Math Teachers’ Circles (MTCs) are communities of K-12 teachers and mathematicians who meet regularly to do mathematics together. The goals are to support teachers as mathematicians and to connect mathematics professors with K-12 education. With more than 100 MTCs in 39 states, many hosted by mathematics departments, MTCs represent an increasingly widespread, relatively simple infrastructure for fostering ongoing interactions that contribute to developing a sense of shared mathematical community across the education spectrum. We will discuss examples of how MTCs can extend the impact of shorter-term collaborations, as well as prepare fertile ground for the development of larger and more complex collaborative infrastructures. In addition, we will describe the infrastructure provided by the national MTC Network, which has taken an implementation sciences-based approach to scaling, disseminating resources, and connecting local MTCs so that they may learn from each other. (Received September 25, 2017)