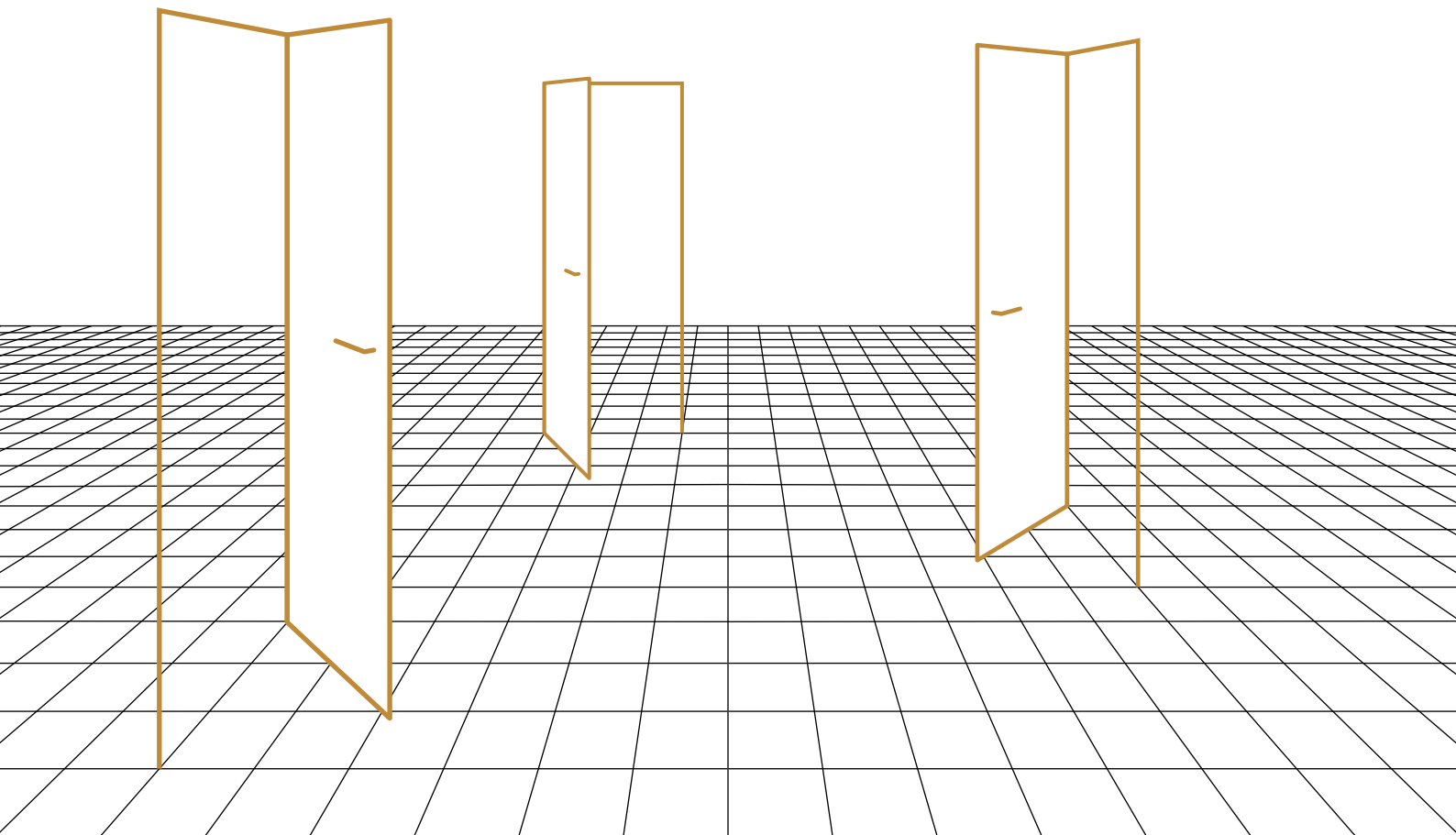


# Ethics of Transition



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# Introduction

We are in the midst of an innovation transition as eyes and minds are turned towards transformative technological developments. Call it the “digital revolution” or the “fourth industrial revolution”; it is creating an ethos of change. In turn, we project future realizations of our values through the anticipated change. The hope of “revolutionary and digital dividends” is a narrative that builds an imagined future. Imagining a significantly different future can be very motivating for those who believe in it: we can envision a more just, fair, and ethical global end-state. But the narrative does not tell us how to attain this future and it often ignores some hard-hitting facts about negative consequences and ethical breaches. **To prevent such breaches, our values and resulting intentions will be one of our most powerful innovative assets.**

The highly anticipated “digital dividends,” in whose name we perpetuate the narrative, will not be realized solely by focusing on the end-point alone. The problem is reflected, for example, in discussions of job automatization which is seen to free individuals from menial tasks and increase quality of life. What does this mean for workers now and the potential Future of Work? Too often the central question is: How do we make work

more automated? Instead, we should be asking: Can we actualize an innovative automated Future of Work that truly produces social, economic, and ecological added value?

Each new development or innovation creates new choices or possibilities through which we find ourselves moving towards an unreachable horizon; any innovation is only one moment of structure in continual, entangled transitions.

Therefore, it is time we change this end-state focused narrative. The reality is that we must acknowledge the **process of transition** as our normal state of affairs, and that this comes with its own unique set of ethical considerations and responsibilities. ethix presents the “**Ethics of Transition**” framework (see fig. 1) for developing and realizing ethical values during an ongoing and negotiable process, rather than focusing only on an idealized end-state. An Ethics of Transition framework helps us find ethical applications that bridge the present with the imagined future in practical ways. Ethics matter now, in the ongoing transition. We must efficiently invest in and shape the transitions during which innovative processes unfold to better deal with their inherent uncertainties.

## Example in Focus

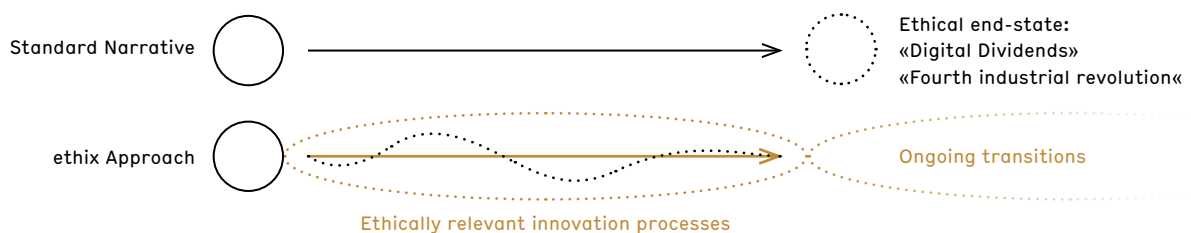
Air BNB, considered a highly innovative and effective startup. Praised for their Growth Hacking maneuvers.

## Narrative:

More efficient use of underused living spaces and bringing together diverse individuals.

## Reality:

Cities’ residents getting displaced from their home and city centers as more apartments are being rented for Air BNB. This can inflate the cost of living, and it usually impacts impoverished populations first. In addition, they are “professionalizing” hosts, de facto reducing diversity.



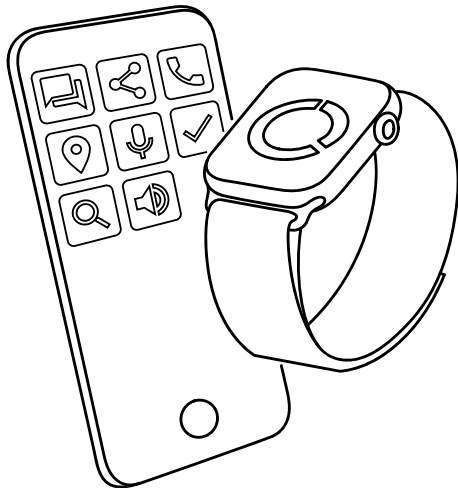
# Technology Transitions

Take as examples these three “Technology Transitions” which represent products and processes that are part of our present innovation era and are at different levels of societal integration. The objects serve as a few, of many, reference points for the Ethics of Transition framework. They will be re-visited at the end of the paper to expand on their possible implications.



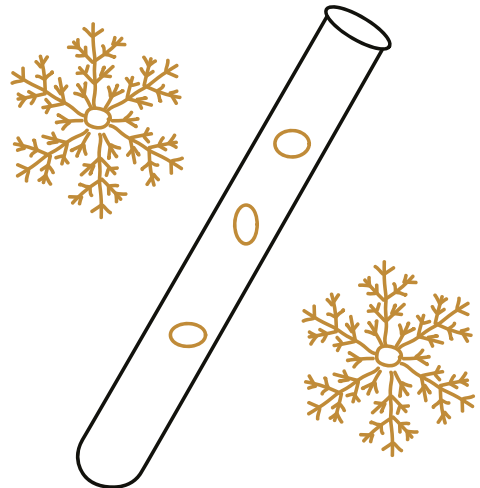
Daily activities are becoming ever more digitized. This is a way to make them more convenient and easy to complete. Even the simple action of buying a ticket is implicated.

How will the process of digitization fundamentally alter the Future of Work?



Smart phones and other smart devices have become pervasive in societies around the globe. They promise to provide global access to information and open communication. They are viewed as liberating and even necessary technologies with remaining untapped potential.

How does the production of these devices promote multiple generations' worth of unethical human conditions?



Medical enhancement means there are more ways to alter, assist, or enhance otherwise “natural” biological processes. Egg freezing, now becoming known as “social freezing” because of its application in non-medical cases, is a way to enhance and extend the female “biological clock.” It is lauded for expanding women’s power over their bodies and promotes their general emancipation.

Ethical risks in relation to ‘social freezing’ may feel difficult to assess because of its individualized focus (one individual woman chooses to (not) use this technology), what might be the big picture implications?

# Characteristics of Transitions

These examples above are relics of the current transition, which have far reaching impacts, both positive and negative. We need to focus on the transition of which these objects are a part as it is occurring, in order to infuse successful ethical approaches and better contextualize them within a broader scope. Below, three key characteristics of transitions are presented.

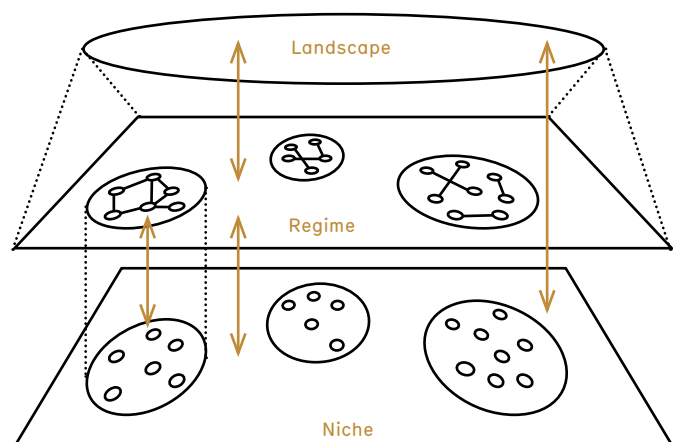
## Ethical navigation is not only about the end-state

Rather than focusing on possible utopian end-state ideals and values, transitions are messy, contextualized navigations in relation to our values that occur in our everyday practices. One can envision ethical values to be a guiding light – say a lighthouse – that supports our general sense of direction to offer guidance toward something other than the lighthouse itself. The lighthouse does little to tell us about how to physically navigate, what an end to our journey may actually look like, nor does it seek to provide that answer (Robeyns 2008). In fact, even if we do reach what we considered to be an ideal state, whole new horizons may come into view. And the only way to do that is to start investing in the transitory space between us and “the values,” where real human lives play out.

## Transitions as a multi-level phenomenon

The entire navigation process of innovative or “socio-technical” transition can be seen as occurring on three interrelated societal levels: the niche, regime, and landscape (Geels 2002). The three levels influence each other and highlight that no single variable determines an innovation's directionality, but rather results from complex interactions across multiple domains and is dependent on actual practice and broader processes.

Change can occur quickly under extraneous circumstances when the system is “shocked” by larger events (e.g., a large natural disaster, war). However, change is generally occurring over longer periods of time – even those innovative changes that feel revolutionary. Therefore, we must scrutinize innovation and the organizations surrounding it as they are unfolding and engage in continuous monitoring as it is occurring since transition pathways are never fixed.



3 Levels Of Transitions: Based on Geels (2002), the graphic depicts interactions between the different societal levels at which transitions occur.

### Uncertainty and possibility at the threshold

Relevant qualities of transitions come from the concept of liminality which was initially developed in relation to individuals' rights of passages and stems from the word "threshold" to signify being on the brink of something. Liminality is the metaphorical and physical space inhabited when one has left an old status or state of being behind, but has not yet arrived at the new, creating a feeling of suspension and apprehension about an, as of yet, unknown future (Turner 1995). Qualities of liminality are inherently part of any transition but may be more or less pronounced. These qualities include:

- Those individuals that perceive each other as entering or inhabiting liminality together can develop a strong sense of community.
- An invoked sense of instability, but also creativity, as the actual outcome – the "what will be" – is still up in the air.
- Transitions as being "between," often become dissociated from social norms, even described as a "liberation from structural obligations."
- Despite its dissociative power, what happens during liminality, and therefore a transition, can illicit "re-classifications of reality," thereby having a direct impact on the future state and what later becomes "normal" (e.g. through processes of habituation) and can eventually "glide back to the level of the taken-for-granted," (Bjørn 2009). Periods of structure/stability and transitions/liminality are not polar opposites, but rather processually unfold together.

### Innovation and transitions

Innovation creates transitions that span the niche, regime, and landscape, making innovative process both a micro and macro issue. We can therefore say that an individual, a group/organization, a society/culture or even an entire historical period can be described as having transitional qualities:

- Niche Level: A single innovation itself causes change and disruption and has been described as "an opportunity" that "exists in a twilight zone," (Henfridsson and Yoo 2014).
- Regime Level: Transitions can exist in organizations either because they are producing or adopting innovations. Harnessing transitions to induce liminality within an organization can shift cultural foci and, for example, promote sustainability not just as an ideology, but in everyday praxis, because participants feel the right to question, alter, or imagine different alternatives. For example, institutional entrepreneurs constantly function within liminal spaces, because they push new ideas, thereby influencing what emerges from transitions and becomes part of structure (Henfridsson and Yoo 2014).
- Landscape Level: When an entire culture is defined by an orientation towards innovation it creates an ethos of constant transitions – a state of a partially unknown future. The experience of liminality becomes socially shared over time resulting in a feeling of permanent uncertainty. The liminal permanence is, in part, perpetuated by the pervasiveness of "alchemic mind-sets" (Szokolczai 1998) that percolate throughout our orientation towards innovation. Alchemic mind-sets valorize disruption as a means of producing favorable improvements or outcomes, even as negative outcomes are dissociated from the innovative events.

# Ethical Implications

The described qualities of transitions allow us to address ethics from a different narrative than the one embodied by the revolution. This is important, as it has very real consequences for trajectories of human lives today and encourages concrete ethical action to be taken.

## Indefinite postponement of ethics

The revolution narrative has the danger of pushing out ethics towards some unknown and unreachable point, rather than addressing them in situ when needed. This effect is amplified when transition processes are happening at multiple levels. The standards are, one might say, “up for grabs,” and there is a lot of wiggle room for negative outcomes.

## Contextual Tensions

The landscape and regime create a specific context in which innovation occurs. Because of this, the niche, regime, and landscape can provide points of tension: real world competitive pressure and the global room for interpretation means that individuals must actively challenge existing norms and fight to increase ethical considerations, with subsequent follow-through during innovation. They must do so by promoting an ethical vision that is actually followed through on.

## Bad ethical input, bad ethical output

Because of liminality’s direct impact on societal structure, what happens during this time period is actually crucial for our ethical outcomes. In other words, what happens during liminality, and therefore transitions, becomes incorporated into emerging structures and the fabric of society. And what does not happen during transitions, will likely be absent, including bad/good ethical considerations.

## Current victims

Innovation transitions can and do cause harm: if we focus only on a distal end-goal, we are missing opportunities to improve people’s lives now. Focusing on the transitions allows us to start thinking about potential losers as they are emerging and better address their needs. To make matters more difficult, innovation often outpaces other regulatory social institutions on the landscape level (e.g. the Law) and therefore cannot be fully relied upon to regulate these consequences.

## Non-linearity

Having our navigation be attuned to in-the-moment transitions means that a “lock-in” mentality should be put into question. This comes from narratives that tie innovation into a long debunked version of evolution that claims we are moving “forward” towards “enhancement.” Innovative trajectories may not be optimal when confronted with ethical considerations and should not be taken for granted. What feels like a “step back” could in fact be the best innovative way “forward.”

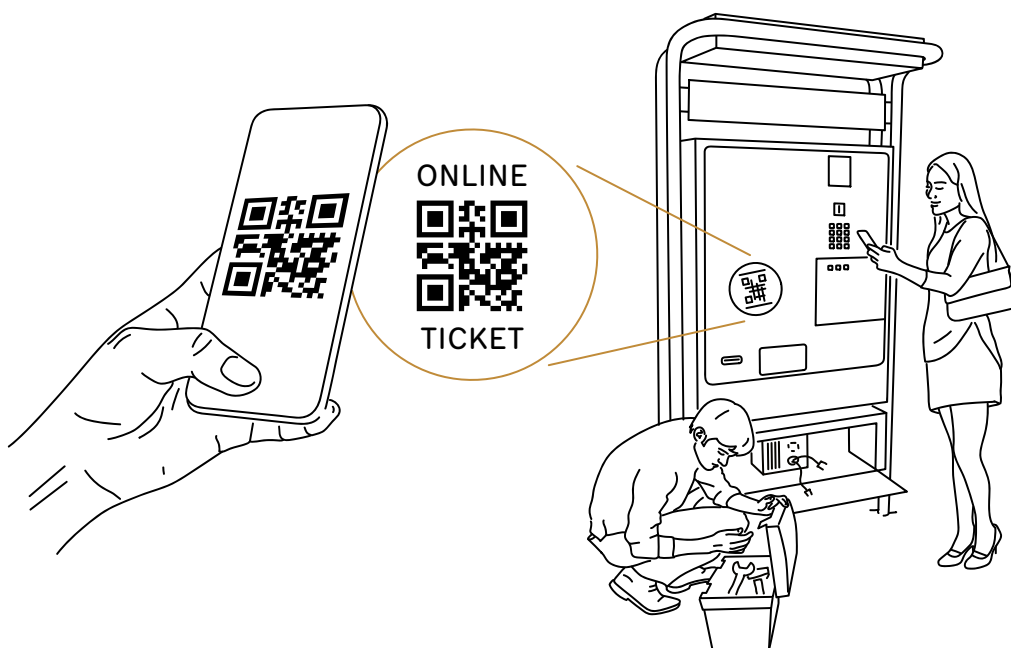


# Re-visiting Technology Transitions

Considering transitions, let us re-visit the objects of transitions to re-assess what ethical concerns may arise, or have arisen, through the implementation of certain innovations. Viewing these technologies as part of and in transition helps assess ethics from different angles. The ultimate goal is to understand these ethical risks before they appear as ethical breaches once the innovation has become infused into society, thereby opening creative possibilities for a flourishing innovative process.

## Future of Work

A city worker kneels before one of the many public transport ticket machines that he services. He checks on the available change, makes sure paper for printing tickets is stocked, and quality checks the machines' functionality. At the end, as if in after-thought, he pastes an unassuming sticker on the outside of the machine. It reads „The new check-in ticket... Check-in now [on our app].” Just another day's work, right? But if you bothered to ask, the worker would tell you that he knows the sticker, which he himself places, will serve in the destruction of his job. He feels, with certainty, how the process of digitization will make him superfluous. What possible job trainings, changes in work expectations, or creation of human powered labor could help address his potential job loss?



Niche

Digital hardware  
and software

Regime

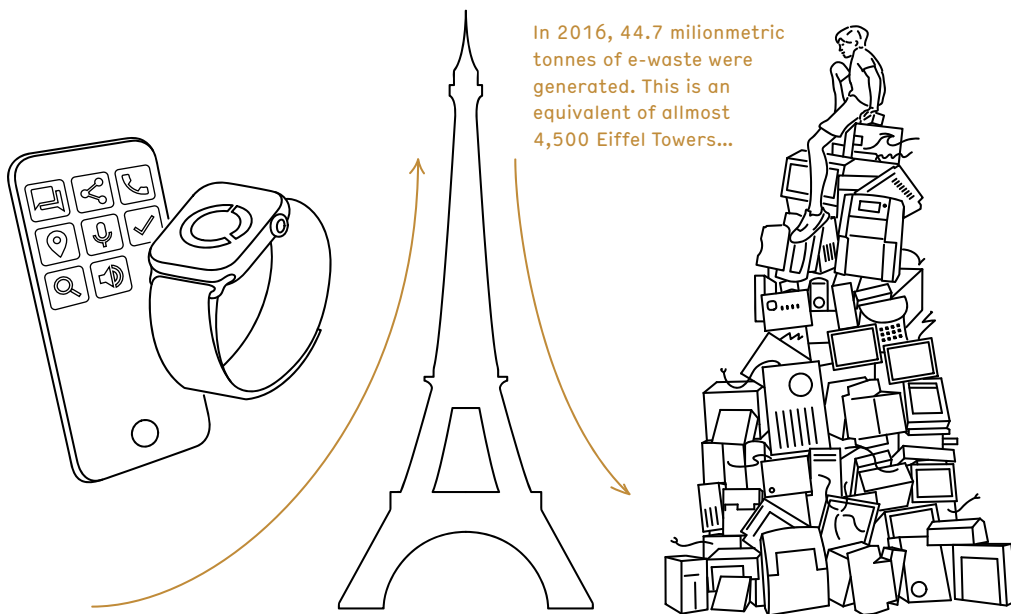
Provision  
of services

Landscape

Future of work

### Eiffel Tower of e-waste: The human consequences

The fourth industrial revolution aims at having digitized many processes. The hardware, however, relies on modern slave labor in the production and waste phase and put workers at severe health risks, yet our consumer behavior is only escalating. The escalation relies on the hardware that is already infringing on human rights. Instead of focusing on cleaning up the devices' human impact, their use is too often intensified by digitalized processes. This is an ongoing and unethical condition being perpetuated during our fourth industrial revolution which the hope of digital dividends does not actively address.



Niche

Digital devices

Regime

Cradle to grave practices

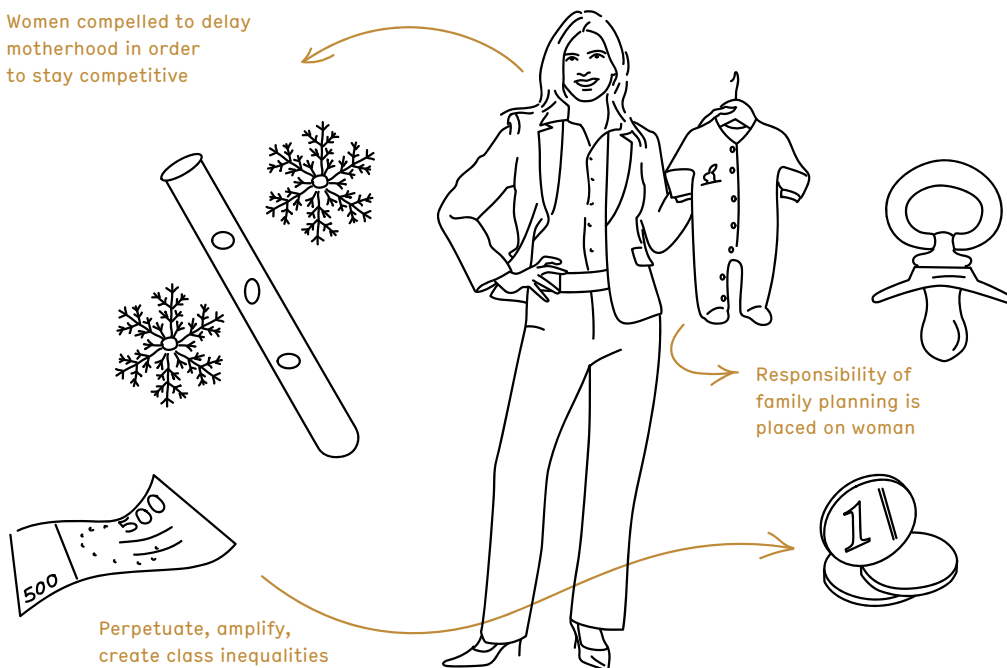
Landscape

Culture of consumerism & digitization

### Gender (in)equality

Propagating social freezing as an equalizing innovation between men and women has some merits, but overlooks broader consequences if not implemented with care, two of which are listed here. First, social freezing places responsibility wholly on women to finance and take on medical risks for family planning at an earlier age than perhaps expected (social freezing is ideal in the mid-twenties). Equality wise, it could actually represent a step backwards by placing more double-burdens on women. Furthermore, social freezing is expensive, and unless it becomes socially supported (i.e. insured), it will give only wealthy women certain opportunities: waiting for the right partner, establishing financial stability, launching an uninterrupted successful career. These factors can perpetuate or even amplify those class inequalities we are already grappling with.

Women compelled to delay motherhood in order to stay competitive



Perpetuate, amplify, create class inequalities

Responsibility of family planning is placed on woman

Niche



Regime



Landscape



Even those transitions that seem to implicate individual choices – using a cell phone, delaying motherhood, choosing to buy tickets digitally – have far reaching ethical implications that cannot be ignored as they are occurring. When innovations are reviewed and planned in an Ethics of Transition framework, more can be done

to counter these ethical risks. There are unique ethical concerns involved in transitions; they are the everyday modern experience of innovation. In this way, a false consciousness regarding the revolutionary-end payout is rejected. Rather, it is suggested that ethics can and should happen now.

# ethix Can Help!

## Key Features of an Ethics of Transition and moving forward

In the context of ethical concerns raised by innovation (see our White Paper “Ethics of Innovation”), thinking in terms of transitions offers a framework for engaging with these concerns in a useful and productive manner. Following the ethical observations made in our examples vis-à-vis innovative transitions, ethix suggests an “Ethics of Transition” approach to capture the need for ethics throughout the ongoing digital and innovative transformation. Promoting ethics during transitions can be a mechanism for producing a more resilient/flexible co-development between the social, economic, and ecological systems that impact and are impacted by innovation. It encourages an empowerment and protection of the people who too often have little say including direct users and those impacted indirectly through others’ use.

In order to do so, the following steps may be helpful:

Develop a working model of how the niche innovation in question is embedded within the larger regime and landscape to understand possible relationships.

Based on this understanding, harness periods of uncertainty to identify and clearly define values.

Through the value analysis, develop possible innovation/innovative space trajectories and how these may result in structural impacts on multiple levels, amongst diverse stakeholders in the short and long-term.

Example questions to use:

- In what ways may human rights be impacted or changed?
- How does this innovation impact basic human capacities for the better and worse?
- Who are the losers in the possible transition trajectories caused by the innovation?
- In what ways is the innovation regulated or not? What does this mean for the innovators' responsibilities?

Using a risk analysis, devise possible action plans to promote ethical innovation trajectories to minimize consequences.

Throughout the process re-assess to see what impacts are actually occurring – re-think innovation if necessary. The beauty of innovation is its inherent flexibility if we allow it to be.

So, let's roll up our sleeves and utilize creative potential for the better – by keeping ethics woven into the very fabric of transitions. ethix is here to help you and your company navigate the ethical waters, by offering strategical support during innovative processes, as they are unfolding, to help keep the transition ethical.

### Key Questions

Are we pushing ethics out to the future?

How is the innovation embedded in the niche, regime, and landscape?

How can ethics be incorporated during the liminal phase?

Who are the potential losers?

Is there an openness towards non-linear options?

### Key Players

Researchers  
Business  
Public Authorities

### Key Criteria

Fairness  
Solidarity  
Autonomy  
Privacy  
Well-being  
Security  
Trust/Reliability

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