



Transport 2050; a paradigm shift has happened

2050, Look Back event

February 19, 2019

**“When you change the way you look at things, the things
you look at change”**

Max Planck, Nobel laureate

‘A novel, a story, a myth, or a tale, all have the same function: they spare us from the complexity of the world and shield us from its randomness’.

Nassim Taleb, The Black Swan

LIVE

7:46 am PT

REP. HENRY WAXMAN

C-SPAN

**D-California, Oversight & Gov't
Reform Committee - Chairman**

Objectives we've achieved in 2050

- Our economic paradigm shifted radically, expelling business models
- The 17 Sustainable Development Goals of the UN, albeit 20 years late!
- Blockchain indeed delivered up to it's promise
 - Privacy warranted
 - Data is key and owned by you and me! (and you may sell it to the highest bidder)
 - Fraud, tax evasion (and worse) eradicated
- Ethical dilemma's of and protocols for AI agreed upon
- Thorium reactors commercially available
- Annual Overshoot Day: March 15, 2051

Our economic paradigm caused collateral damage

- Shareholder centric and thereby not inclusive and not maximizing long term value
- Externalities were not included adequately in prices
- As a result: depletion of natural resources and pollution of the environment
- Ownership/capital was rewarded better than labour, creating more inequality
- Decrease in innovation globally, necessary for long term value creation
- The winner takes all
- New rapidly scalable business models led to concentration of power (and abuse)
- Decreasing level of trust, polarization in politics, rising nationalism, democracy under pressure
- New technologies and business models didn't fit in and taxation was lagging behind

REVOLUTION



Foundations for our society in 2050

- Inclusive
- (More) equality
- Circular
- Stakeholder centric
- Multilateral cooperation (on a global scale)
- Long term value creation for all
- Seven generations principle
- Building a new story line
- Accountable Capitalism! (Elizabeth Warren)



SUSTAINABLE DEVELOPMENT GOALS



How blockchain works

PaulDughi.com



Jim wants to send money to Mary



The transaction is represented online as a block



The block gets distributed across the network



The network verifies the transaction is valid



The block is added to the chain, reconciling across the network and creating a permanent record



Jim's record of ownership of the money moves to Mary

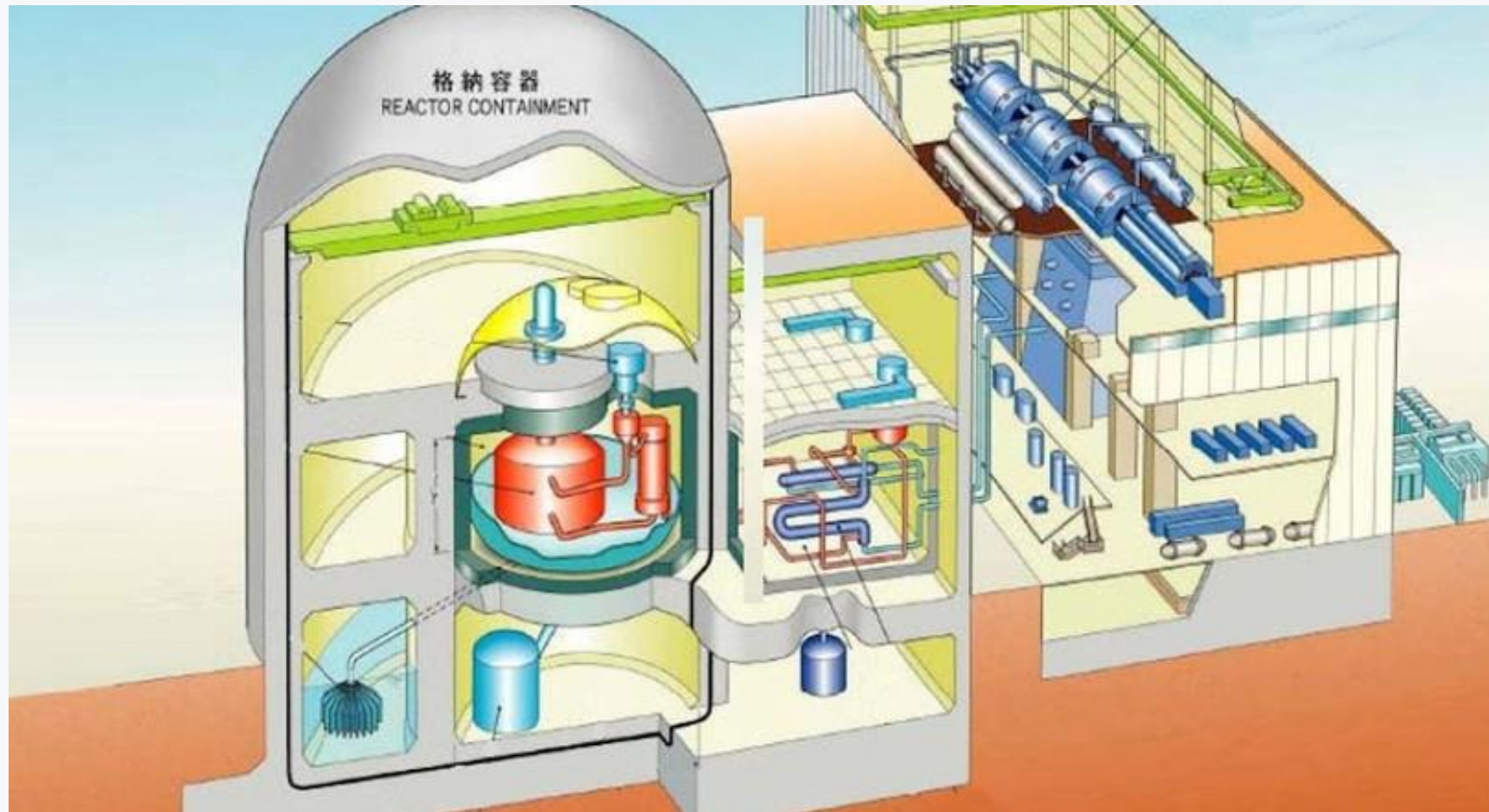


Data, the new gold/oil!

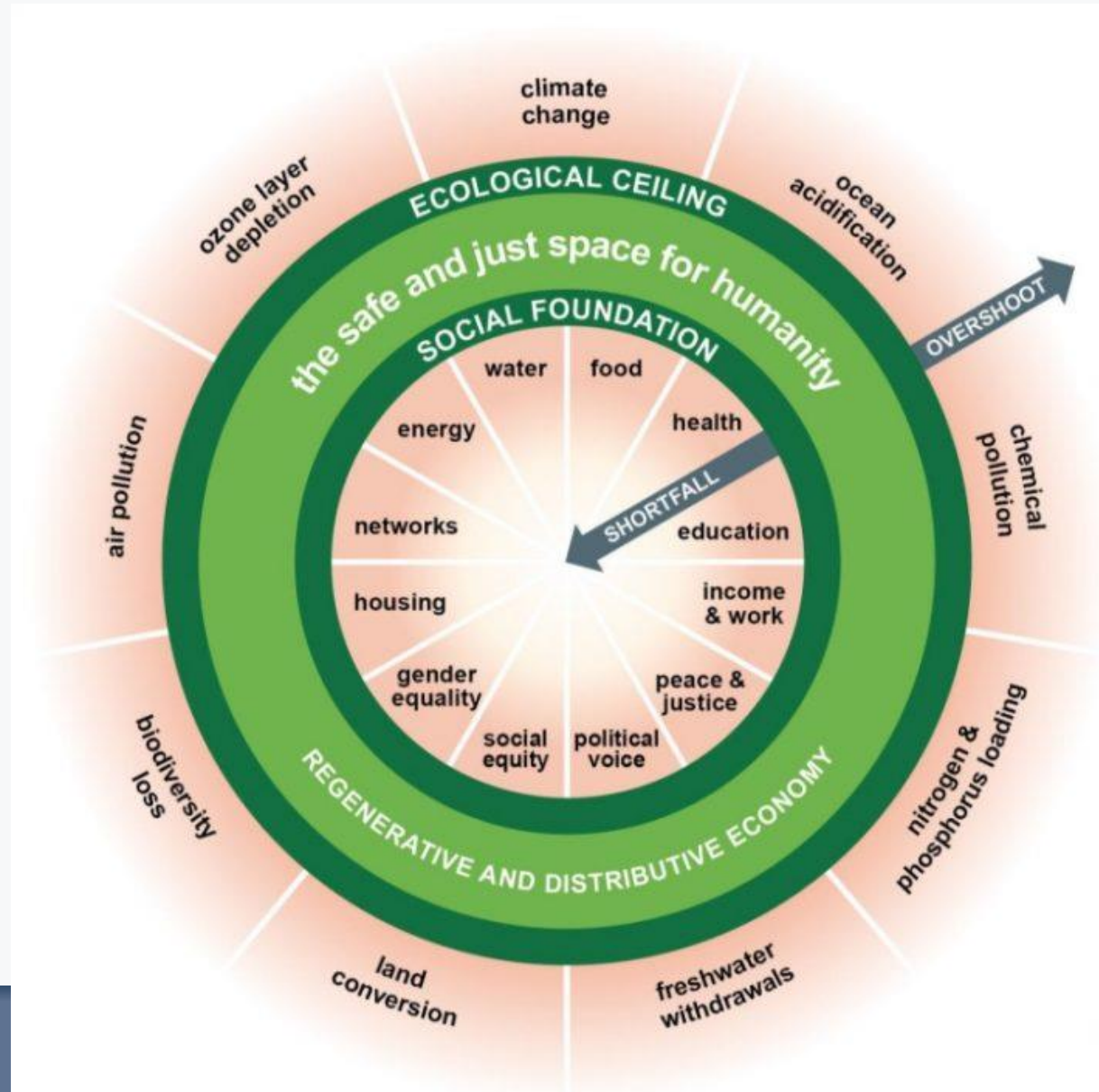


AI and ethics

- Do we understand algorithms? Do we trust them? Will they make mistakes?
- Will mankind become obsolete or even extinct? Who is in control?
- Will biases become enhanced or eliminated?
- If robots do our work, will we have massive unemployment?
- What will be the meaning of our life? Human interaction?
- Inequality and taxation?
- Designer baby's and longevity?
- Unintended consequences? Evil genies?



Annual Overshoot Day: March 15, 2051



Transport in 2050?

1. Additive manufacturing: Mass customization, reshoring & 3D printing
2. Pooling of resources, no more ownership
3. 50% less cars
4. Circular and energy efficient
5. Ships? Cruise ships and yachts perhaps, but container ships?
6. Infrastructure mainly based on public transportation (trains & planes)
7. Smart cities
8. Hyperloops? Drones?

Artificially Intelligent Engineers — How AI Will Kill All Engineering Jobs.



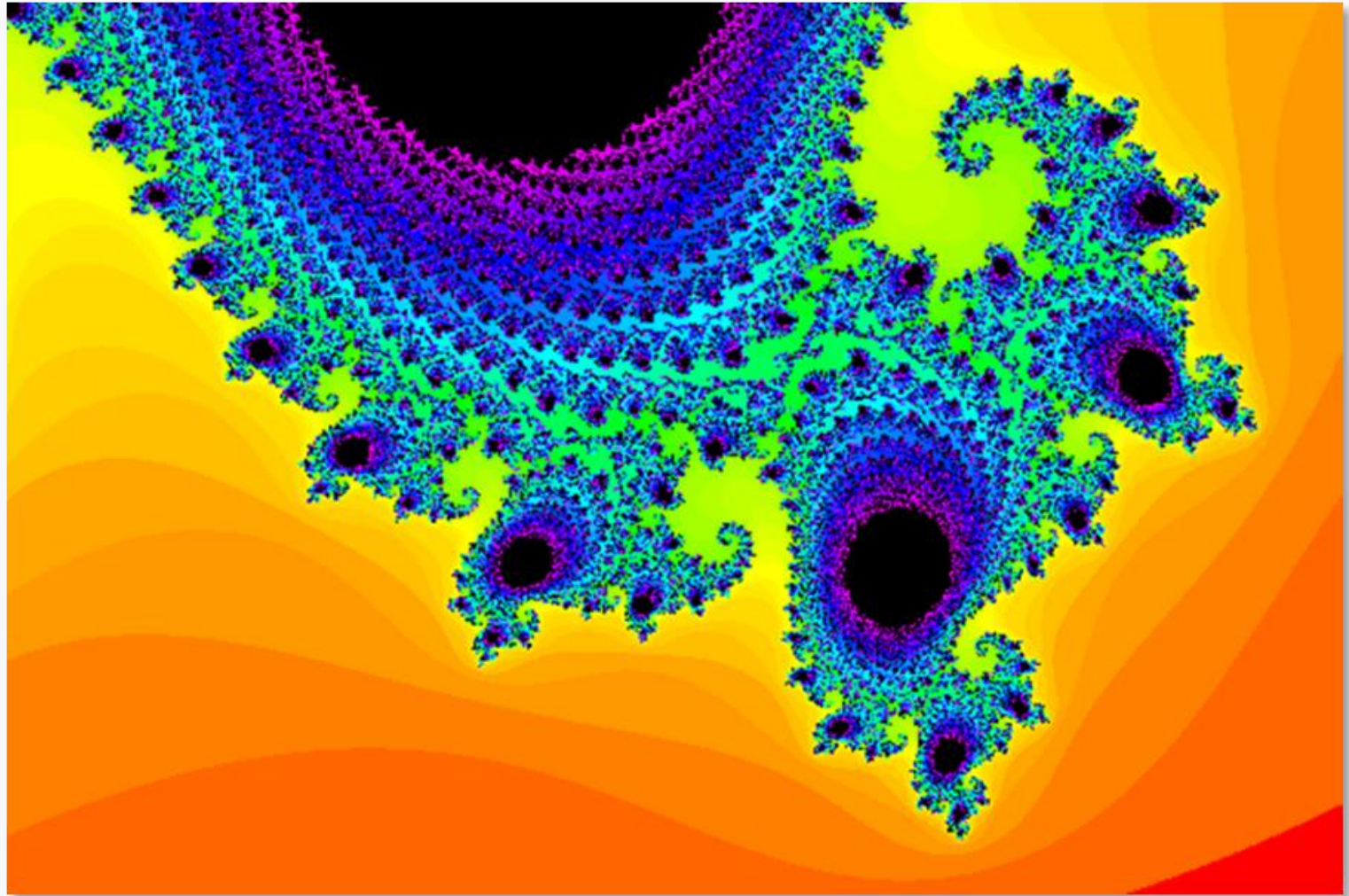
Kumaran Akilan

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-And Why It Is a Good Thing.

$$X_n = c * X_a (1 - X_a)$$









Questions?

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