Tameness is a very important model-theoretic property of abstract classes of structures, under the assumption of which strong categoricity ([GrVa06, ShVa17]) and stability transfer theorems ([BaKuVa06, Za12]) tend to hold. We generalize the argument of Lieberman and Rosicky [LiRo17]—based on Makkai and Paré’s result on the accessibility of powerful images of accessible functors ([BrRo17]) under the existence of a proper class of almost strongly compact cardinalities ([BaMa14])—that tameness holds in classes of metric structures, noting that the argument works just as well for structures with underlying Q-spaces, Q a reasonable quantale. Dropping the reflexivity assumption from the definition of metrics, we obtain a similar result for classes with underlying partial metric spaces: through straightforward translations from partial metrics to fuzzy sets and sheaves, we obtain, respectively, fuzzy and sheafy analogues of this result.