



BLOCKCHAIN AND THE FUTURE OF CITIES

Prof Cathy Mulligan - ERA BIG Chair

Director, DCentral Lab

Instituto Superior Técnico, University of Lisbon

NFTS!
NFTS!

How do we traditionally speak about Blockchain and Cities?



ID



Integrity



Planning



Prioritise
Local Commerce



Interoperability



NFTS!



Energy, Water &
Pollution
Management



Improving
Public
Transport



Departmental
Transparency



Land, Property &
Housing Management



Security of IoT
Devices



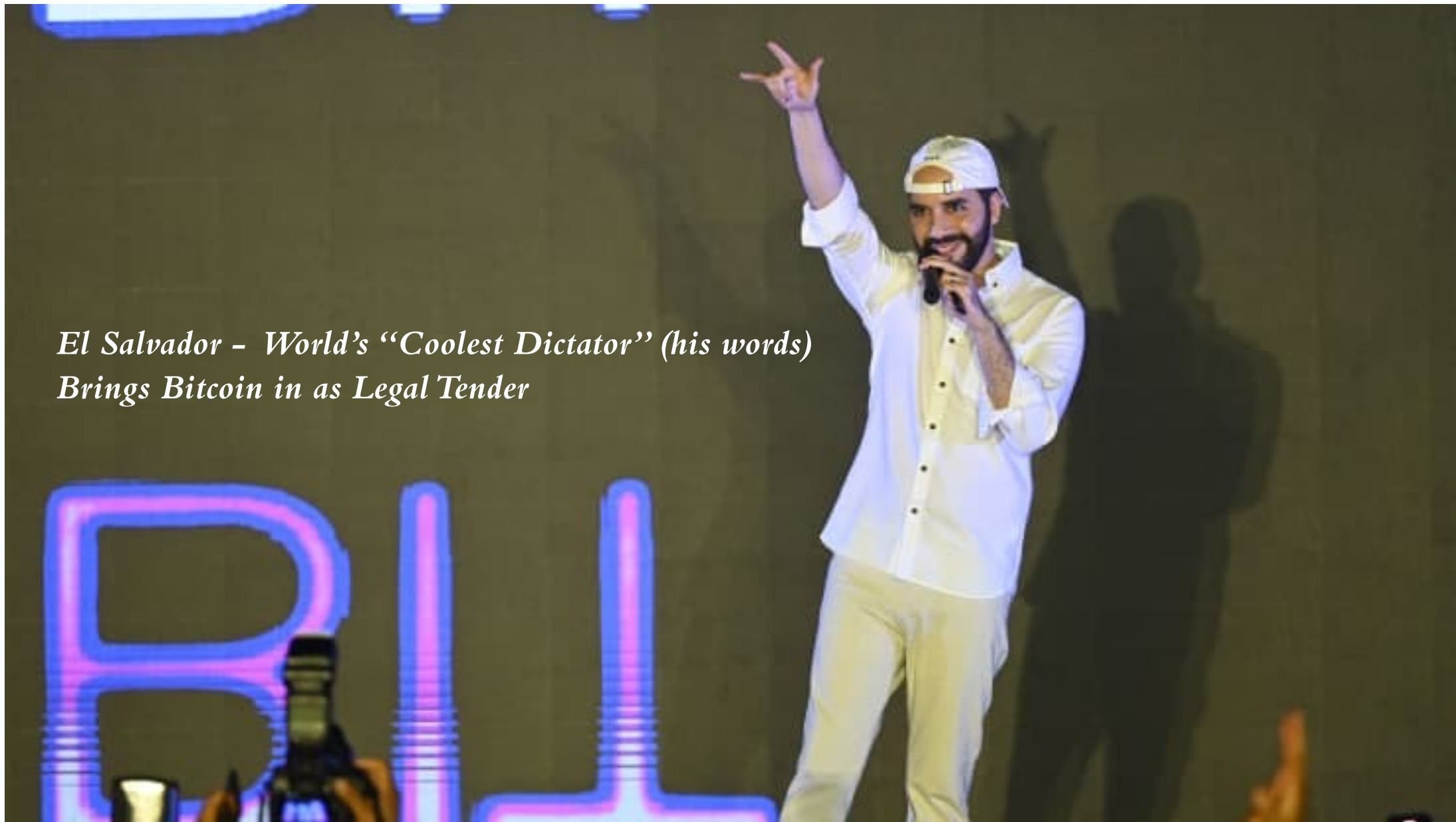
DAOS!

Cities in the Context of the Climate Crisis

“Rising global temperatures causes sea levels to rise, increases the number of extreme weather events such as floods, droughts and storms, and increases the spread of tropical diseases. All these have costly impacts on cities' basic services, infrastructure, housing, human livelihoods and health. At the same time, cities are a key contributor to climate change, as urban activities are major sources of greenhouse gas emissions. Estimates suggest that cities are responsible for 75 percent of global CO2 emissions, with transport and buildings being among the largest contributors.” UNEP, 2021

- Cities as static entities are really a thing of the 20th century
- Our ideas of identity, community, society and even places themselves are set to change dramatically – has the city itself outlived its usefulness to humanity?
- Climate Change will unleash incredible changes in how we work, eat, communicate and where we live. In some instances changes will be catastrophic and irreversible
- Everything we think we know today may end up being useless frames of reference tomorrow

*El Salvador – World’s “Coolest Dictator” (his words)
Brings Bitcoin in as Legal Tender*



Visions of Capitalist Dictatorships

Telosa – “Equitism”



A photograph of a town street with several white goats walking across it. In the background, there are residential buildings and a hill. A semi-transparent text box is overlaid in the center.

*WE ARE NOT ALONE... EVEN
WHEN WE THINK WE ARE*

**A herd of goats has taken over
a deserted town centre.**

Cities are Aggregators – and Intermediaries

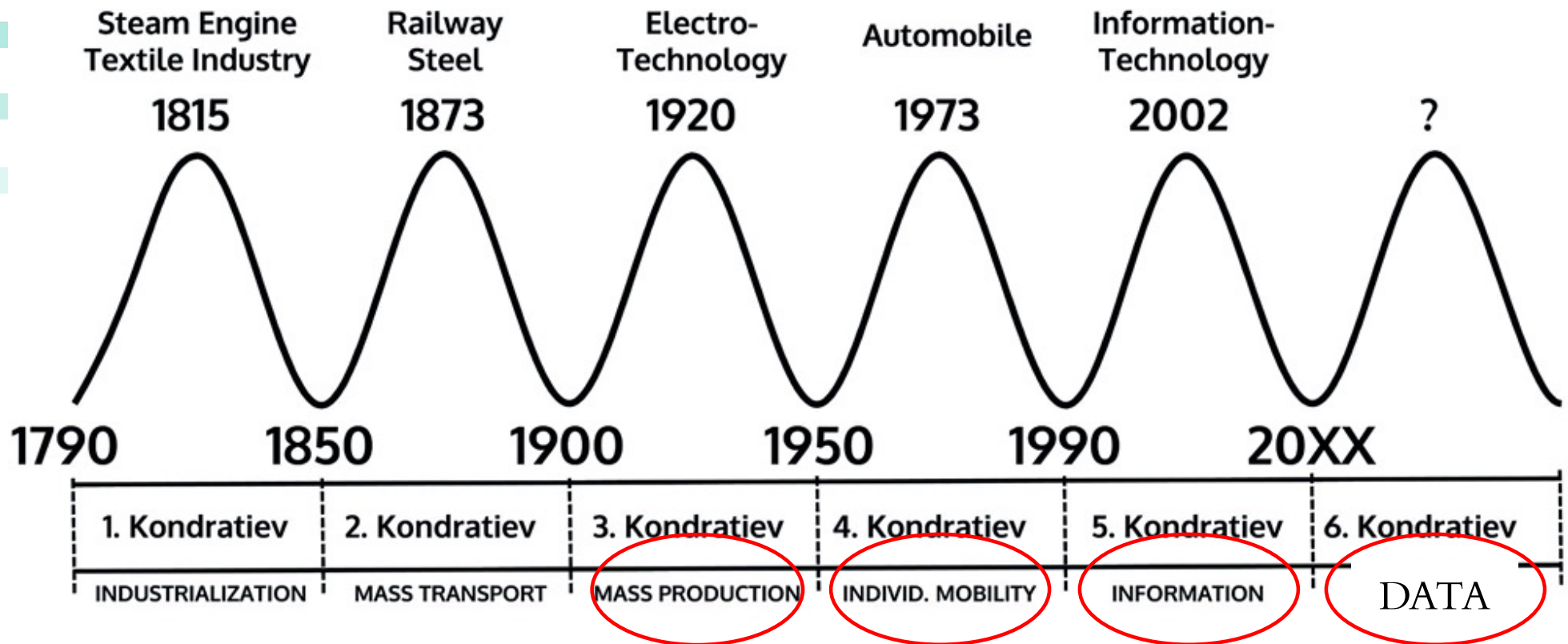
- Money
- Power
- Work
- Production
- Consumption

- Poverty
- Powerlessness
- Unemployment
- CO2 and environmental impacts
- Waste streams

*The electric light did not come
from the continuous improvement
of candles*



Waves of Innovation

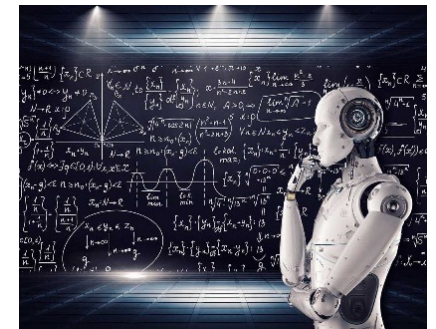


Shifts in Innovation Eras



100 years ago, people thought electricity was about lights – they did not think it was about fridges, washing machines, or self-driving cars

We are at the *start* of the digital economy – what we think we know about data today is nothing compared to what is coming tomorrow



BITCOIN AS LEGAL TENDER

0%

INCOME
TAX

0%

CAPITAL
GAINS TAX

0%

PROPERTY
TAX

0%

PAYROLL
TAX

- *Why do you need Bitcoin to do any of this?*
- *What might he actually be interested in?*



We cannot solve 21st © Problems with 20th © Solutions

- The philosophies, concepts and stories we use to make sense of an increasingly explosive and uncertain global present are – nearly always – ideas inherited from a different time and place. The kind of thinking that created today's global turbulence is unlikely to help us solve it" (Moore 2016)
- We need to not just think about materialities of a place – or a city, but to also
- *Rethink our inherited imaginary and intangible concepts that we think ideas through - and ultimately - design with*

Actually, we no longer have a choice



*CITIES ARE HOME TO
MANY OF THE
INTANGIBLE IMAGINARIES
OF HUMAN LIFE*

Intangibles and Imaginaries

- Economies
- Society / Culture

- Are all jointly created imaginaries – we only have the economic system we do because everyone agrees to abide by the social norms
- We only have the culture we do because we all tacitly agree to the 'rules'
- ... & Communities
- Are they perhaps the most tangible thing that a human actually has? But are communities linked to space, place, cities?

Final Thoughts

- Blockchain does not just challenge our notion of money but can also allow us to redefine structures that have defined our society not just for centuries but for millenia
- Do we need cities to be structured the way they are?
 - Can decentralisation change how we organise as humanity?
- Can Blockchain change the nature of a city's interactions between:
 - itself and its hinterland,
 - itself and other cities,
 - itself and the environment
- What does “Community” really mean when you are facing massive climate change?

SYDNEY

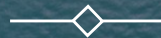


CLIMATE
ALWAYS BEATS
EVEN THE BEST
TECHNOLOGY





THANK-YOU



CATHERINE.MULLIGAN@TECNICO.ULISBOA.PT

@API_ECONOMICS