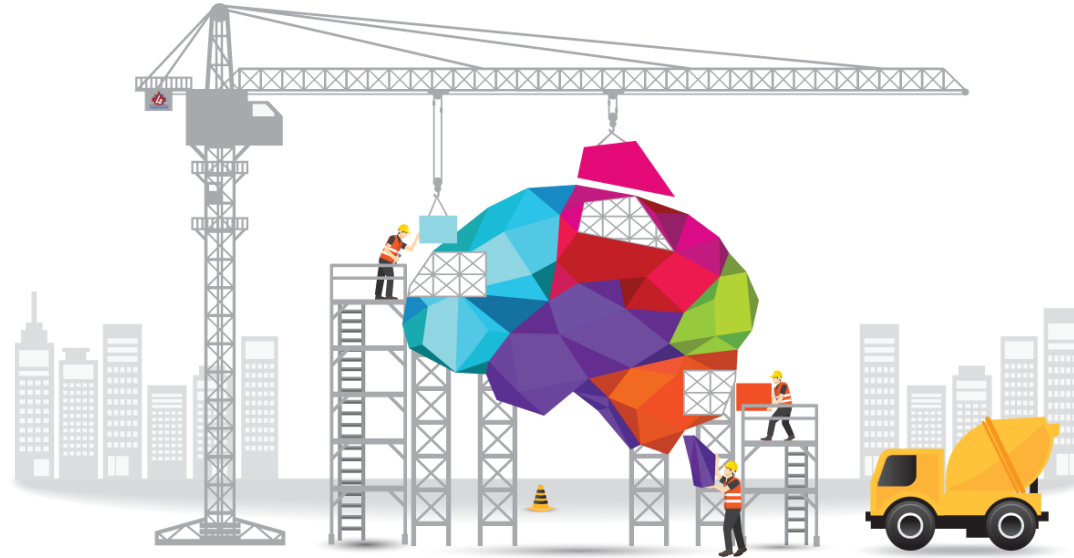
ACKNOWLEDGEMENT OF TRADITIONAL OWNERS

QUT acknowledges the Turrbal and Yugara, as the First Nations owners of the lands where QUT now stands. We pay respect to their Elders, lores, customs and creation spirits. We recognise that these lands have always been places of teaching, research and learning.

QUT acknowledges the important role Aboriginal and Torres Strait Islander people play within the QUT community.



Build Brains Better, Australia!



Harris A. Eyre MBBS PhD

Co-lead, *Neuroscience-inspired Policy Initiative (NIPI)* @ OECD in collaboration with
PRODEO Institute, Meadows Mental Health Policy Institute

Adjunct with *IMPACT* @ Deakin University, *Global Brain Health Institute* @ UCSF, *Brain Health Nexus* @ Cohen Veterans
Bioscience, and *HEKA Fund* (Newfund Capital and FondaMental Fondation)



Brain Challenges



Stress

COVID
Brain Fog

Short-term
thinking

Political
tribalism

Climate
change
denial

Anti-
vaccine
sentiment

Misinformation
spread

Despair

Stigma

Alzheimer's
disease

Depression
and anxiety

How much longer can society sustain this barrage of challenges?

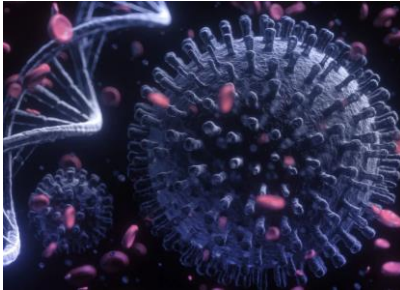
All roads lead to the brain



Climate



Viruses



Brains



Modern economy

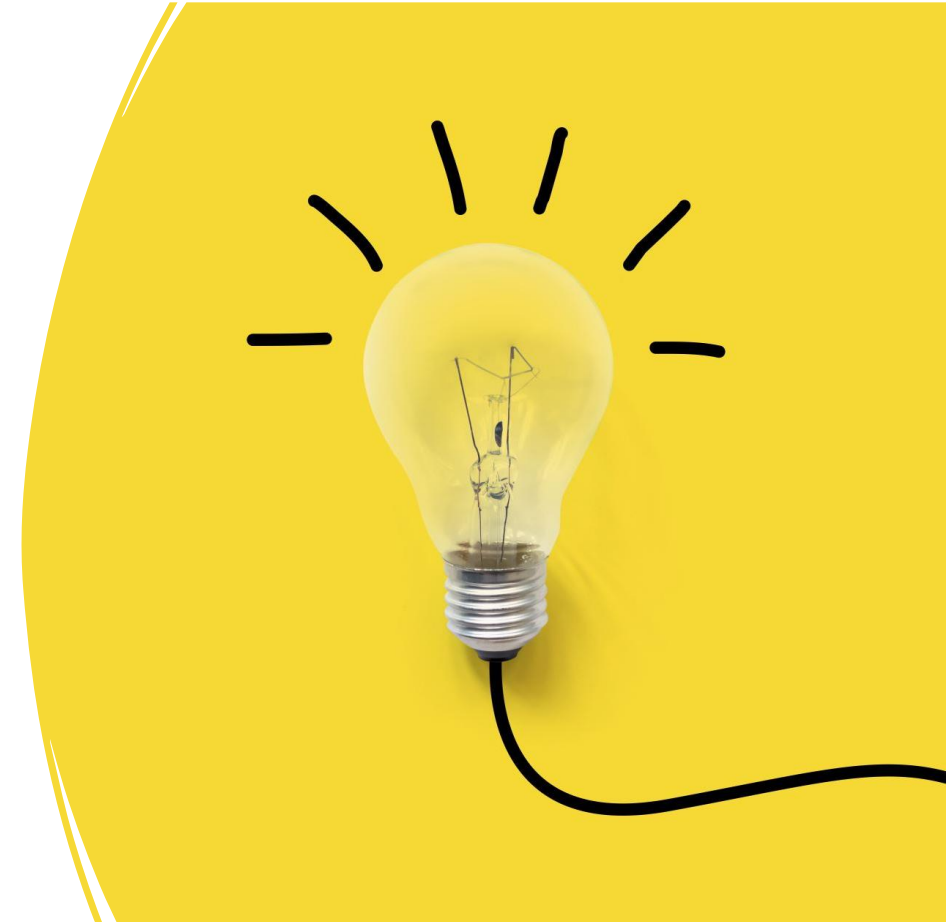




- In 1968, Robert F Kennedy said, “GDP measures everything except that which is worthwhile”.

Our Brains

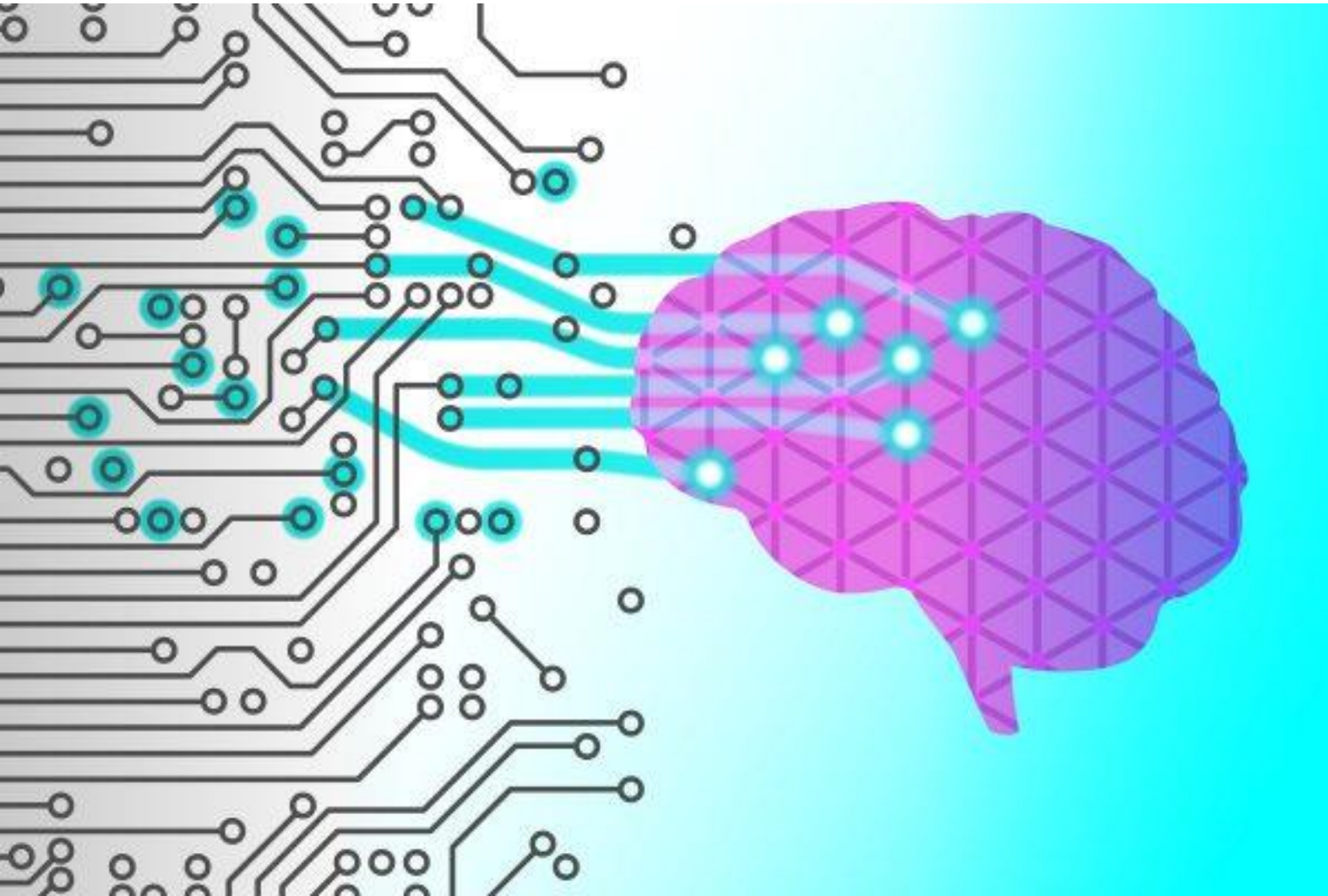
- Are left behind in economics, policy and investing
- Let's fix this
- If we don't, can society endure?!



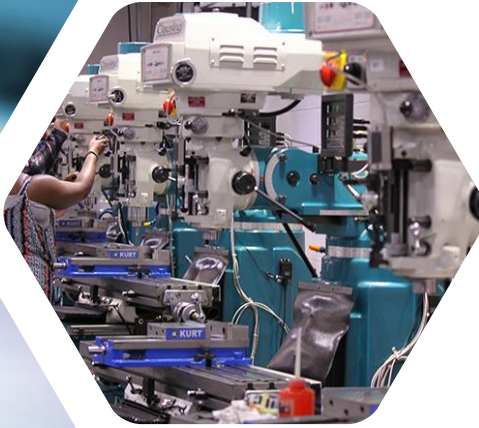
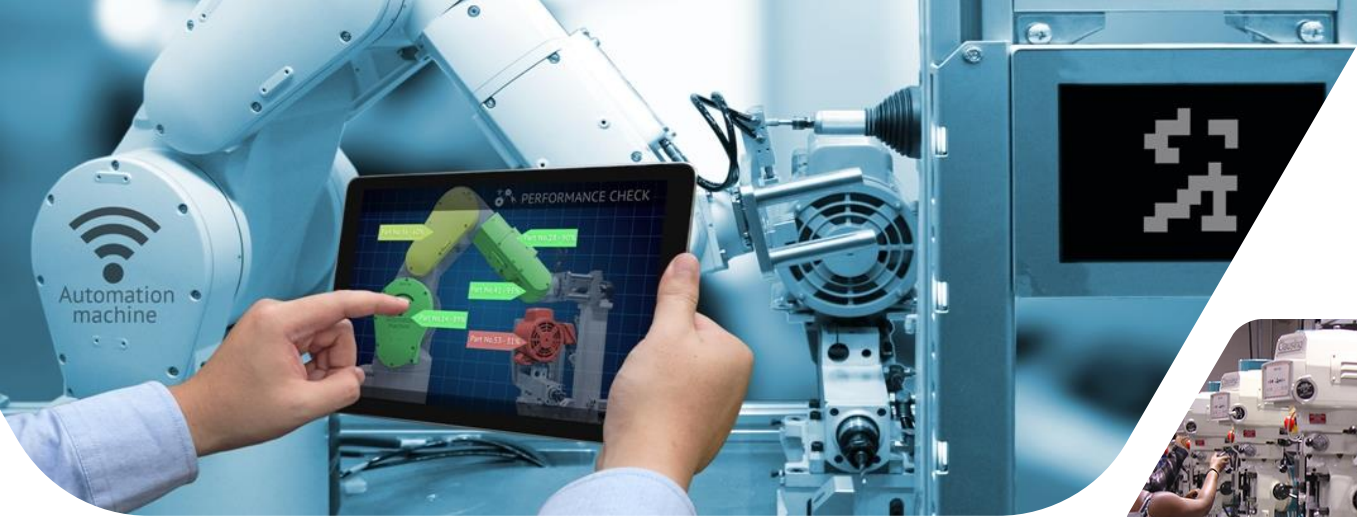
Let's put the brain at the center of the economy



Brain Capital



- Brain health + brain skills in the brain economy



What is the Brain Economy?

- Increasingly demands cognitive skills.
- Innovation is a tangible deliverable of employee productivity.
- Stigma rates are falling.
- Neuroscience discoveries are increasing.
- COVID harms our brains.

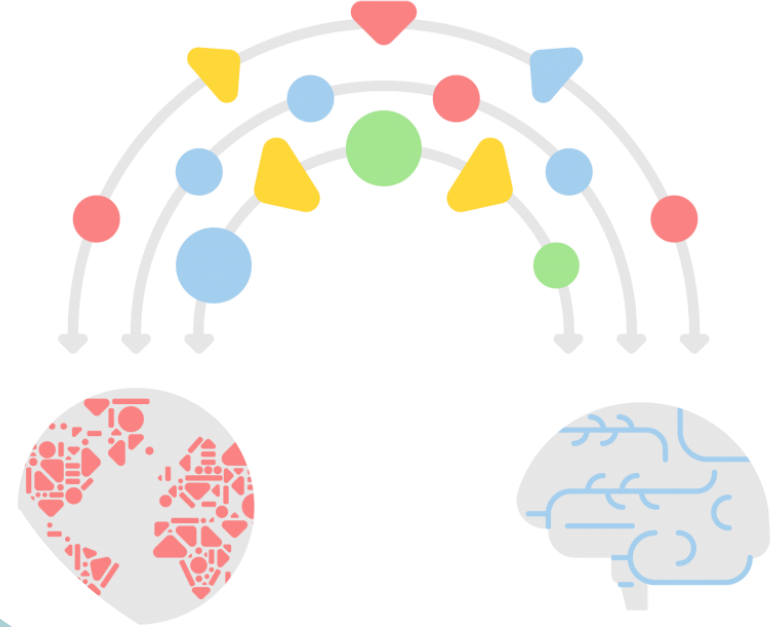


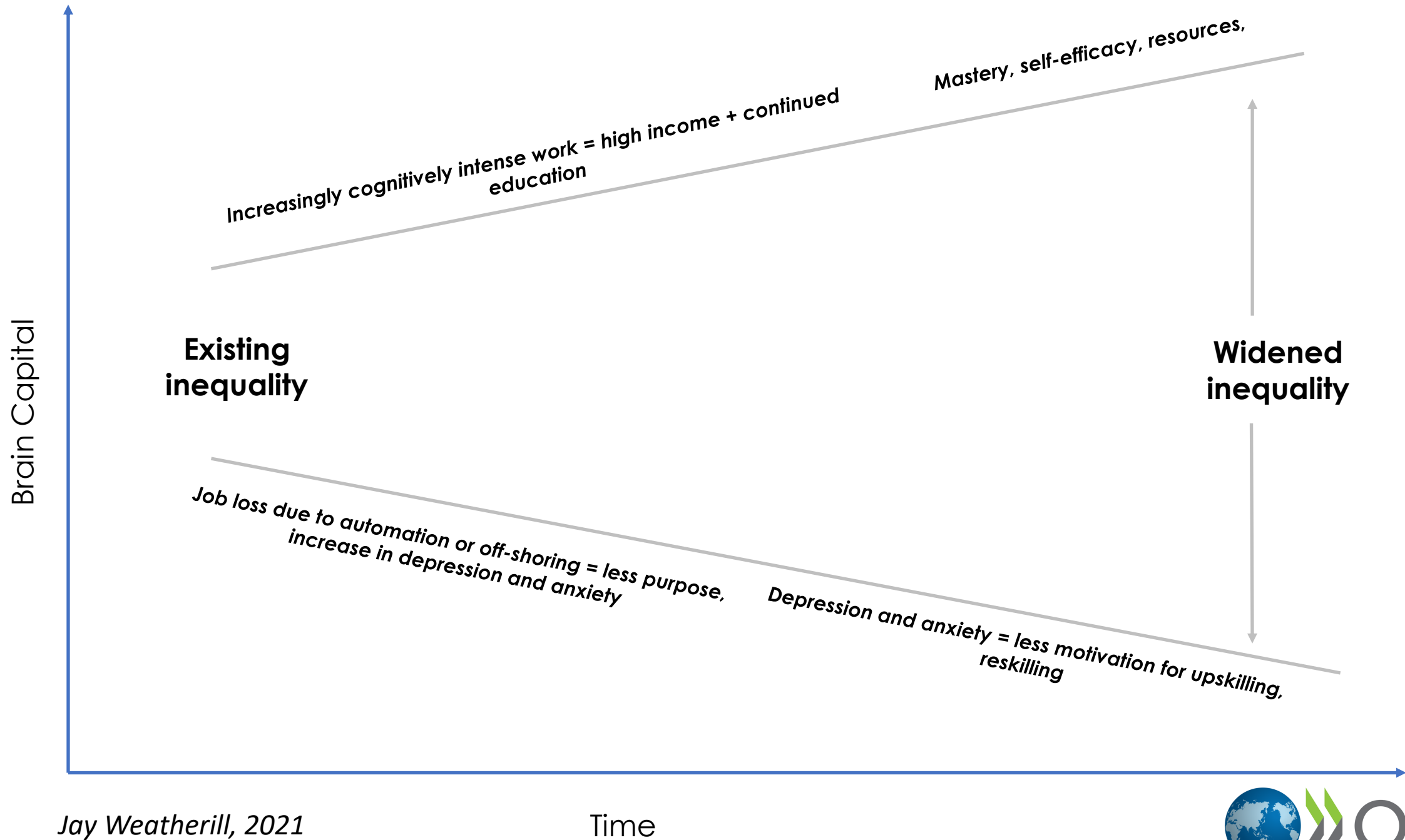
What is Brain Health?

- Encompasses cognitive and emotional strengths across the lifespan.
- Compromised brain health greatly increases the risk of disorders (e.g., Autism, ADHD, depression, anxiety, Alzheimer's, schizophrenia, TBI, CTE)

What are Brain Skills?

- Emotional, social and cultural intelligence combined with cognitive strength.
- These are the underpinnings of resilience, a critical skill in the COVID world.
- Adaptability, problem solving.





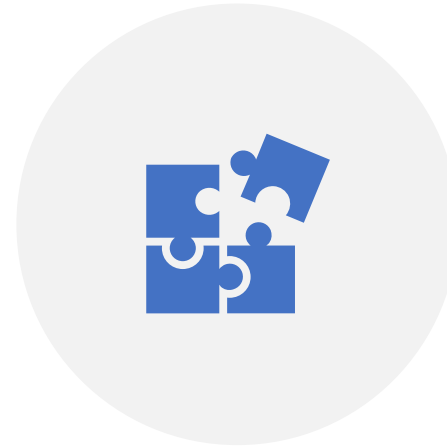
Brain Capital



SORT OUT BRAIN CAPITAL, AND
IT ALLOWS US TO TAKE CARE
OF EVERYTHING ELSE



PRODUCTIVITY

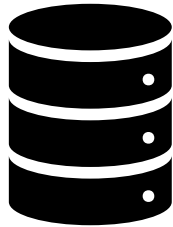


INNOVATION

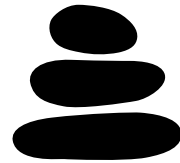


WELLBEING

Brain Capital Grand Strategy



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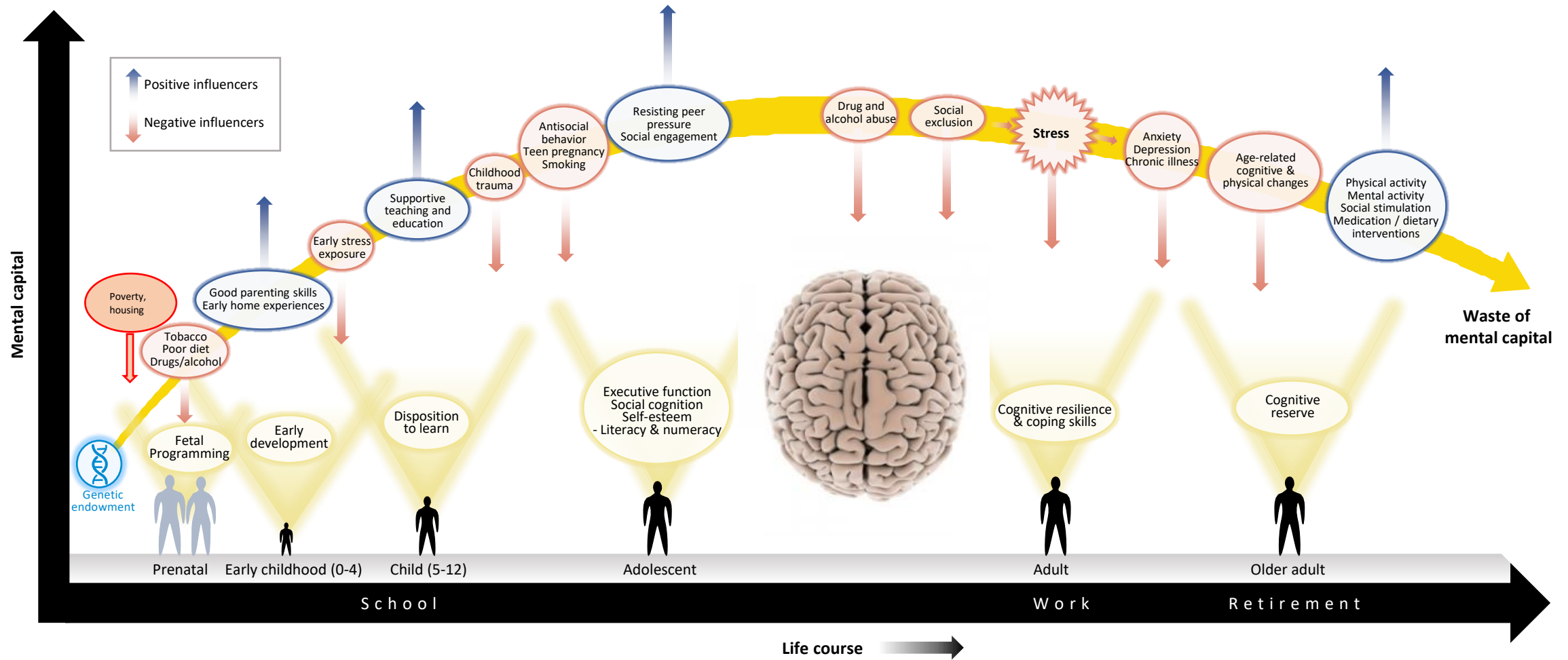


In-all-policies



Investing

Brain Capital Across the Life Span



Existing Disciplines are Siloed



But Brain Capital cuts across these...

Neuroscience-inspired Policy Initiative

NAEC is working with the [PRODEO Institute](#) and various actors* on a Neuroscience-informed Policy Initiative on the concept of "Brain Capital" which considers brain skills and brain health as an indispensable part of the knowledge economy. NAEC promotes this concept as an approach for thinking about the economy and how it works in new ways and is laying some of the groundwork, looking at relevant metrics and building up a network of interested actors in the medical field, neuroscience, philanthropy and business. The initiative has entered a developmental phase examining the application of ideas from neuroscience and medicine to economic and social policy including topics such as productivity, gender equality, mental health, education and others.

Rethinking Productivity: Insights from Neuroscience

Our brains and minds are inextricably linked to productivity. Brain health disorders, such as depression, anxiety and neurodegeneration, cost the global economy trillions of dollars each year in lost productivity. Solutions are urgently required to address this. This seminar explores how the latest innovations in neuroscience can help us unlock insights into how to optimise productivity in the knowledge economy. A **transdisciplinary group of speakers** approach this topic from diverse perspectives such as neuroscience, global mental health, economics and finance.

[Rethinking Productivity: Insights from Neuroscience - Summary](#)

Brain Capital Grand Strategy

A seminar with the **Secretary General and Admiral McRaven** on 27 January gave momentum to the initiative at a discussion of:

A **Brain Capital Grand Strategy: Towards Economic Re-imagination** - recently published in *Molecular Psychiatry* - an inter-disciplinary effort of medical doctors, neuroscientists and economists to which NAEC contributed. The paper argues that in our brain economy, investments in brain health and brain skills are critical for post-COVID economic renewal, re-imagination, and long-term economic resilience.

Innovations to Address Women's Brain Health Inequalities

As part of the **OECD March on Gender** initiative, this seminar, supported by the NAEC Neuroscience-inspired Policy Initiative, looks into differences in neurological outcomes between men and women. **Agenda**

The COVID-19 crisis has exposed sex and gender differences in brain and mental health disorders, as we see news of a dangerous hike in depression

Highlighting Brain-Based Inequalities for Women: From Bedside and Boardroom to Policy
Psychiatric Times (5 May 2021)

Boosting brain health is key to a thriving economy
Megan Greene, *The Financial Times*
(12 August 2021) [[download pdf](#)]

NAEC and Neuroscience-inspired Policy, Megan Greene, Bloomberg (2 July 2021)

Admiral William McRaven, NAEC, January 2021

The Brain Economy

Modern Capitalism Must Prioritize Our Minds and Brains, *Psychiatric Times* (22 July 2021)

Buyer Beware: Why Investors and Mental Health Practitioners Must Sit on the Same Side of the Table, *Psychiatric Times* (18 May 2021)

Building Brain Capital, *Neuron* (5 May 2021)

A Brainier Approach to ESG Investing, *Psychiatric Times* (26 March 2021)

Feeling Lucky? Convergence Mental Health as a Mechanism for Serendipitous Innovation, *Psychiatric Times* (23 March 2021)

Smart Growth: the Case for Measuring Brain Capital, *Psychiatric Times* (18 February 2021)

Boosting Global Confidence amid Covid-19, *RSA Comment* (1 February 2021)

Convergence Mental Health, *Oxford University Press* (21 January 2021)

Move Over Data, Brain Capital is the New Oil, *Psychiatric Times* (14 January 2021)

Digital decision making and safety in the COVID world, *Today's Geriatric Medicine* (Vol 14, 2021)

The Brain Economy, *RSA Journal Issue 3 2020*

The necessity of diplomacy in brain health, *Lancet Neurology* (Vol 19, Issue 12, 2020)

Responsible innovation in technology for mental health care, *Lancet Psychiatry* (Vol 7, Issue 9, 2020)

Brain health living labs, *American Journal of Geriatric Psychiatry* (2020)

Focusing on employee brain health could relaunch the economy, *ScienceBlog*, University of Texas (27 October 2020)

Team proposes a holistic economic reimagination that focuses on brain health to improve employees' resilience, Center for Brain Health, *Medical Xpress* (27 October 2020)

The BrainHealth project could create a resilient economy, Center for Brain Health, *EurekaAlert* (26 October 2020)

Brain Capital: A new economic and investment approach, Prodeo Institute, *EINPresswire.com* (26 October 2020)

***Co-Leads:**

- William Hynes DPhil, OECD
- Harris Eyre MD PhD, PRODEO Institute

Steering Committee:

- Hussein Manji MD, Johnson & Johnson
- Patrick Brannelly, Gates Ventures
- Rym Ayadi PhD, Euro-Mediterranean Economists Association and CASS Business School
- Marion Leboyer MD PhD, Fondation FondaMental
- Andrew S. Nevin DPhil, PWC Nigeria
- Cara Altimus PhD, Milken Institute
- Erin Smith, PRODEO Institute and Stanford University
- Andy Keller, CEO/President of Meadows Mental Health Policy Institute

OECD Working Groups

Brain Capital Diplomacy

- Cultural management
- Responsible innovation
- Media & communications
- Science diplomacy
- Global harmonization



Thematic Policy Approaches

- Women's rights
- Child and youth
- Social services
- Cultural wellbeing
- Health Care



Brain Capital Investing

- Brain bonds
- Culturally responsive data and analytics
- Venture capital & philanthropy
- Social impact investing



Brain Capital Index

- Cognitive decline rates
- Rates of investment into brain issues
- Education and brain skills
- Metacognition
- Well being



Productivity boost

FINANCIAL TIMES

Opinion **US economic recovery**

Boosting brain health is key to a thriving economy

The jobs of the future will value different skills than those of the past

MEGAN GREENE

+ Add to myFT



© Efi Chalikopoulou

FINANCIAL POST

FP Economy

Why the fight against COVID-19 won't end with a high vaccination rate

FP Economy essay series: 'Long COVID' threatens future productivity and profitability if leaders fail to take it seriously

Inez Jabalpurwala, Special to Financial Post

Sep 20, 2021 • September 20, 2021 • 7 minute read • [97 Comments](#)



There are no brains without capital, and no capital without brains.



Bill Carson and Antonella Santuccion Chadha, 2021



Share



Add to list



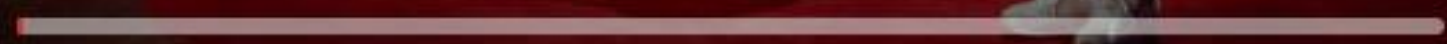
Like



Recommend

Molly Wright | TED and Minderoo Foundation

How every child can thrive by five



7:26





**THRIVE
BY FIVE**



ARACY

Australian Research Alliance for Children & Youth

Collaboration • Evidence • Prevention

Brain Builders Australia

Thriving
Queensland
Kids
Partnership



**PLASTIC,
A HEALTH HAZARD
FOR EVERY BODY**



Female Empowerment


The single greatest Brain Capital building strategy



Jay Weatherill, 2021

Female Empowerment





EMPOWERED
PERSONALISED
BRAIN HEALTH

YILYAPINYA
Indigenous Corporation

**THINKING SMARTER
NOT HARDER** PROGRAM

**Thinking Smarter
Not Harder Program**
is aimed to improve memory, brain speed,
attention, social and leadership skills.

**It is offered free for Indigenous Adults
living with an Intellectual Impairment
and/or Psycho-social Disability.**

Sheryl Batchelor
sheryl@yiliyapinya.org.au
www.yiliyapinya.org.au
0413 484 276

The program will be led by an Indigenous facilitator
and be delivered in Beoval. The Program is funded
by a three-year NDIS ILC Grant 2020-2023.

A not-for profit registered charity and NDIS provider using scientifically validated cognitive and social skills programs to improve an individual's memory, attention, brain speed and social skills which in turn improves their quality of life.



Sheryl Batchelor · 1st
Founder and Director at Yiliyapinya Indigenous Corporation
Greater Brisbane Area · [Contact info](#)

[Yiliyapinya Indigenous Corporation](#)
[University of Southern Queensland](#)

267 connections
17 mutual connections: Gavin Keeley, Leonie Rothwell, and 15 others

[Message](#) [More](#)

Your brain could be a national security risk



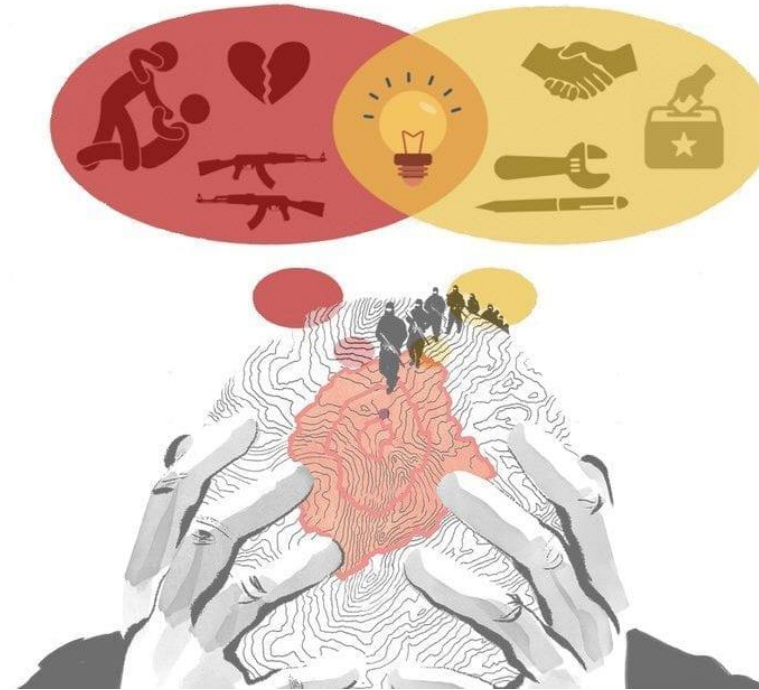
Addressing America's crisis of despair and economic recovery

A call for a coordinated effort

Report of the Brookings Working Group
on Despair and Economic Recovery

JULY 2021

BROOKINGS



Graham, Hill, Eyre et al, 2021

Movement for ESG



Environmental

- Renewable fuels
- Greenhouse gas (GHG) emissions
- Energy efficiency
- Climate risk
- Water management
- Recycling processes
- Emergency preparedness



Social

- Health and safety
- Working conditions
- Employee benefits
- Diversity and inclusion
- Human rights
- Impact on local communities



Governance

- Ethical standards
- Board diversity and governance
- Stakeholder engagement
- Shareholder rights
- Pay for performance

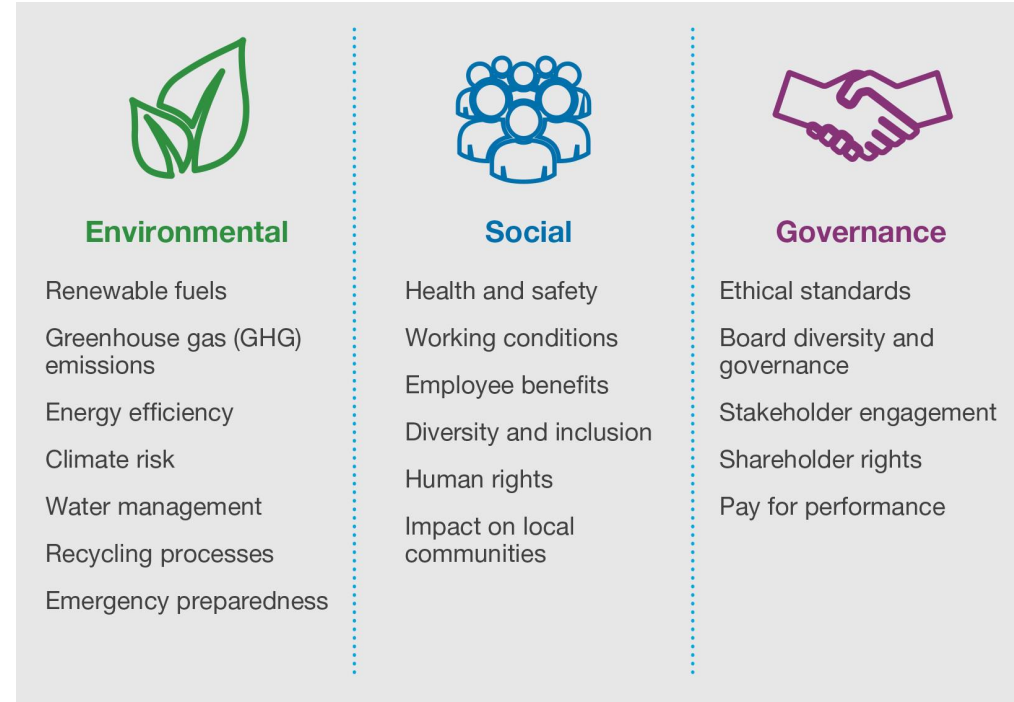
[\\$40.5 trillion is allocated](#) to ESG investing around the world

Larry Fink, CEO of Blackrock, endorsed this in his 2020 CEO letter

What about Brain-ESG?

Brain issues cut across all of these:

- Science denialism is climate denialism
- Nano-plastics are harming our brains and bodies
- Short termism / greed in capitalism leads to resistance to changing business models
- Governance of neurotechnology is very poor. Information asymmetry is rife between niche neuro-experts and generalist investors
- Brain health issues are key to corporate performance



What if we could better channel the \$40.5 trillion?

Eyre, Hackett, Das et al 2021 (in submission)

CONVERGENCE MENTAL HEALTH

A TRANSDISCIPLINARY
APPROACH TO INNOVATION



EDITED BY HARRIS A. EYRE MICHAEL BERK
HELEN LAVRETSKY CHARLES F. REYNOLDS III

“Separation and isolation are features of many mental health problems. Why are they also features of our health systems attempts to fix them?”

--- **Harold Mitchell, AC, Philanthropist, Founder, Harold Mitchell Foundation**

“Convergent neuroscience studies suggest that a good night’s sleep helps foster both mental and emotional resilience, while chronic sleep deprivation sets the stage for negative thinking and emotional vulnerability.”

---**Peter C. Farrell AC, Founder and Chairman, ResMed; Member, MIT Dean of Engineering’s Advisory Council Member**

We need a new human-centered narrative of progress.

Merging brain science and society.

[HOME](#)[THE
NEXT
GLOBAL
SYSTEM](#)[A
SYSTEMIC
RECOVERY](#)[GENESYS](#)[COVID-19
EXIT
STRATEGIES
AND
LESSONS](#)[CONFRONTING
PLANETARY
EMERGENCIES](#)[INTEGRATIVE
ECONOMICS](#)[AVERTING
SYSTEMIC
COLLAPSE](#)[EVENTS](#)[RESOURCES](#)[PROJECTS](#)[NA
AN
NEU](#)

Government Economists for New Economic Systems

It is now widely recognised that reductionist, sectoral, ad hoc and short-term policies are inadequate to face the systemic structural issues which threaten the future. New analytical and systems-oriented approaches are required both to understand and to manage the connected systemic issues of the modern world.

As governments are forced by reality to move towards more integrated systems-based approaches to the formulation and implementation of policy, it will become increasingly necessary to build new analytical capabilities within governments. New economic thinking and systems-based approaches offer enormous potential and **Government Economists for New Economic Systems (GENESYS)** offers a platform for debating, experimenting and discussing policy alternatives and the analytical approaches which underpin them.

Launch of GENESYS network



Keynote address by [Paschal Donohoe](#), President of the Eurogroup and Irish Minister of Finance.

Followed by a roundtable discussion providing an overview of new economic thinking and acting, why and how governments should embrace it.

4 November 2021 | 15:00-17:00 (CET)

[> Draft Agenda / Projet d'ordre du jour](#)

[> Watch the webcast](#)

Objectives

New economic thinking and systems-based approaches offer enormous potential and **GENESYS** will offer a platform for debating, experimenting and discussing policy alternatives and the analytical approaches, which underpin them.

GENESYS could be an informal network of country-based delegates, principally but not limited to Finance Ministries and Central Banks, meeting virtually with an agenda and work programme established by the Members. This is a shadow programme of the regular economic policy structures and Committees and responds to a long-running concern of Members to bring NAEC closer to Member countries.

It will facilitate a discussion on more radical alternatives to policy challenges embracing new economic thinking drawn from a range of disciplines – [Integrative Economics](#). The NAEC Initiative will provide the substance for the discussions.

France to prioritise brain research when it takes on EU presidency next year

14 Oct 2021 | News

As the decade-long - and at times controversial - Human Brain Project draws to a close, there are fears the research landscape around neurosciences could fragment. Member states now want a new way to coordinate research.

By David Matthews



France will prioritise brain research during its upcoming EU presidency, aligning national strategies and working on a specific brain health partnership for the second half of Horizon Europe.



Human Brain Project

NOV. 4, 2021

Putting brain health at the centre of the European policy agenda

“For brain health to receive the attention it deserves on the policy agenda, it should be seen as a broader, societal challenge. At the present point in time, a number of developments converge to offer a uniquely positive perspective on possible advances. When embraced thoroughly, they can make a real difference in the lives of millions of European citizens.”

– Pawel Sweiboda, Director General of Human Brain Project, CEO of EBRAINS and Steering Committee Member of OECD NIPI



THE BIDEN-HARRIS ADMINISTRATION

EXECUTIVE OFFICE OF THE PRESIDENT Councils

Economic Advisors

Costs of depression, anxiety,
Alzheimer's ?

Brain economy shifts?

Environmental Quality

Air pollution harms the brain

Domestic Policy

Brain Capital Gap

Gender Policy

Brain Health Gap for women

National Security

Brain hacking / radicalizing effects of
social media

Management and Budget

New Brain-ESG accounting standards,
tax policies

Drug Control Policy

Substance abuse and misuse

Public Engagement

Awareness is key

Science and Technology Policy

Advanced neurotechnologies
Effects of social media on the brain

Trade

Big new industry

Brain Capital is interrelated to all of these – we need a Brain Capital Council

Dawson, Eyre, Ling et al 2021 (in submission)

TEXAS 2036 COVID-19 TRACKING DASHBOARD: Find up-to-date data in one easy-to-visualize format.

A Down Payment On The State's Future

[Read the Analysis](#)

All roads lead to the brain

Depression
and
anxiety

Environment

Alzheimer's
disease

Education

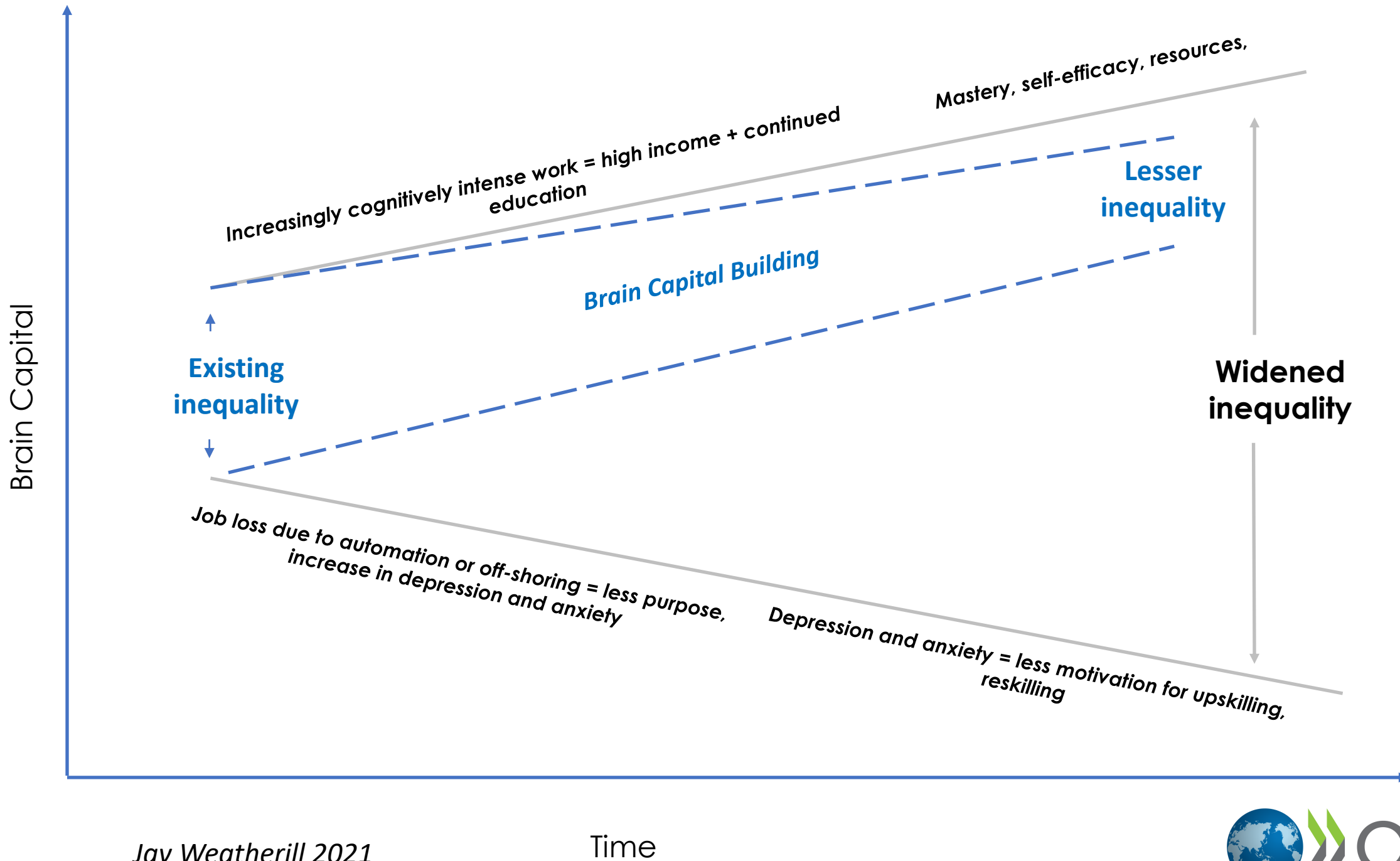
Early childhood



Economics

Policy

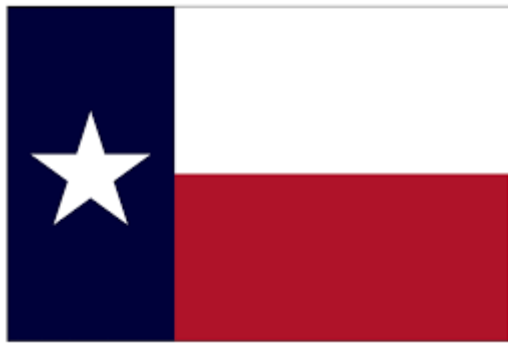
Tom Luce, Texas 2036



OECD Brain Capital Day

Paris, January 28th

Is Australia going to lead or follow behind
Texas and France?



Where to from here Australia?

Economics? Policy? Research? Convening? Investment vehicles?

Domestic activities and international (APEC, ASEAN)?

Can Australia lead the early childhood brain development field?



**THRIVE
BY FIVE**



The Hackett Center for Mental Health
@HackettCenter · Nonprofit Organization



Center on the Developing Child
HARVARD UNIVERSITY



“The Neuroscience-inspired Policy Initiative produces the best explanations I’ve seen of the very major problem of so many siloed, artificially isolated brain-based issues.”

---Hon Andrew Robb AO, former Trade and Investment Minister of Australia

We all have a responsibility



What part of this big canvas do you want to own?

Thank you



“Brain Capital is integral to a new narrative of progress which puts people at the center of our economic system – their well-being and their psychological recovery from shocks.”

Ángel Gurría, former OECD Secretary-General

“The OECD Neuroscience-inspired Policy Initiative produces the best explanations I’ve seen of the very major problem of so many siloed, artificially isolated brain-based issues.”

Hon Andrew Robb AO, former Trade and Investment Minister of Australia



Questions?

real world **futures**

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