

Users and intermediaries in the energy transition

Energy Business and
Innovation – Session 8

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12.5.2022



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Overview

- **Last session, focus was on the role of policies in the energy transition**
- **Today, we will focus on users and intermediaries.**
- **Users have a particularly large role in the energy transition as co-producers**
- **Public sector, as well as other sectors, include also various organizations or individuals playing a facilitative role -> these are often referred to as intermediaries**

From consumers to users (Schot et al. 2016)

Important roles of users for the energy transition:

- **Building up niche markets**
- **Enabling social networks**
- **Learning to rethink**
- **Changing dominant user preferences**

Typology users in energy transitions

(Schot et al. 2016)

- **User-producers**
- **User-legitimizers**
- **User-intermediaries**
- **User-citizens**
- **User-consumers**

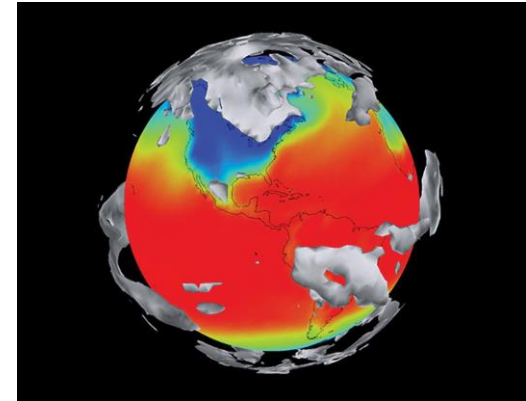
User-producers

- Entrepreneurial actors
- Invent, experiment and tinker with radical technologies
- Example: pioneers developing local energy systems using small-scale renewable technologies.
- Often acting on their own, but might also be supported by governments through e.g. subsidies



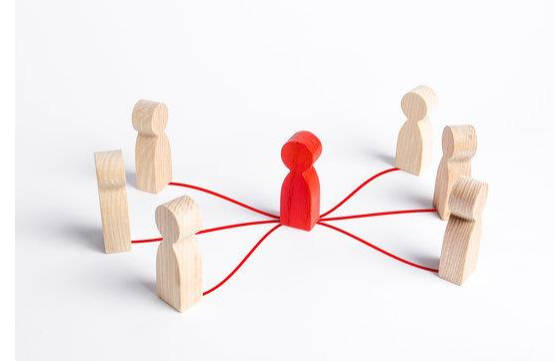
User-legitimimators

- **Shape the values and worldview of niche actors, providing meaning, purpose and rationale for their activities**
- **Provide forceful interpretations of landscape developments, e.g. climate change, and how these relate to the transition**
- **Example: Limits-to-growth narrative and movement providing meaning to renewable development**



User-intermediaries

- **Create spaces for the appropriation, shaping and alignment of the various elements of emerging socio-technical systems (e.g. products, infrastructures and regulations)**
- **Configure the system e.g. by setting rules and regulations on use, voicing expectations of new technologies and their uses**
- **Important role in the upscaling and mainstreaming of niches**
- **Examples: national and regional organizations for renewables**



User-citizens

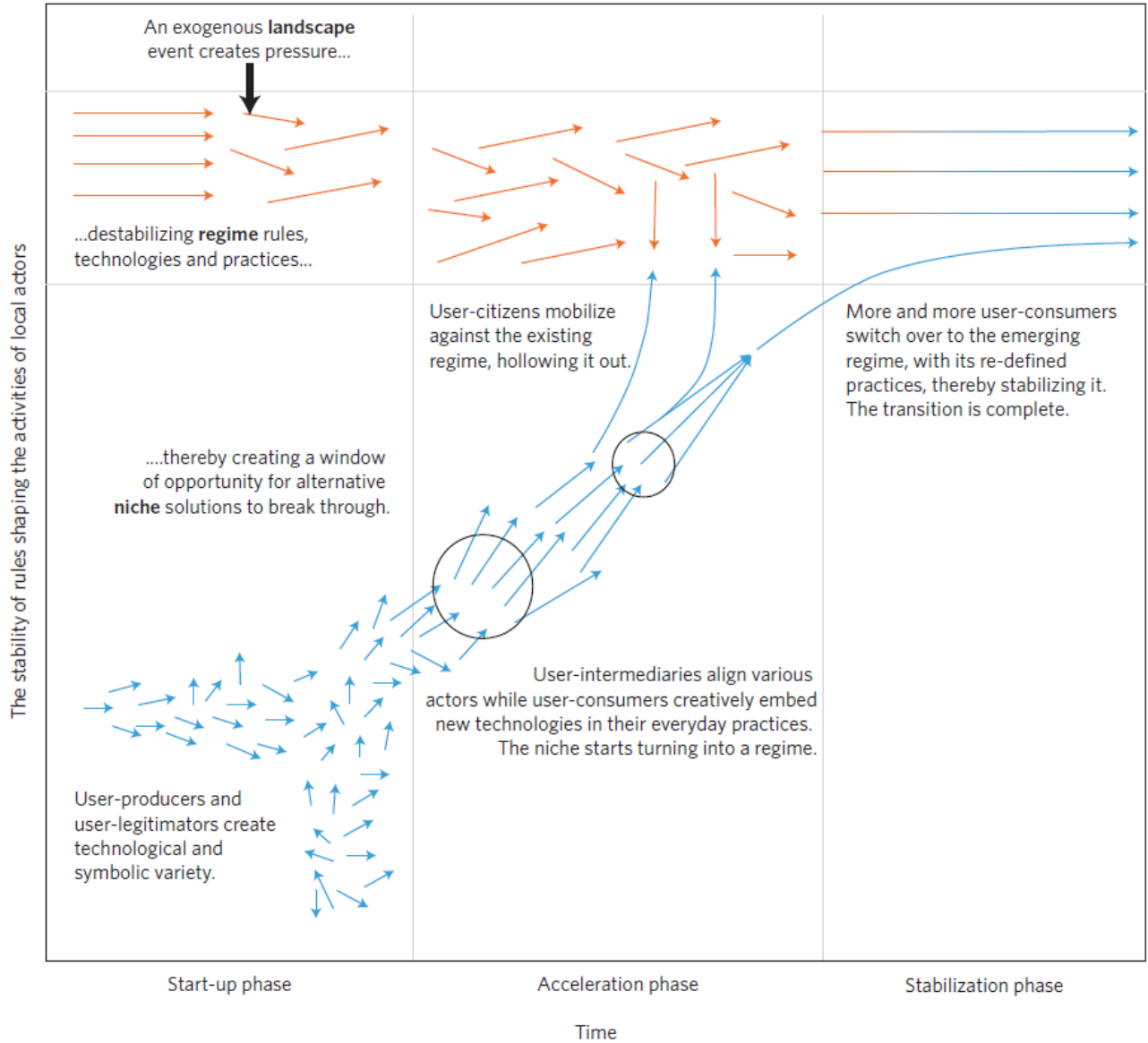
- **User-citizens engage in regime-shift politics, lobbying for particular niches and against a regime**
- **Aim to transmit niche-derived lessons about regulatory reforms into regime-shift processes**
- **Work together with social movements**
- **Examples: active individuals, NGOs such as Greenpeace**



User-consumers

- Buy products and embed them in their daily practices and lifestyles
- Give symbolic meaning to new technologies by expressing their status and identity
- Example: consumer organizations promoting specific technologies





(Schot et al. 2016)

Discussion

Consider your own role as a user of energy and/or a professional in the energy field.

- **How would you characterize your own role as a user of energy?**
- **Does it include any characteristic of the broader user roles outlined previously?
(producer/legitimator/intermediary/citizen/consumer)**
- **Have you been involved with organizations representing users in your personal or professional (work/uni) life?**

Intermediaries and the energy transition

- **Intermediaries – actors and platforms that positively influence the sustainability transition process by linking actors and activities to foster new collaboration (Kivimaa et al. 2020)**
- **Intermediaries can have a role in both the emergence and diffusion of new sustainable technologies**
 - Facilitating experimentation and learning
 - Building social networks
 - Creation of new markets by e.g. engaging users or changing policy
 - Management of tensions between different stakeholders
- **May be private (e.g. consultancies, industry associations), public(e.g. government agencies) or NGOs (e.g. voluntary groups, charities) (Bergek, 2020)**

Examples (Kivimaa et al. 2014)

The logo for SITRA, consisting of the word "SITRA" in a bold, black, sans-serif font. The letters are closely spaced and have a slightly rounded, modern appearance.

- Foundation established to promote sustainable well-being
- Explicit focus on systemic change
- Regime destabilization and niche support
- Limited engagement period

The logo for Motiva, featuring a stylized red icon on the left that resembles a double-headed arrow or a pair of wings, followed by the word "Motiva" in a red, sans-serif font.

- Government-owned expert company promoting sustainable use of energy and materials
- More focus on implementing existing policies rather than regime destabilization
- Raising awareness, accelerating the application of new concepts and technologies, niche diffusion

Guest lecture – Sini Numminen



- **Postdoctoral researcher, Department of Design**
- **Research interests: energy use and daily rhythms, demand side management, energy infrastructure service and energy justice**
- **Focus of session: Citizen's energy literacy enabling and challenging energy business**

References

- Bergek, A., 2020. Diffusion intermediaries: A taxonomy based on renewable electricity technology in Sweden. *Environmental Innovation and Societal Transitions*, 36, pp.378-392.
- Kivimaa, P., 2014. Government-affiliated intermediary organisations as actors in system-level transitions. *Research policy*, 43(8), pp.1370-1380.
- Kivimaa, P., Primmer, E. and Lukkarinen, J., 2020. Intermediating policy for transitions towards net-zero energy buildings. *Environmental Innovation and Societal Transitions*, 36, pp.418-432.
- Schot, J., Kanger, L. and Verbong, G., 2016. The roles of users in shaping transitions to new energy systems. *Nature energy*, 1(5), pp.1-7.