

Transforming Our World

The 4th Industrial Revolution from a Deep Transition Perspective

@Johan_Schot | #InnovationLandSummit



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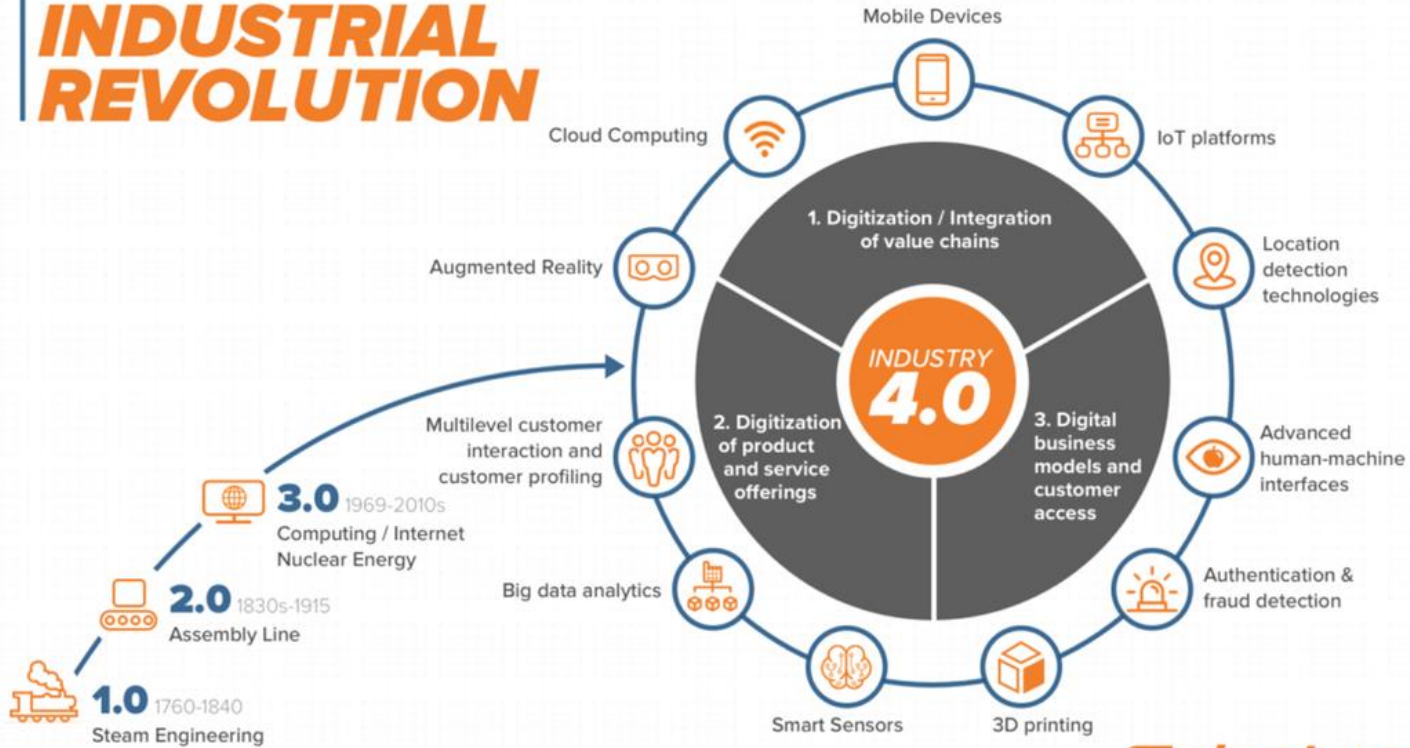


“Emerging disruptive technologies are advancing at an unprecedented speed, changing the world as they blur the boundaries among the economic, social, business and political spheres.”

Bangladesh Center for 4th Industrial Revolution

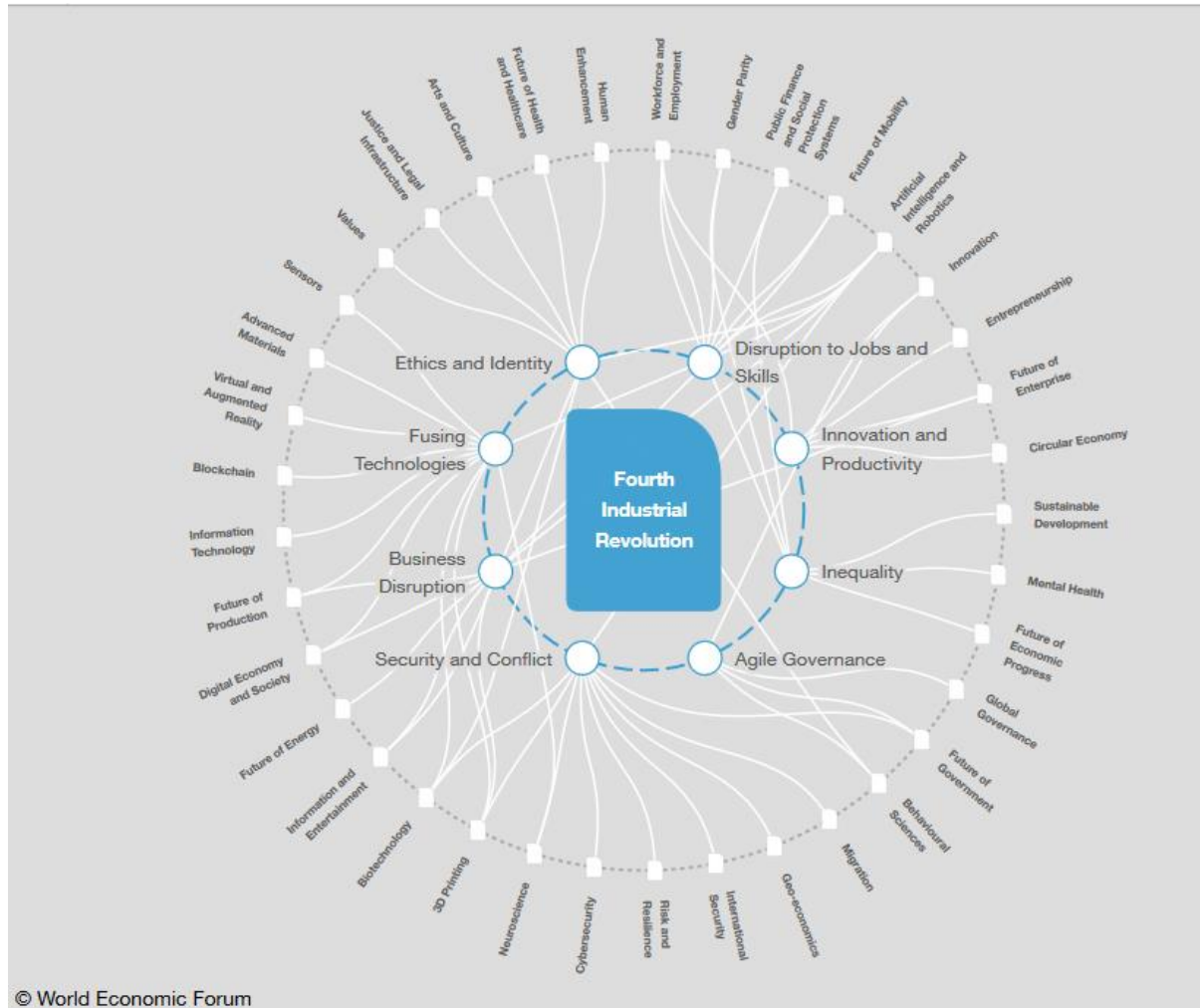
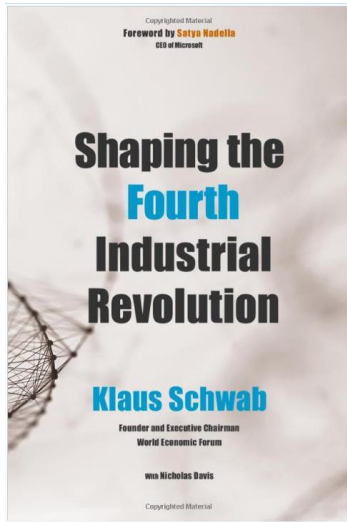
THE DAWN OF THE

FOURTH INDUSTRIAL REVOLUTION



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Apps for the Fourth Industrial Revolution



What is Innovation?

- Innovation is a product of industrial revolutions
- Modern societies promote innovation through:
 - ✓ R&D
 - ✓ Building national systems of innovation
 - ✓ Entrepreneurship and skill development

What is Innovation?

Externalities of Innovation: Climate change, pollution, inequality.

→ Or are they embedded impacts?

Need for a regulatory framework.

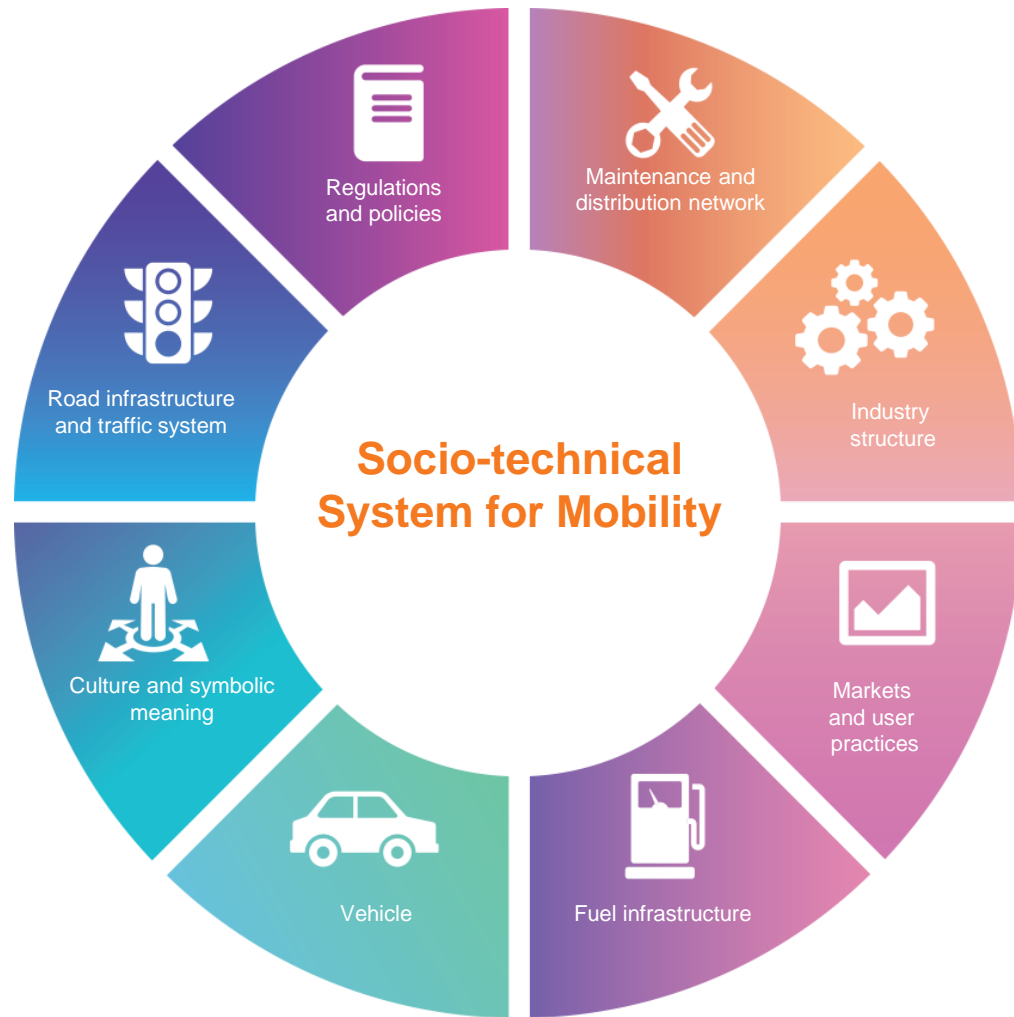
→ But is regulation the solution?

How to better deal with embedded impacts?

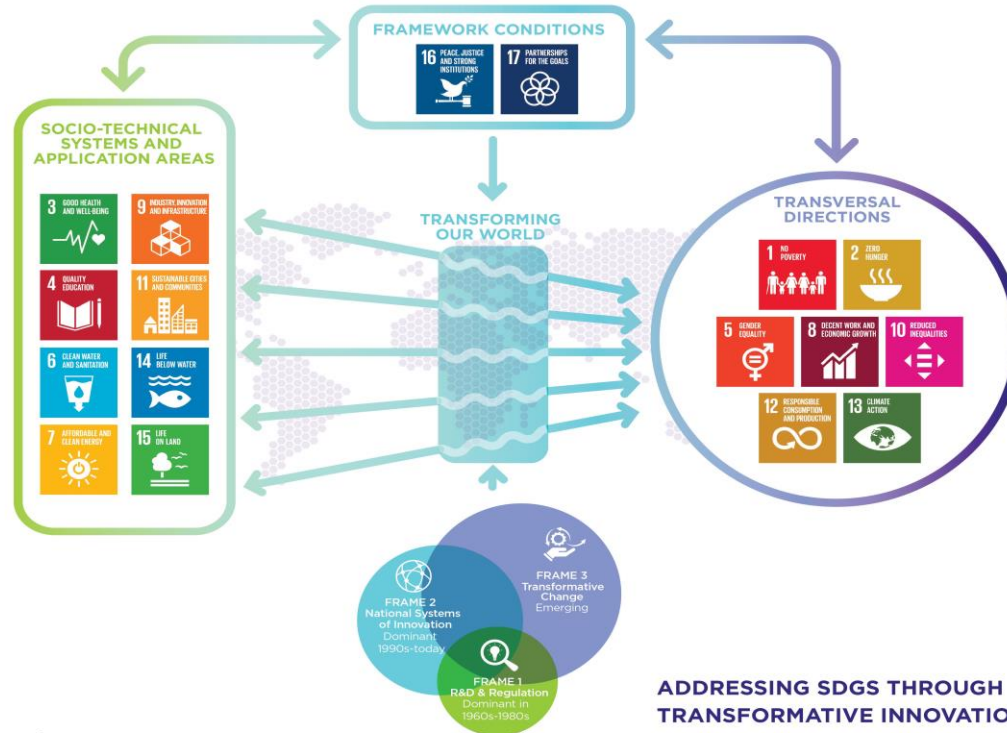
→ Need for changing the way we innovate?



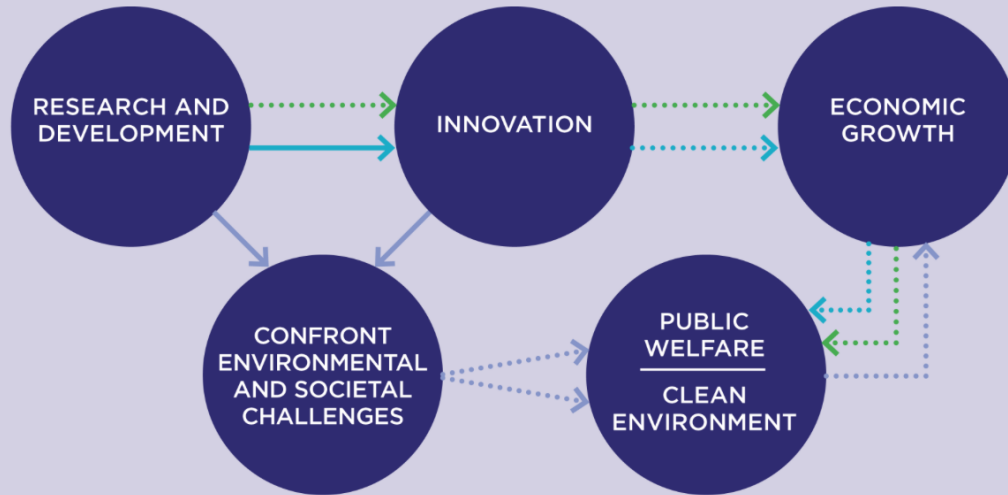
**Innovation: Creative
Destruction vs.
Destructive
Creation?**



Transformative Innovation & SDG Implementation



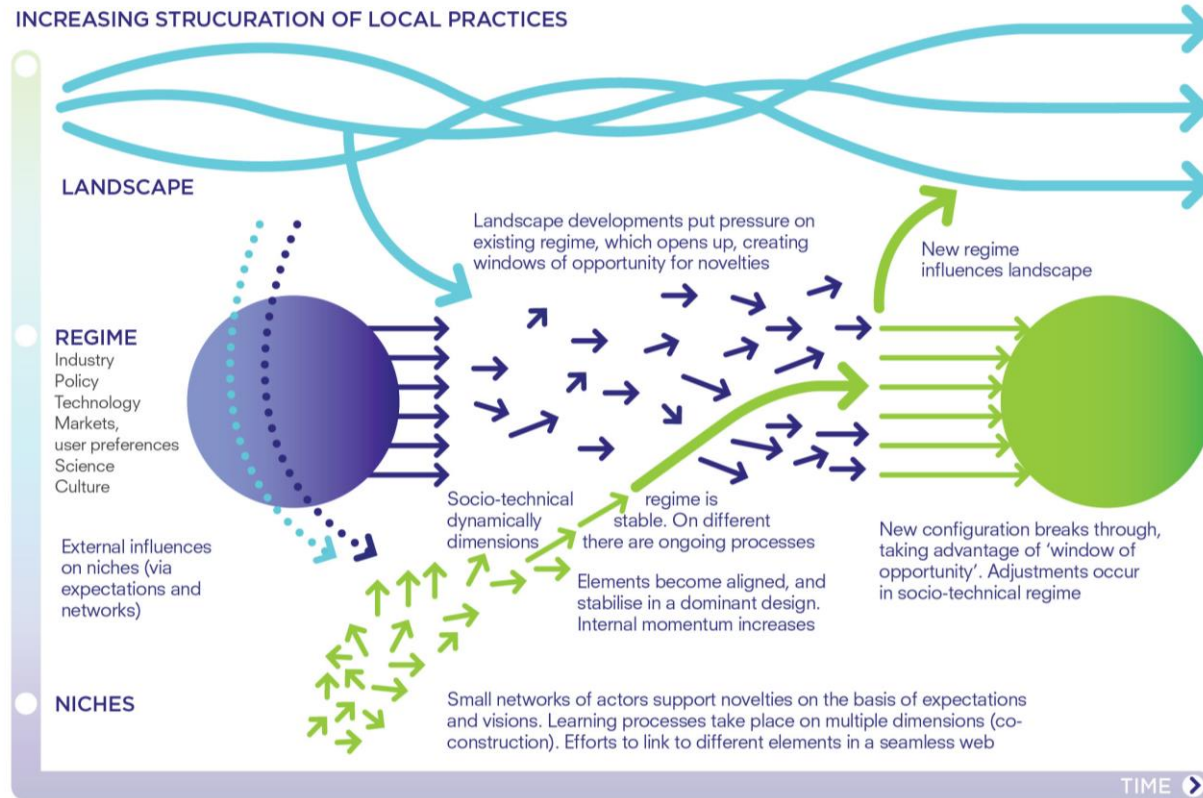
3 Frames of Innovation



Solid line = This shows the frame explicitly addresses this aspect (e.g. the link between knowledge creation and utilization in frame 2).
Dotted line = This indicates that an aspect is assumed to follow (e.g. the utilization of the results of basic scientific research by industries in frame 1).

Source: Schot, Boni, Ramirez, Alvial-Palavicino (2019)

Explaining system change: the multi-level perspective



Multi level perspective of the socio-technical transition framework. Source: Geels, 2002; Geels and Schot, 2007

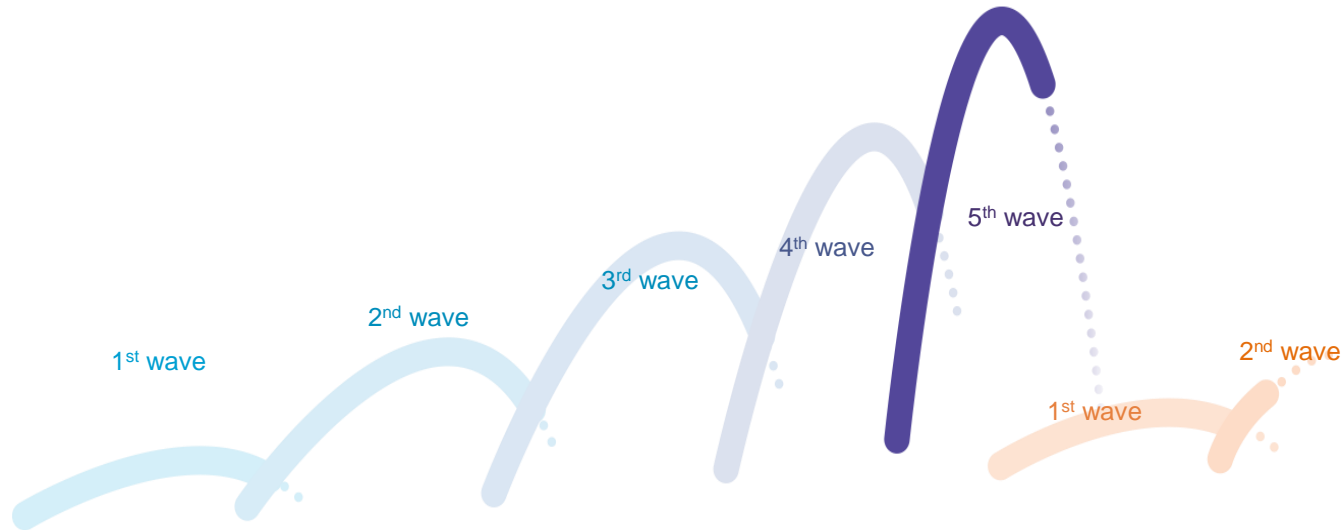
Definition of Deep Transition

“A series of interconnected and sustained fundamental transformations of socio-technical systems in a similar direction”

Fundamental = Deep → Change of Meta-Regimes or
Techno-Economic Paradigm

Definition of Techno-economic Paradigm

“A meta regime is a standard or model accepted across a wider range of socio-technical systems. It is a preferred way and common sense for improving the system”



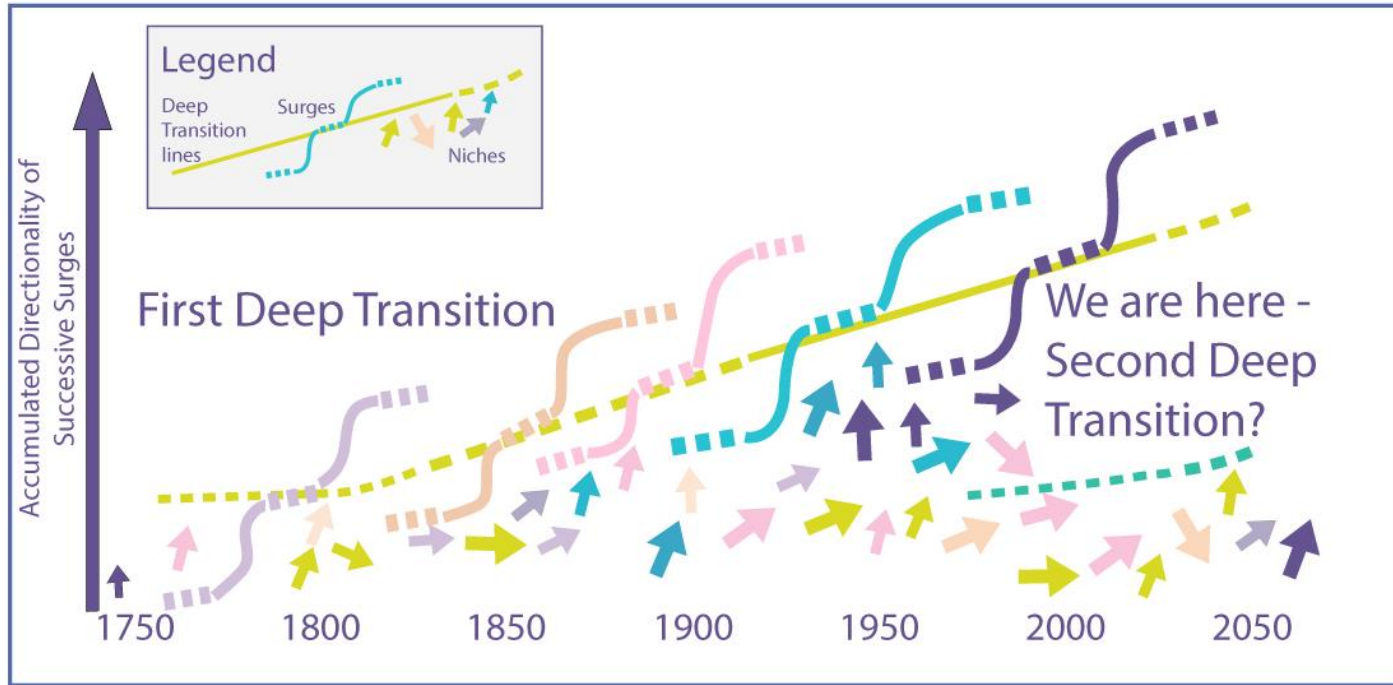
Current dominant meta-rules

- Mass-production
- Individual mass-consumption
- Linear production
- Carbonized production and consumption
- Building global value chains

Alternative meta-rules

- Sharing economy
- Circular economy
- Low-carbon production and consumption
- Building local value chains

Long term continuity in Deep Transition Dynamics



Will 4th IR contribute to the Second Transition?

This depends on three conditions which apply to all actors, governments and companies. Whether:

- 1 Current social and ecological crises are put at the heart of the 4th IR, not just a set of technologies!
- 2 Technological opportunities are not seen as imperatives we have to adapt to, but as options, we may choose depending on their ability to enable socio-technical change in a sustainable direction!
- 3 The innovation model is changed, incorporates externalities, and directionality early on, and seeks participation between public-private and civil society parties!

“Business should lead in giving 4th IR technologies a social and ecological purpose. They make them tools for transforming sustainable socio-technical systems, and enabling a Second Deep Transition”

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- www.tipconsortium.net
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Deep Transitions Research:

- Global Expert Panel on the 4th industrial revolution and Deep Transitions

DEEP
TRANSITIONS

Let's stay in touch!

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