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science for global insight

STI for the Transformation Towards SDGs

TWI2050
The World in 2050
www.twi2050.org

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Thematic Review, Advancing Science, Technology and Innovation for SDGs, High-Level Political Forum, United Nations, NYC – 10 July 2018

STI Policy Coherence

- **Paradox** of STI:
  - Many left behind and negative externalities
  - Key to achieving SDGs with appropriate policies
- Essential to
  - Understand inter-relationships, interdependencies and trade-offs
  - Leverage **synergies** among STI policies and SDGs
  - At all levels - global, national, regional and local
- Tools to support policy coherence:
  - Integrated assessments
  - Roadmaps from local to global
  - Systems and holistic approaches

TWI2050 Report (www.TWI2050.org)

Key Messages

Synthesis

1. Framing and Introduction
2. The Challenges Ahead
3. Sustainable Development Pathways
4. Governing the Transformation

- >60 authors from ~20 organizations
- Launch: UN HLPF, Side Event 12 July, 13:15, 15th Floor

TWI2050 Writing Meeting
5-7 March 2018, IIASA

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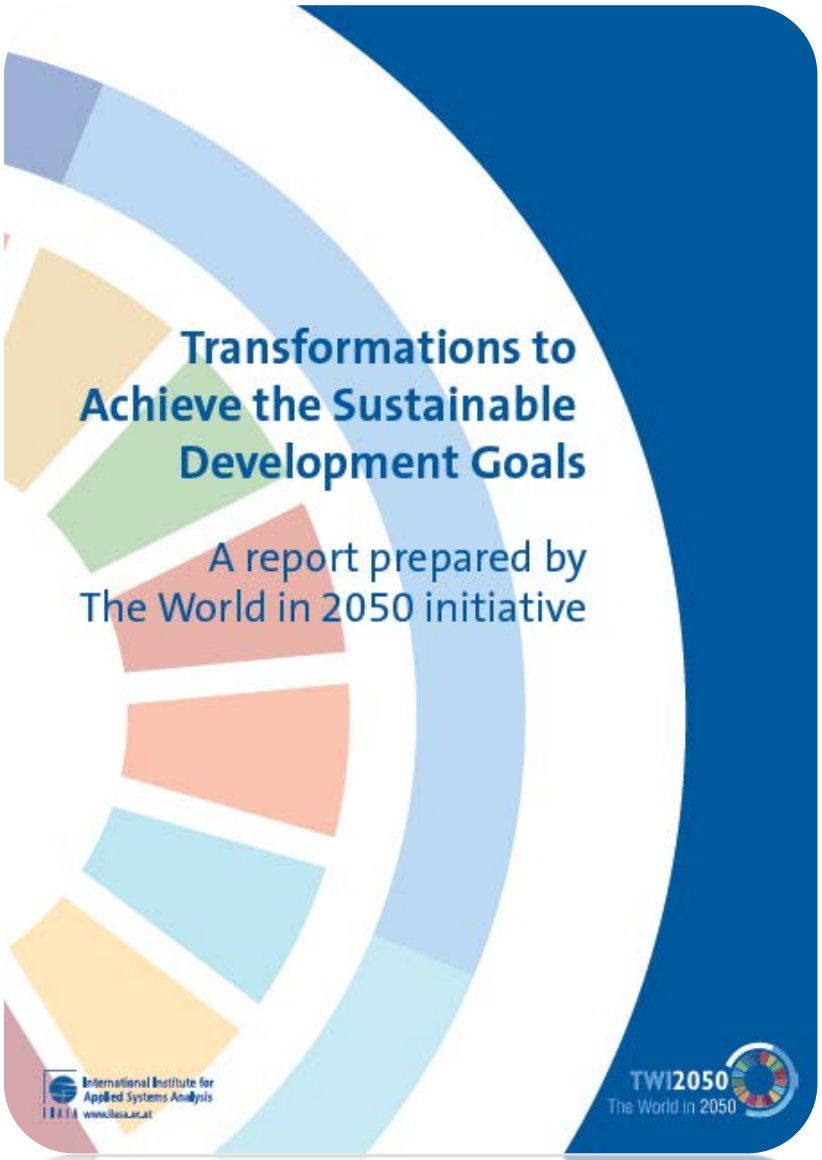
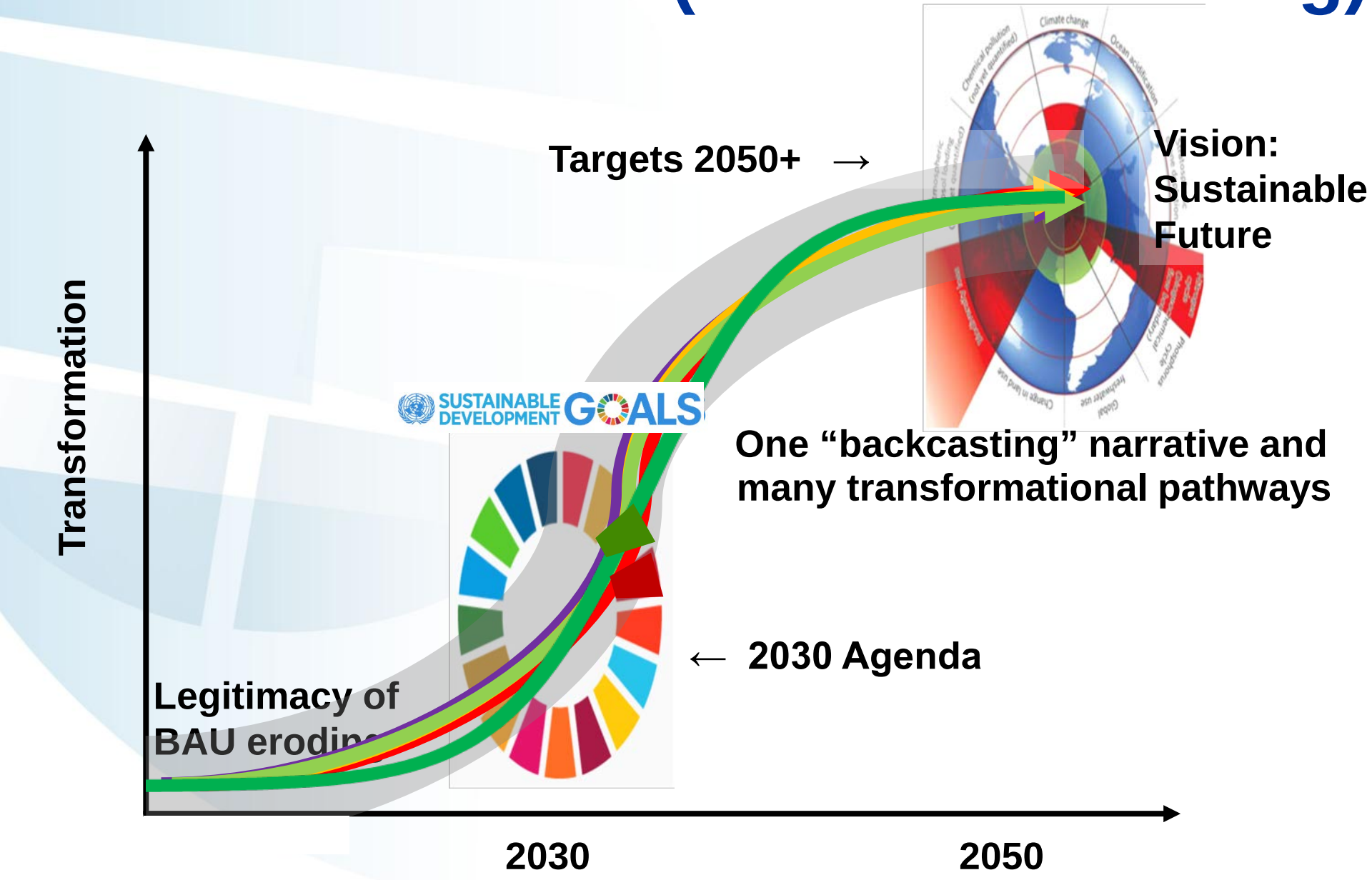


The World in 2050 (www.TWI2050.org)



Six Major Transformations (TWI2050.org)

Digital revolution
Artificial intelligence, big data, biotech, nanotech, autonomous systems

Human capacity & demography
Education, health, ageing, labor markets, gender, inequalities

Smart cities
Decent housing, mobility, sustainable infrastructure, pollution

SDGs:
Prosperity
Social Inclusion
Sustainability

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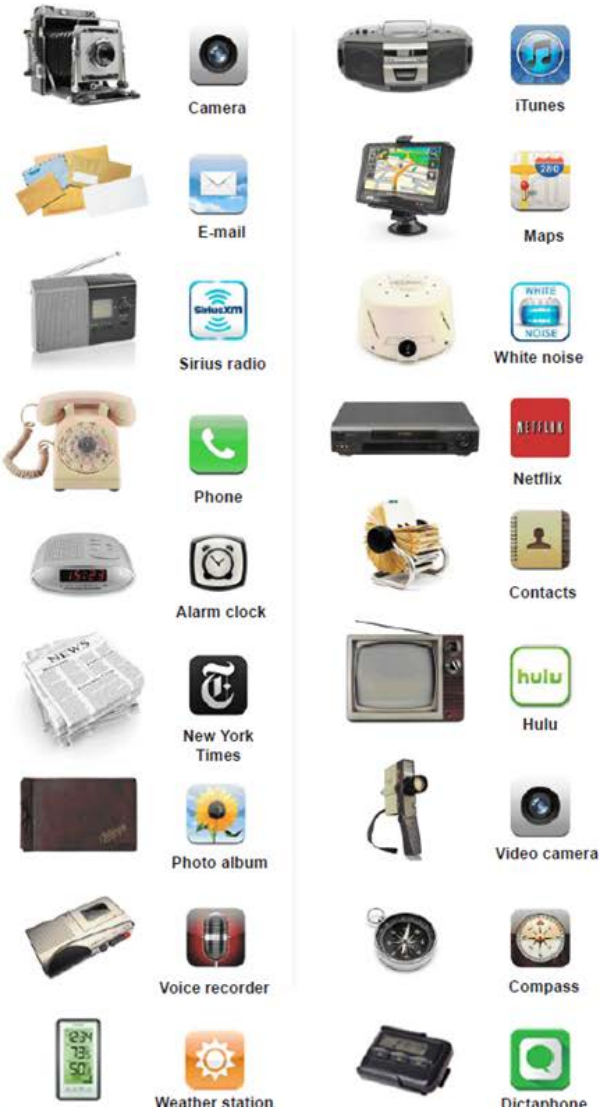
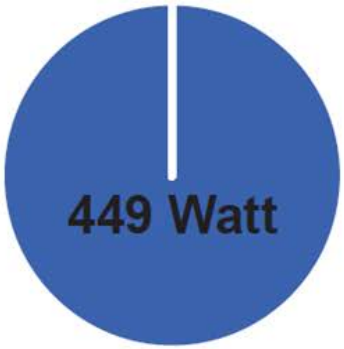
Consumption & production
Resource use, circular economy, sufficiency, pollution

Food, biosphere & water
Sustainable intensification, biodiversity, forests, oceans, healthy diets, nutrients

Decarbonization & energy
Energy access, efficiency, electrification, decent services

Impact of IC Technology Convergence

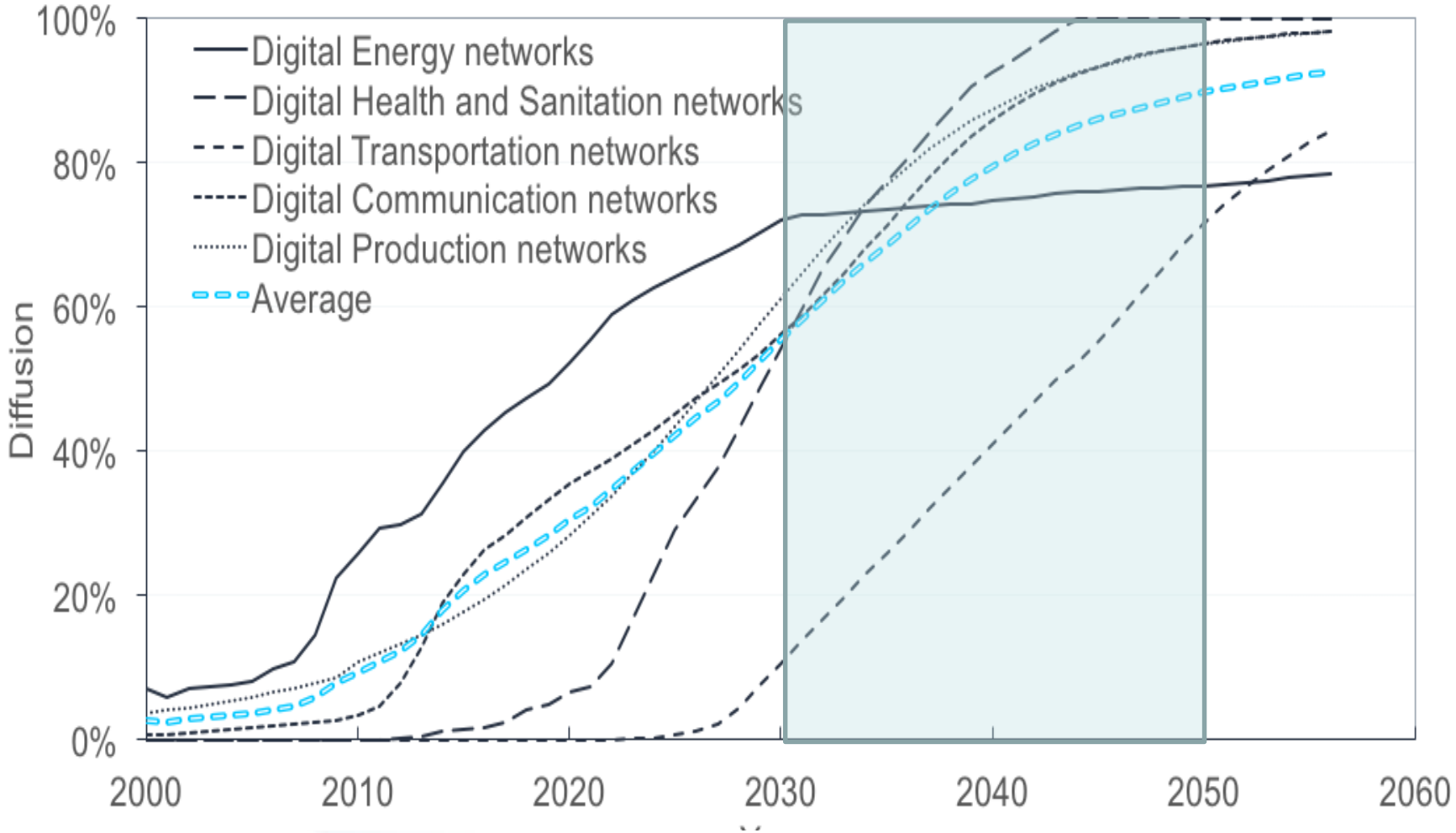




Power consumption

Stand-by

Technology Diffusion Compared
digital revolution



STI Transformational Change

Dynamic, Cumulative, Systemic and Uncertain

- Incremental – gradual (continuous) and cumulative improvements
- Disruptive – radical, discontinuous and abrupt as “gales of creative destruction”
- Add as many mail-coaches as you please, you will never get a railroad by so doing. [Schumpeter, 1935/1951, 136]

Disruptive Change

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

1900: where's the car?

1913: where's the horse?

Images: L, National Archive, www.archives.gov/research/american-cities/images/american-cities-101.jpg
R, shorpy.com/node/204.
Inspiration: Tona Seba's keynote lecture at AltCar, Santa Monica CA, 28 Oct 2014,
http://tonyseba.com/keynote-at-altcar-expo-100-electric-transportation-100-solar-by-2030/

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THANK YOU

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