

# Digitalization, Globalization and Sustainable Development Implications, Synergies, Conflicts

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# Major global transitions

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- Globalization
  - Trade
  - Communication
- Digitalization
  - Production (Industry, Labor)
  - Service (Robotics, AI)
  - Consumption (smart environments)
- Sustainabilization
  - Natural resources and sink capacity
  - Social and economic justice
  - Collective and individual identity

# Accompanying trends

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- Demographic changes
  - Aging
  - Growing and shrinking populations
- Urbanization
  - Increased vulnerability
  - Increased mobility
- Global environmental changes
  - Climate change
  - Loss of biodiversity (land use patterns)
  - Planetary boundaries

# Globalization

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- Space becomes irrelevant for:
  - Production
  - Trade
  - Communication
- Emphasis on competitiveness on a global scale
  - Priority on efficiency
  - International division of labor
- Universalization of lifestyles
  - Emergence of global values and behavioral routines
  - Dominance of markets in everyday life
  - Emergence of a popular global culture

# Digitalization

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- Opportunities
  - Increase of efficiency (economic value)
  - Automation of manual but also dispositive activities (substitution of routines)
  - Increase of information access, communication modes and learning opportunities
  - Increase in comfort and convenience
- Risks
  - Vulnerability through interconnectiveness
  - Displacement of jobs and professions
  - Cybersecurity
  - Loss of privacy and sovereignty
  - Polarisation of values and attitudes (echo chamber)

# Sustainabilization

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- Ecological
  - Decarbonization
  - De-materialization
  - Renaturalization
- Economic
  - Circular economy
  - Internalization of external effects
- Socio-cultural
  - Intra- and intergenerational justice
  - Participation in all collective affairs (education, governance)
  - Maintaining cultural identity

# Conflicts

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- Fundamental
  - Growth versus no-growth societies
  - Free global markets versus national protectionism
  - Autonomy versus interdependence
- Different relative weights
  - Economic efficiency
  - Fairness and social equity
  - Weak versus strong sustainability (substitution)
  - Degree of centralization
  - Degree of state intervention into markets
  - Degree of privacy rights and open disclosure

# Dealing with conflicts

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- Consensus
  - Hard to reach for resolving principle differences
  - Time consuming
  - Difficulty to get all actors involved
- Majority vote
  - Preferences change over time
  - Minority is losing everything
  - Not most efficient or fair solution
- Boundary Negotiations
  - Identification of intolerable action areas for each major actor
  - Mapping most acceptable space below each group's boundary



# Synergies in Transformation I

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- *Ecology*: decarbonized, dematerialized, renaturalized guiderails that govern the limits of free markets
- *Economy*: smart structures within a circular economy, emphasis on service providers, strengthening local and regional economies
- *Politics*: effort to balance the three transformations simultaneously; more deliberative participation, adaptive regulation (e-government)

# Synergies in Transformation II

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- *Social*: enforcing rules for individual autonomy and sovereignty; embracing community empowerment; avoiding or compensating inequities
- *Cultural*: emphasis on cultural diversity but maintaining local and regional identity
- *Global*: multilateral agreements rather than global rules; control of finance markets on a global level; regulation of digital services and rules from a global perspective

# What Can We Do?

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- *Embrace all three transformations but on the condition of accountable and responsible design*
- *New governance strategies combining effectiveness (experts), efficiency (corporate sector), resilience (governments) and fairness (NGOs) to achieve legitimacy*
- *Inclusion of more direct citizen involvement in developing smart and sustainable lifeworlds*
- *More effective educational programs that make people understand their opportunities and risks and prepare them for their role in the new information age*

# Quote:

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Sustainability is often misunderstood. It does not mean securing what we have. The focus is not on conservation but on innovation and development. The world needs change, yet this change must obey a different rationale, i.e., the paradigm of justice with respect to the present and the future generations...

*Kofi Annan*

# Thank you for your attention

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