



***Education in the
Singularity Era
An Investor's View***

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**4th Intl. Conference on
Future Education
Belgrade, Nov. 11-12, 2019**

What qualifies me to be here?

Europe's Female Angel Investor 2019 by BAE
Entrepreneur of the Year 2017 by EBAN
Integral Investor since 1994
Inventor of Theta Model in Investing – 6.8x ROI
Intl. Full Member Club of Rome
WAAS Fellow
Studied AI at Stanford & KIT (Dipl.-Inform.) &
PhD in Psychology

My intentions today

1. What is the context of operation?
2. What is the key to transformation?
3. What is the role of future education?

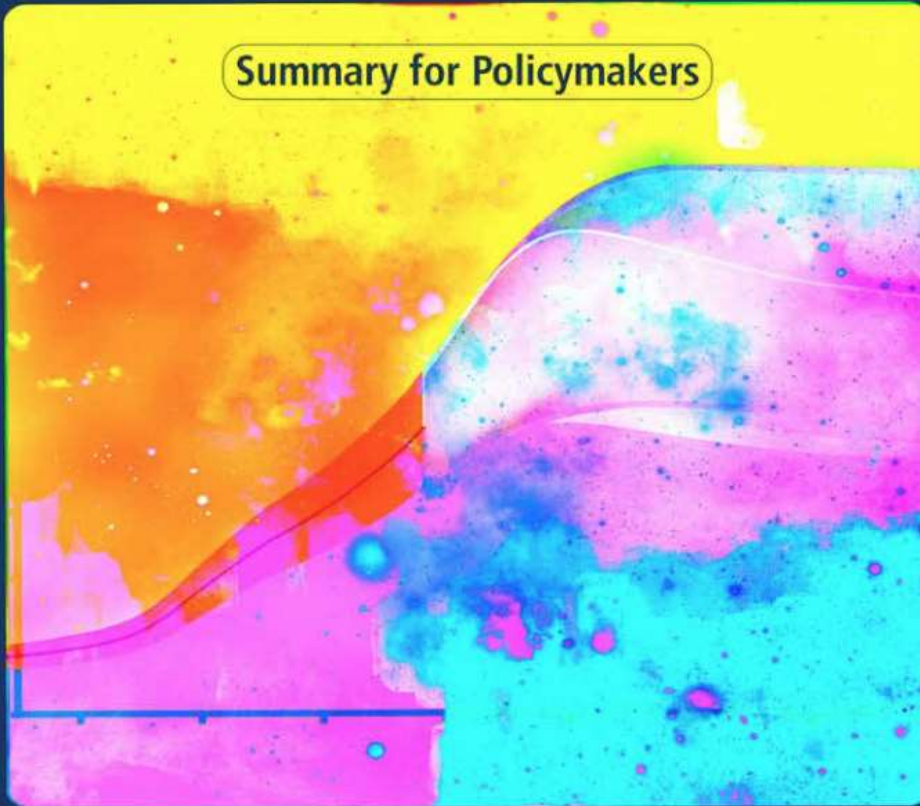
The Context: Major Existential Threats & Opportunities

1. Climate change
2. Tech singularity: Exponentially growing technologies
 - Artificial Intelligence
 - Bio technology
 - Nano/synthetic technology
 - Post humanism
3. AI-driven nuclear proliferation

Global Warming of 1.5°C

An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty

Summary for Policymakers



We got It

The earth is warming much faster than expected and we are on track to reaching 3°C rather than stay below 2°C as per the Paris Agreement

Now what?

2015 Ratification: Paris Accord & Agenda 2030

BUT HOW DO WE IMPLEMENT THEM?

SUSTAINABLE DEVELOPMENT GOALS





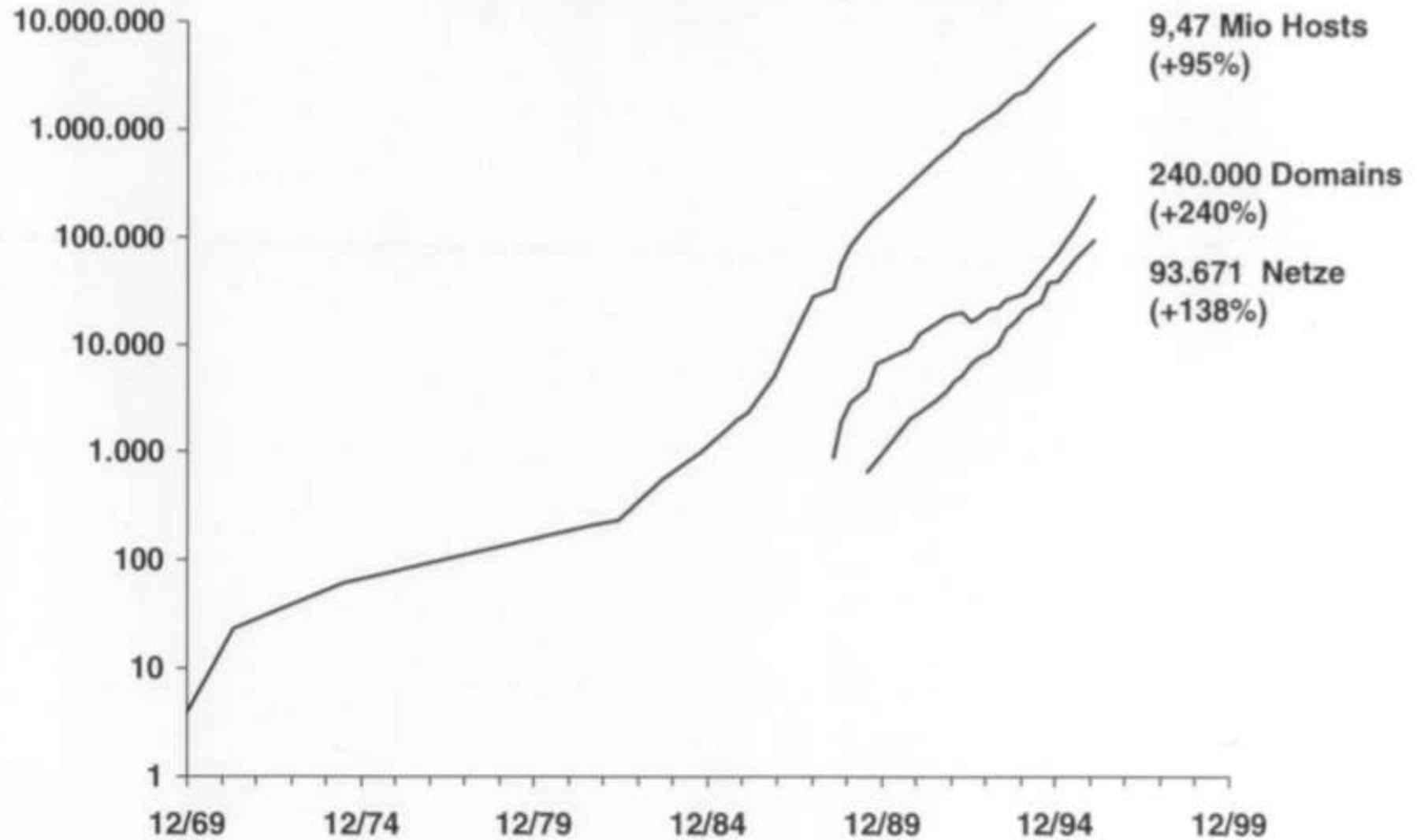
Source: Courtesy of Jørgen Randers (2018)



**“Tomorrow’s speed of change
will make today look like we’re crawling”
Peter Diamandis**



Das Internet wächst exponentiell



9,47 Mio Hosts
(+95%)

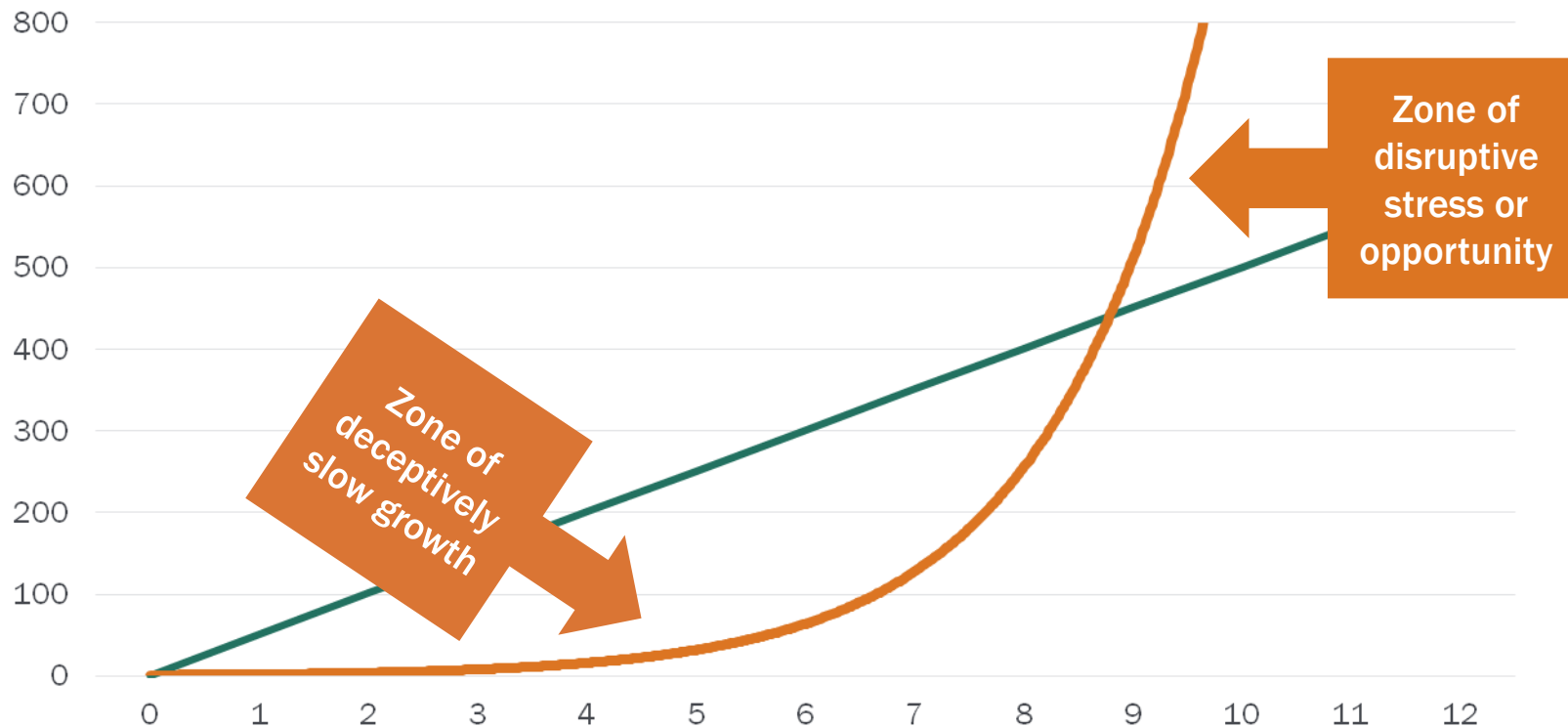
240.000 Domains
(+240%)

93.671 Netze
(+138%)

Zuwächse über 12-Monatszeitraum
Source: Internet online statistics, 1/96

The driving force behind techno-singularity

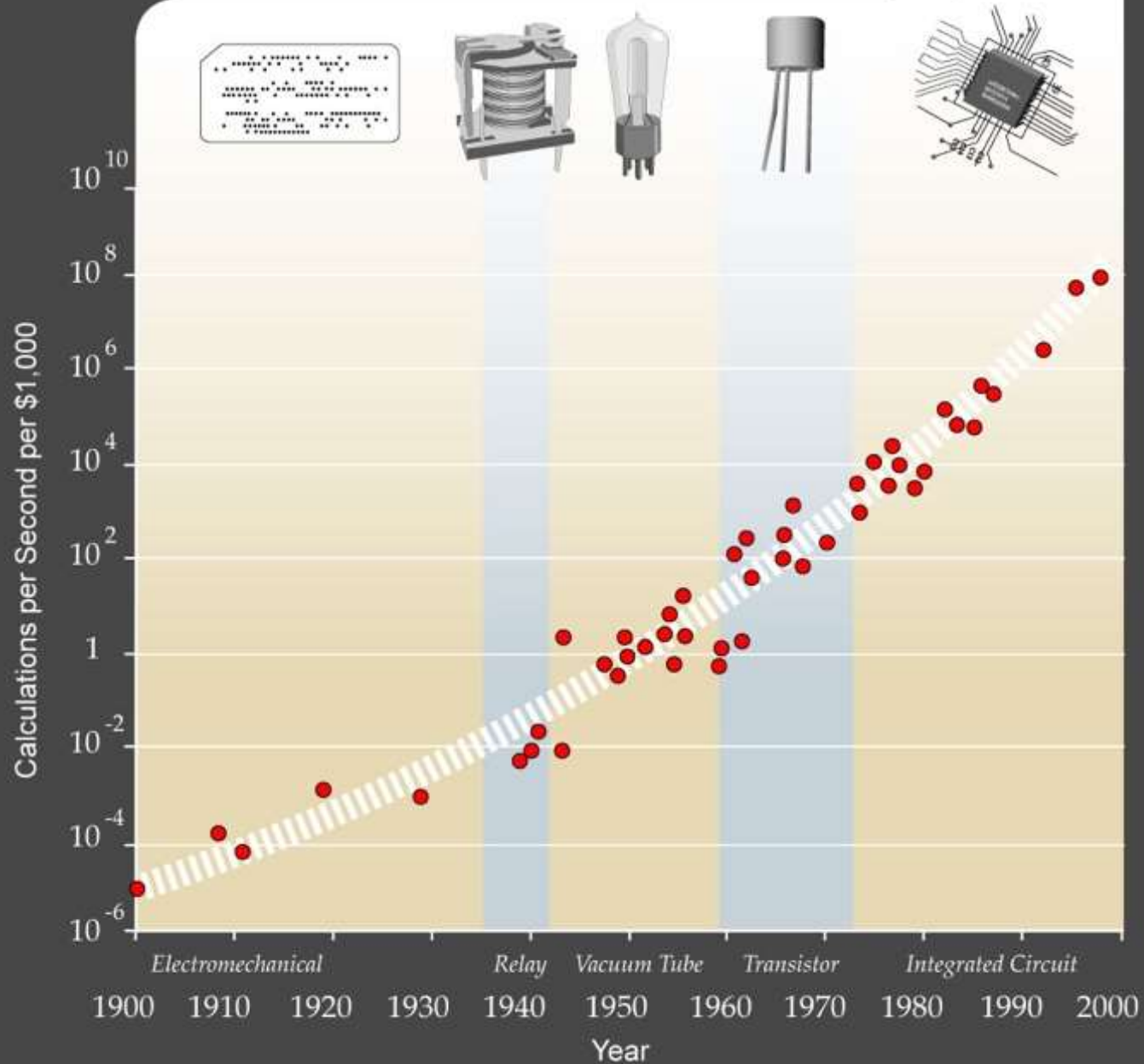
Exponential growth vs. linear growth



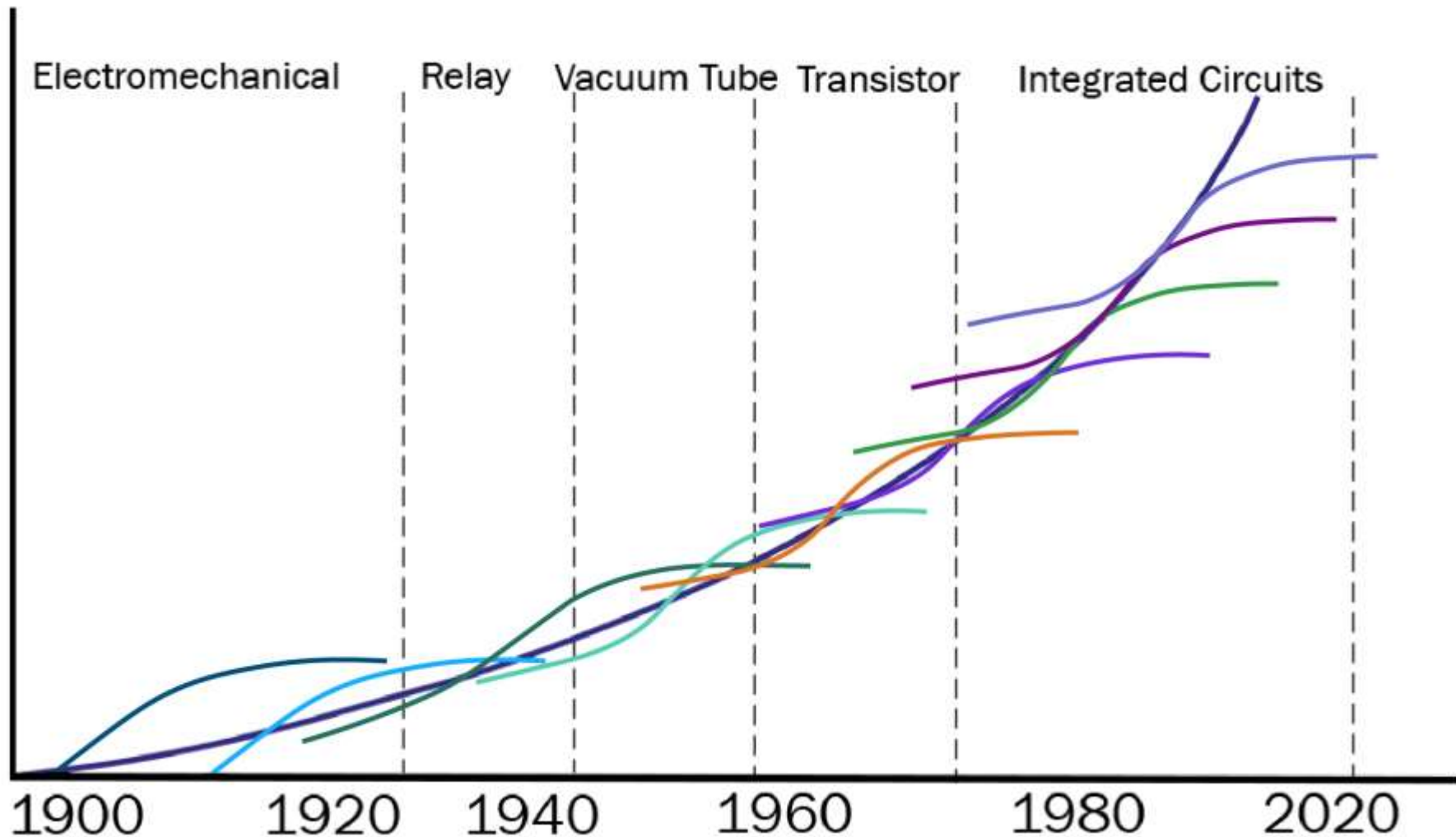
Moore's Law

The Fifth Paradigm

Logarithmic Plot



Law of Accelerated Returns (Ray Kurzweil)



The 6Ds of tech singularity

Digitalization
Deception
Disruption
Dematerialization
Demonetization
Democratization

Transformation is feasible

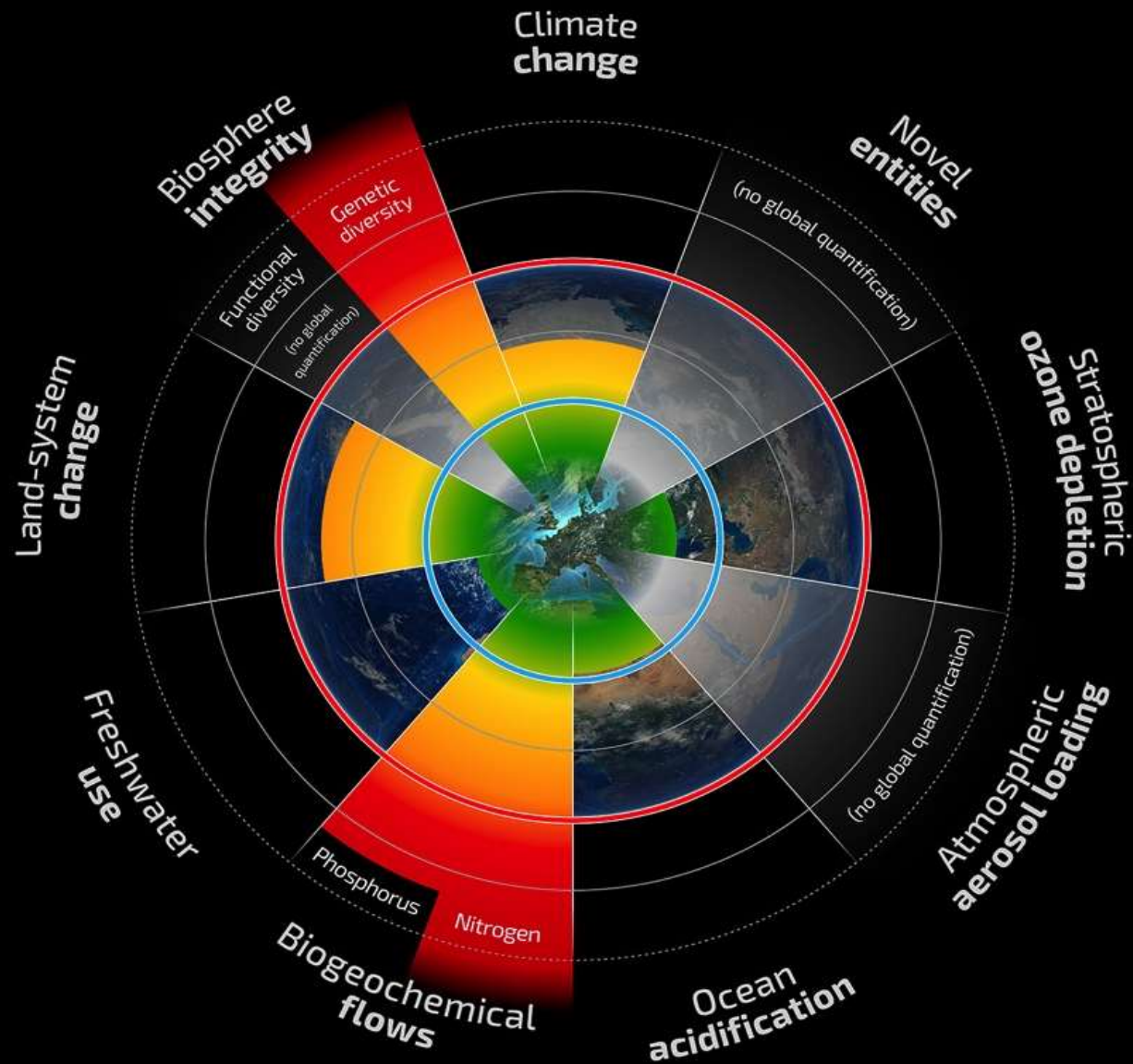
How to achieve the Sustainable Development Goals within Planetary Boundaries

A report to the Club of Rome, for its 50 years anniversary 17 October 2018

A report to the Club of Rome by: Jorgen Randers, Johan Rockström, Per Espen Stoknes, Ulrich Golüke, David Collste and Sarah Cornell

Transformation is Feasible!

BUT: UN SDG fulfillment is possible ONLY within Planetary Boundaries



Source: Courtesy of Johan Rockström (2018)

BUT: SDG fulfillment is possible ONLY within Planetary Boundaries



Source: Courtesy of Johan Rockström (2018)

The whole world 1980–2015



Source: Courtesy of Johan Rockström (2018)

How far will we get with *Business as Usual*?



Source: Courtesy of Johan Rockström (2018)

Can we do it with *Faster* growth?



Source: Courtesy of Johan Rockström (2018)

Can we do it by working *Harder* on all fronts?



Source: Courtesy of Johan Rockström (2018)

We can do it SMARTER with 5 transformative actions



Source: Courtesy of Johan Rockström (2018)

Five transformational policies that work

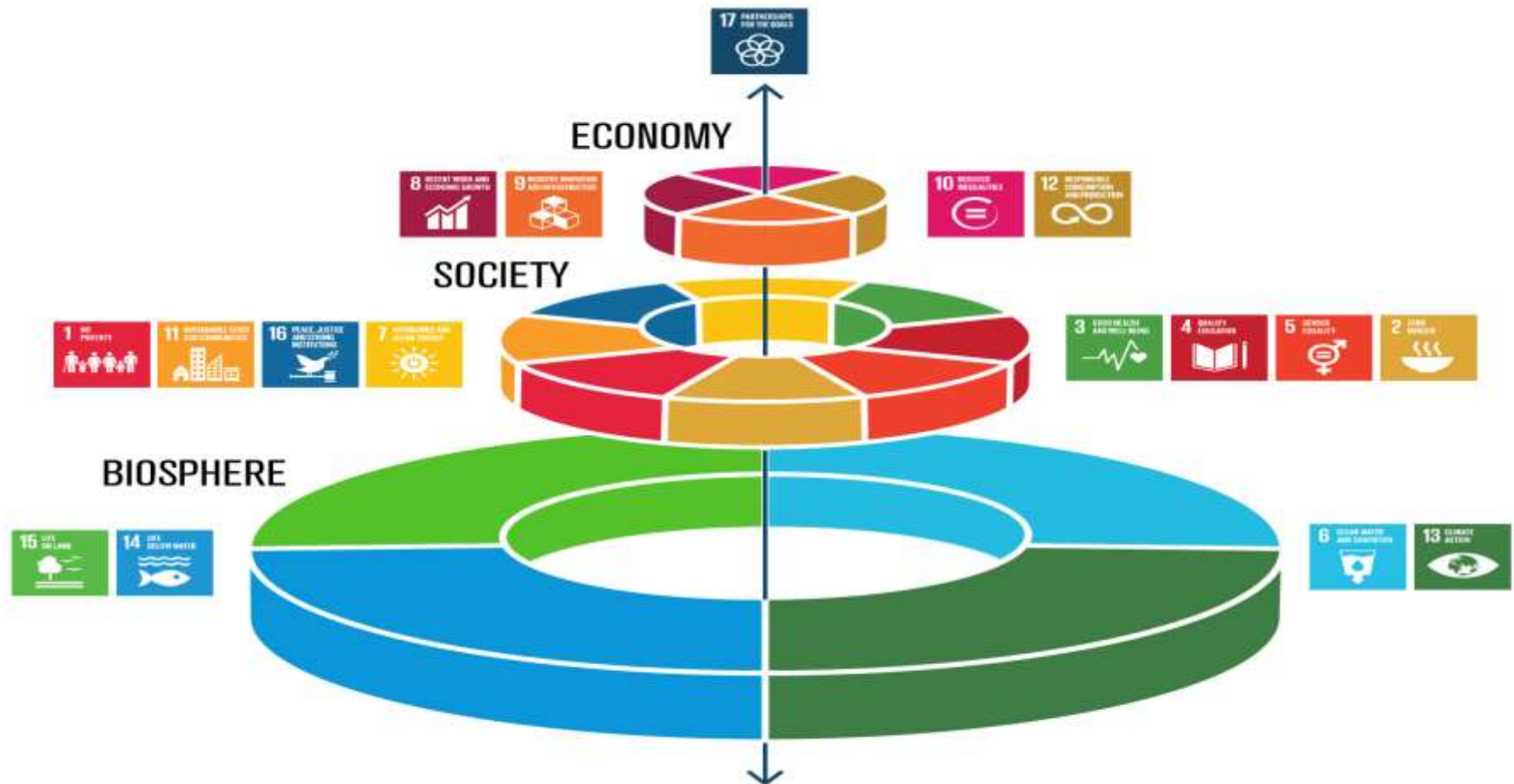
1. Accelerated renewable energy growth:
 - halving emissions every decade from 2030 on
2. Accelerated productivity in food chains:
 - +1% p.a. better productivity
3. New development models in developing countries:
 - copying features of S-Korea, Chinese, Ethiopian successes
4. Active inequality reduction:
 - ensuring 10% richest < 40% of income
5. Investment in education, gender equality, family planning, health stabilizing the world population
 - improving well-being but with reduced ecological footprint

Source: Randers J, Rockström J et al (2018) Transformation is feasible

My intentions today

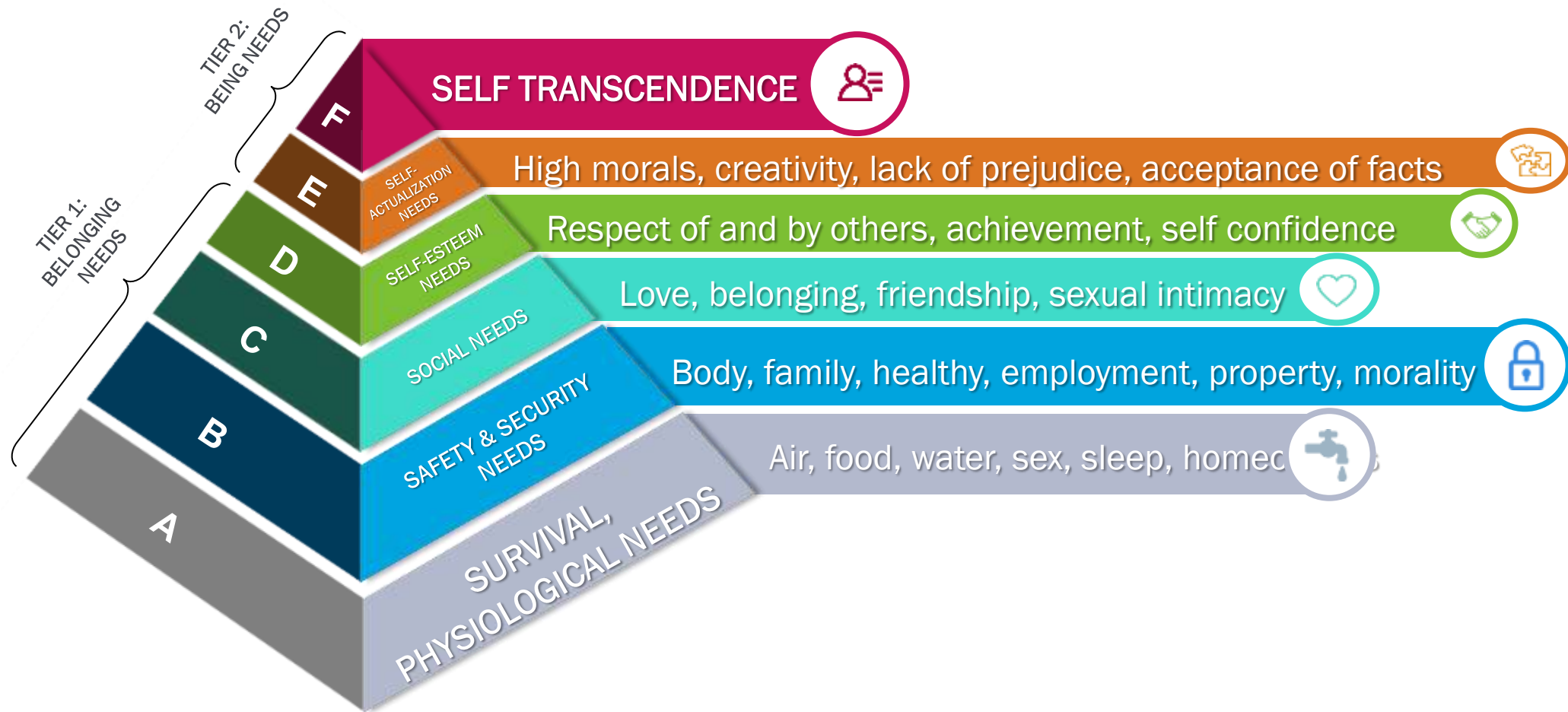
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KEY: The Great Mindshift to a world-centric view

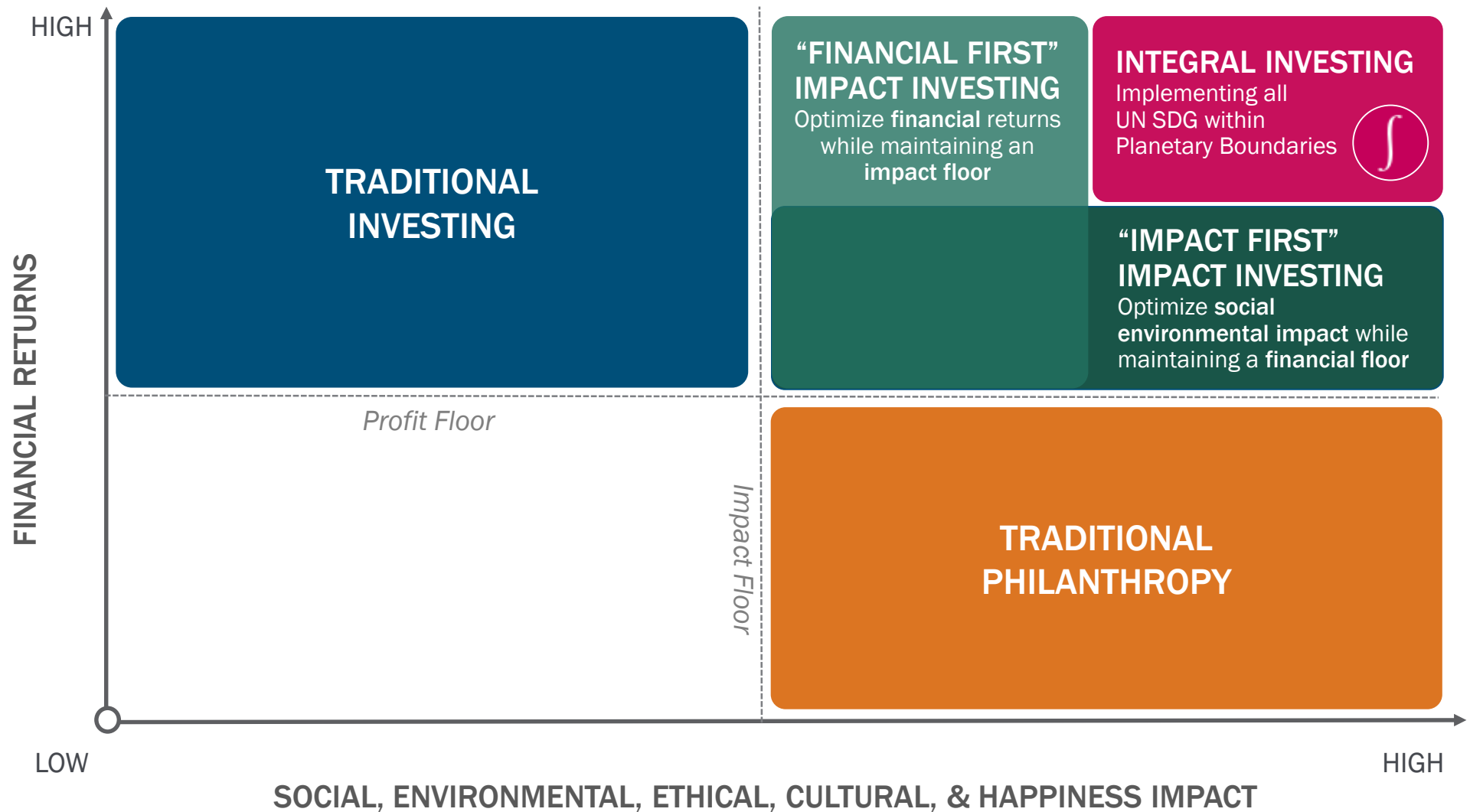


Education must support the great mindshift

Mind shift is hard work: Maslow's Pyramid of Needs



A Personal Contribution: Integral Investing



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**“Humanity is a biological bootloader for
digital superintelligence” Elon Musk**

Summary: Call to educators

10 Years left: SMART Transformation Feasible
Implement integrated education, not just cognitive

H. Gardner: 9 types of intelligence*

Drive the great mind shift to later stages of
consciousness

Do not underestimate exponential tech

Support Beneficial AI development:

Als will be as evolved as we are - but only in the
beginning

H. Gardner (2004) linguistic intelligence, musical intelligence, special intelligence, bodily-kinesthetic intelligence, naturalist intelligence, interpersonal and intrapersonal intelligence, and existential intelligence

If not us, who?
If not now, when?

