

Luxembourg  
Blockchain  
Week 2022

3 - 7 OCTOBER, LUXEMBOURG



Luxembourg  
Blockchain Lab

# DISCUSSION

Blockchain and the sustainability transition:  
threat or enabler?



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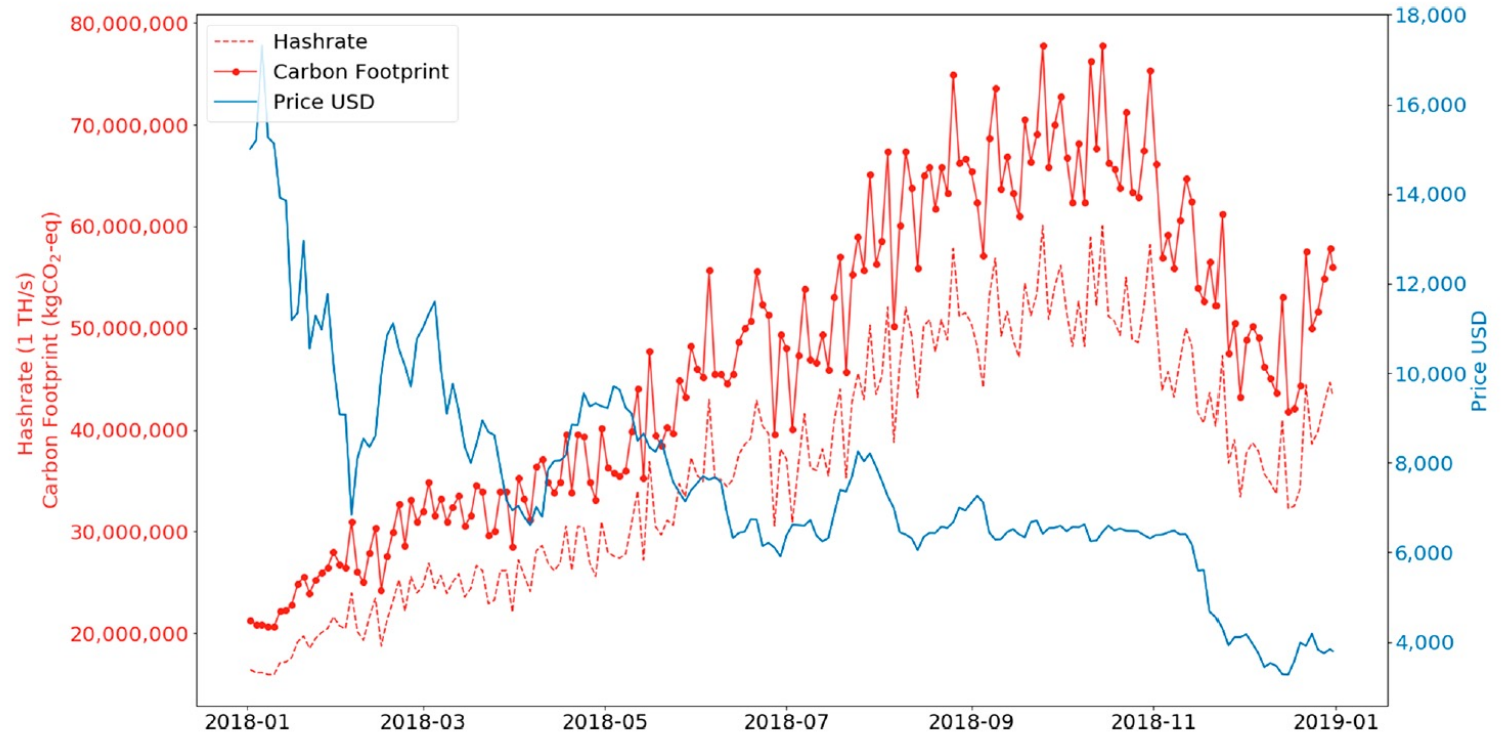
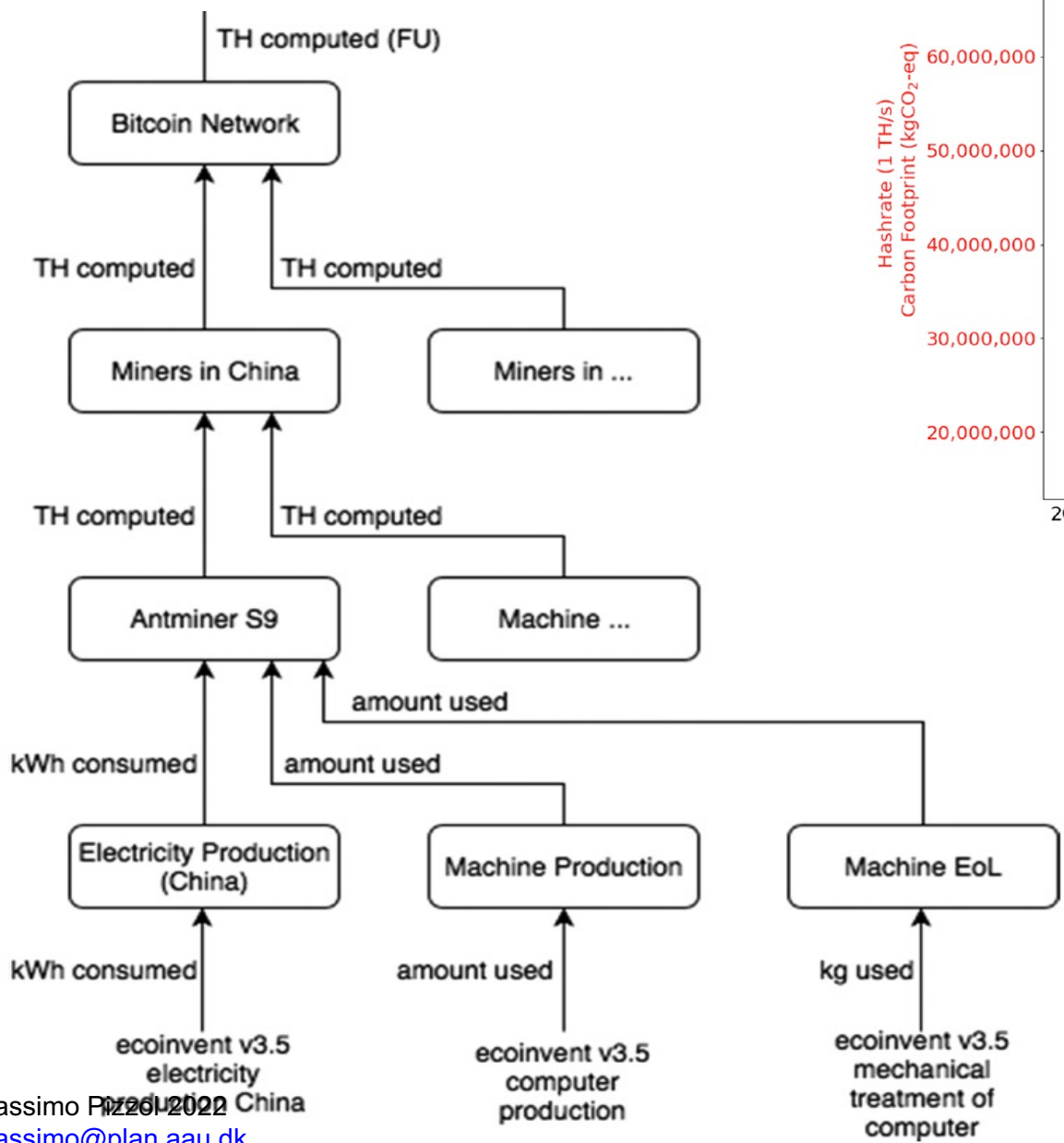
**ENRICO BENETTO**

Head of RDI unit  
LIST



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# Mining & carbon

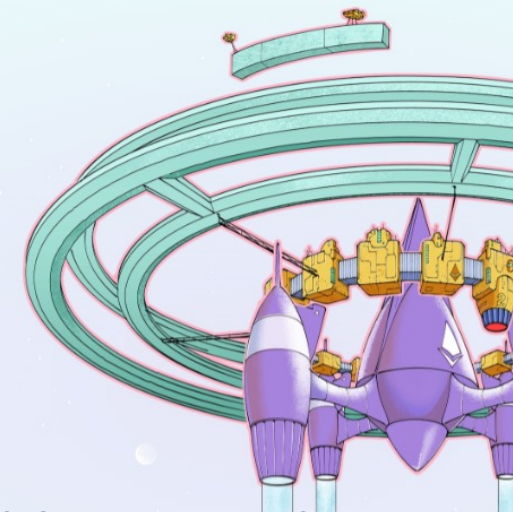


UPGRADES / MERGE

## The Merge

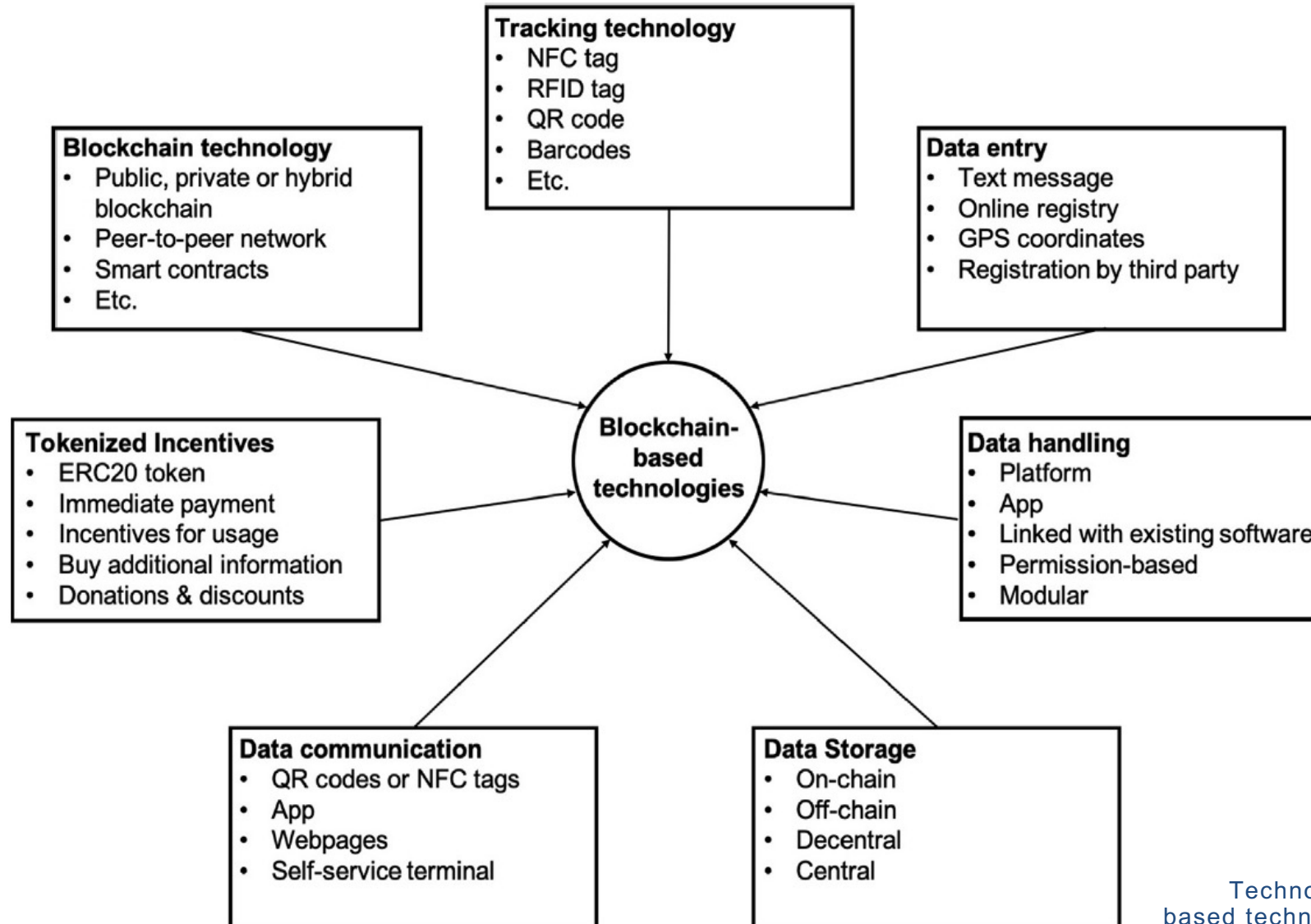
- Ethereum Mainnet uses proof-of-stake, but this wasn't always the case.
- The upgrade from the original proof-of-work mechanism to proof-of-stake was called The Merge.
- The Merge refers to the original Ethereum Mainnet merging with a separate proof-of-stake blockchain called the Beacon Chain, now existing as one chain.
- The Merge reduced Ethereum's energy consumption by ~99.95%.

Page last updated: September 29, 2022






Life Cycle Assessment of Bitcoin Mining  
 Susanne Köhler\*, † and Massimo Pizzol ‡  
 DOI: 10.1021/acs.est.9b05687  
 Environ. Sci. Technol. 2019, 53, 13598–13606

# Blockchain-based technologies





# Traceability: blockchain VS standards

<b>Co-Existing</b> 	<b>Synergistic</b> 	<b>Antagonistic</b> 
<ul style="list-style-type: none"><li>• BC collecting data on impacts</li><li>• Access to financial services via BC</li><li>• Data on BC used to conduct audits</li></ul>	<ul style="list-style-type: none"><li>• BC implement the impact measurements from standards</li><li>• BC and standards collaborate (e.g. digital + on-site audits)</li><li>• Ecolabels product information made accessible via BC</li></ul>	<ul style="list-style-type: none"><li>• BC implement their own measures of impact and sustainability</li></ul>

