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Sustainability transitions of sectors like energy, transport or water have become explicit goals of national policy programs in several parts of the world. The governance of associated innovation and transformation processes requires an integrated assessment on how new and seemingly superior technologies will interact with manifold societal, economic, industrial and political contexts. Failing to do so is likely to quickly undermine political support for these ambitious and long term projects. Part of the program of technology assessment is to anticipate the impacts of new technologies on society and the environment. However, in order to address the challenge of sustainability transitions, institutional dynamics have not been considered explicitly enough in existing approaches. We elaborate a methodological proposal on how to analyze the interaction between technological and institutional developments in specific technology fields. We identify potential future variations of core institutional structures of a socio-technical regime, construct matching regime constellations, and elaborate on interactions with technological design alternatives. The framework will be applied to recent developments in the field of electric mobility in the context of the German Energiewende. The results provide some fresh perspectives for academics and policy makers on how to better consider interactive dynamics in socio-technical systems.

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