

# Policy for digitalisation as an enabler of High-with-Low futures

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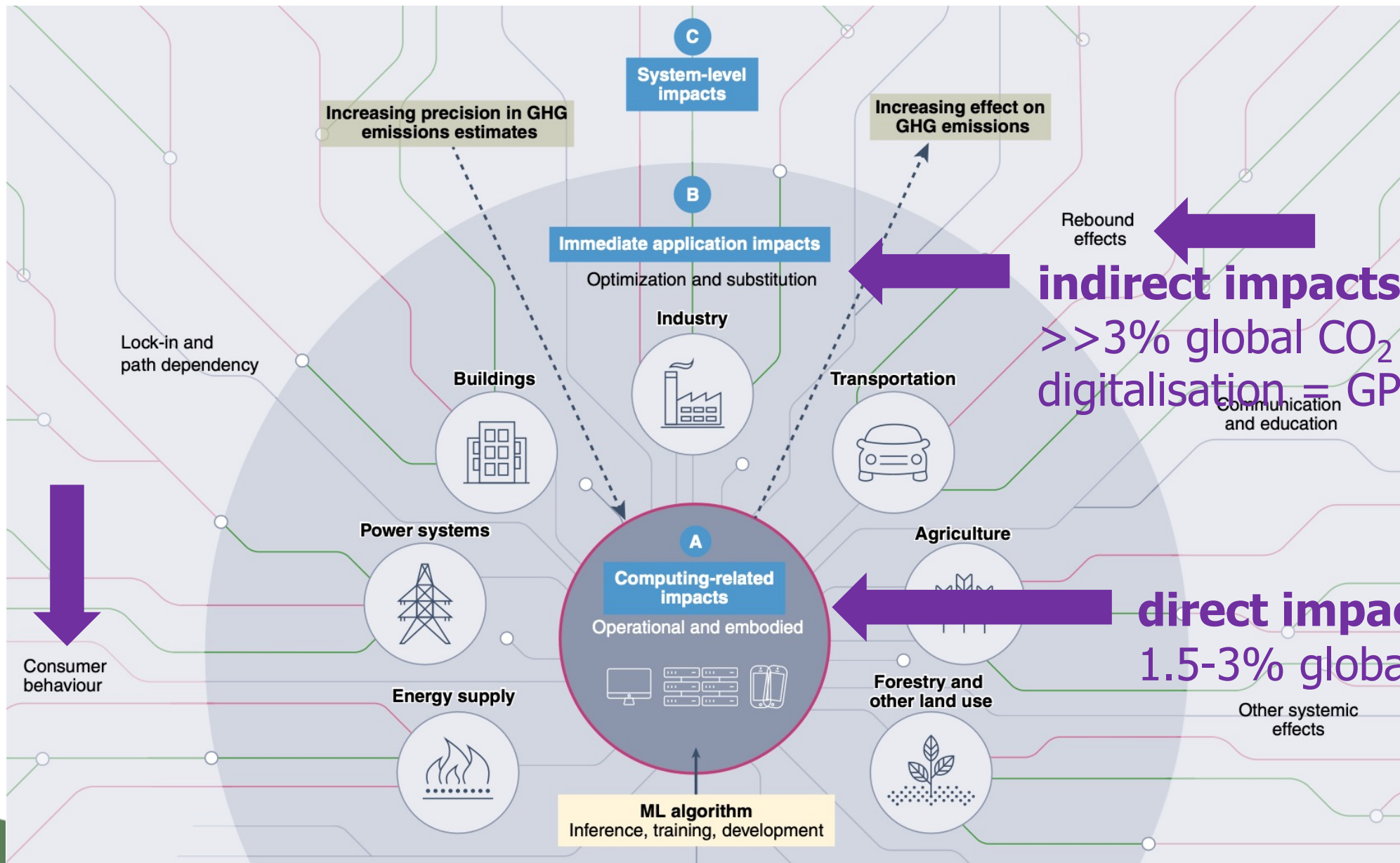


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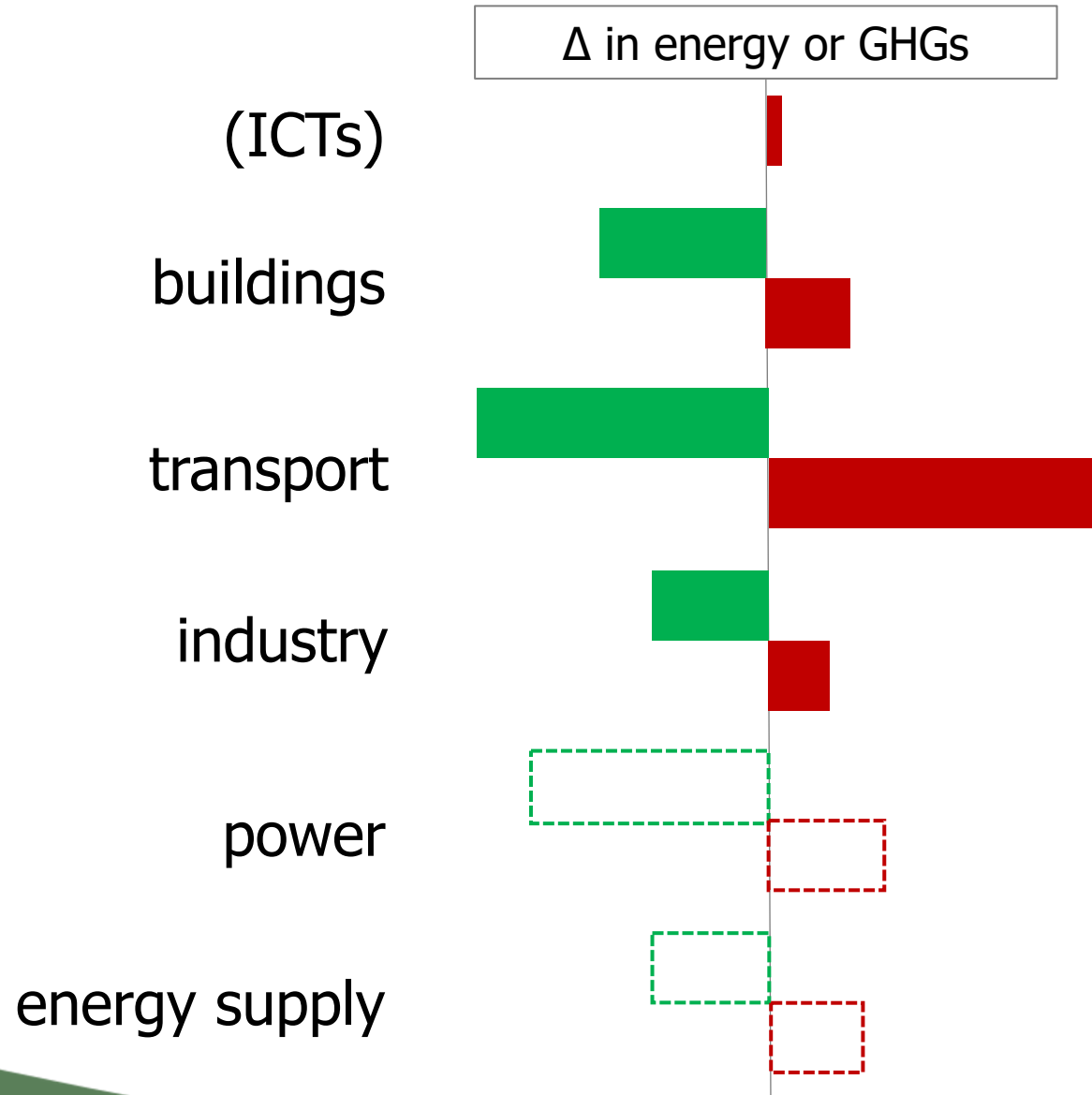


# Digitalisation impacts on energy



Kaack et al. (2022). "Aligning artificial intelligence with climate change mitigation." Nature Climate Change. doi.org/10.1038/s41558-022-01377-7

# Indirect impacts of digitalisation per sector



digitalisation policy for HwL  
= "the usual suspects"

i.e., sectoral energy &  
climate policies

+ emphasis on limiting  
rebound

# Governance of digitalisation: cross-cutting theme in HwL

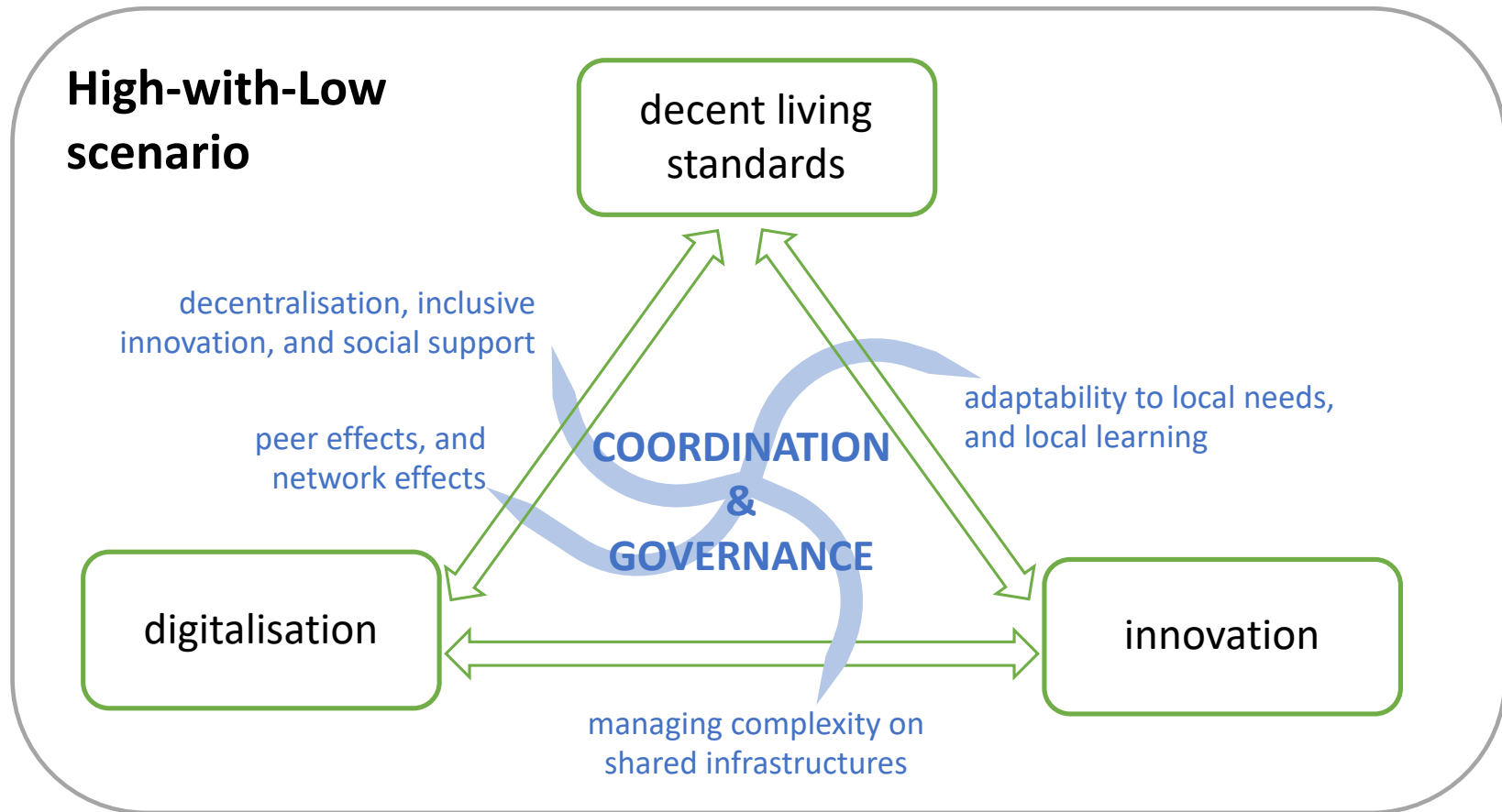
Working paper

## The 'High-with-Low' Scenario Narrative: Key Themes, Cross-Cutting Linkages, and Implications for Modelling

Charlie Wilson, Arnulf Grubler, Gregory Nemet, Shonali Pachauri, Stefan Pauliuk, Dominik Wiedenhofer

WP-23-009

<https://pure.iiasa.ac.at/id/eprint/19036/1/WP-23-009.pdf>



# Governance of digitalisation: cross-cutting theme in HwL

**Working paper**

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- (1) Build **shared expectations** about direction
  - *digital networks for self-reinforcing peer effects*
  - *empower end users & distribute agency*
- (2) Orient **incentives** towards public purpose
  - *tackle digital exclusion*
  - *monitor & limit rebound (e.g., collect usage data)*
- (3) Coordinate access & use of **shared infrastructure**
  - *open data commons*
  - *limits on monopolistic behaviour*
- (4) **Experiment** with policy

# Digitalisation policy: user protection, market power, access = *consistent with HwL but limited*



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EU Digital Services Act

(2) Orient **incentives** towards public purpose

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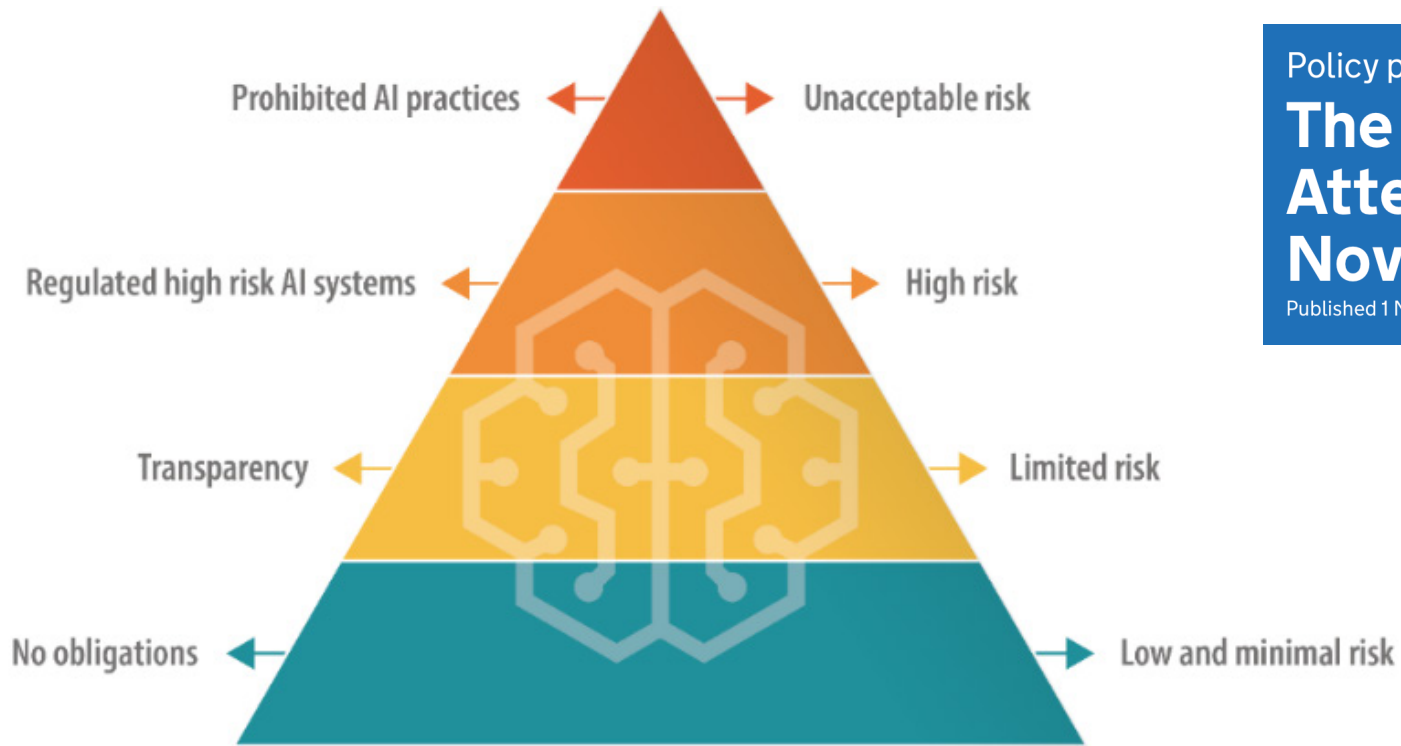
EU Digital Markets Act

(4) **Experiment** with policy



# AI Act: avoid undesirable outcomes ...

*“Certain AI systems create risks that we must address to avoid undesirable outcomes.”*



Policy paper

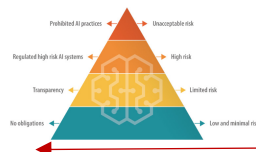
## The Bletchley Declaration by Countries Attending the AI Safety Summit, 1-2 November 2023

Published 1 November 2023



Governance solution?  
... an IPCC for AI

# AI Act: avoid undesirable outcomes ... including on societal & environmental wellbeing



AI Act & digitalisation policy

'usual' energy & climate policy

GPT instance



software engineers,  
tech companies

application



tech companies,  
car manufacturers,  
mobility providers

application context

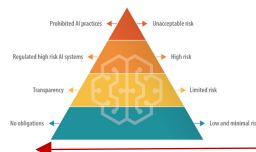


municipal governments,  
transport planners & authorities,  
regulators (roads, environment)

**what policy mitigates the undesirable outcome of increasing energy use?**



# AI Act: avoid undesirable outcomes ... including on societal & environmental wellbeing



AI Act & digitalisation policy

'usual' energy & climate policy

GPT instance



software engineers,  
tech companies

- small n of influential companies
- sensitive to social license to operate
- ambitious net-zero plans

application



tech companies,  
car manufacturers,  
mobility providers

*e.g. usage-based emissions reporting*

application context



municipal governments,  
transport planners & authorities,  
regulators (roads, environment)