Transformative Change for Sustainable Development

Nebojsa Nakicenovic
Deputy Director General
International Institute for Applied Systems Analysis
Professor Emeritus of Energy Economics
Vienna University of Technology

High Level Political Forum on Sustainable Development
Global Emissions CO$_2$
Global Emissions CO$_2$

Billion tons CO$_2$

- 2016 #3

Nakicenovic
The World in 2050 (TWI2050)

“Doing More with Less” within Planetary Boundaries

Vision: Sustainable Future

Growing number of actors of change:
- green businesses
- cities
- civil society
- science
- IGOs (UN etc.)

New values and norms

2050: Sustainability transformation

2030: Achievement of SDGs

Legitimacy of BAU eroding

Incremental  Radical  Transformational

Source: After WBGU, 2011
The World in 2050 (TWI2050)

“Doing More with Less” within Planetary Boundaries

Vision: Sustainable Future

→ New values and norms

→ 2050: Sustainability transformation

→ 2030: Achievement of SDGs

Transformation Diffusion

Incremental

Radical

Transformational

Legitimacy of BAU eroding

Source: After WBGU, 2011

Nakicenovic
STI for Transformational Change

1850

1900

1950

2000

2050

Source: After Granger Morgan, 2013
Disruptive Change

Easter Parade on Fifth Avenue, New York, 13 years apart

1900: where’s the car? 1913: where’s the horse?

How to achieve global development within a safe and just operating space

“Safe space” of interaction among SDGs: sustainability narratives and integrated models e.g. SSP1, GEA, DDPP

Multiple-benefits and tradeoffs of transformation toward sustainable futures
THANK YOU

naki@iiasa.ac.at