Often in history, important measurements and discoveries were preceded by long periods of technical development. The development of optics, followed, among others, by the Michelson-Morley experiment, the development of the laser, culminating in precision interferometry and the recent detection of gravitational waves, and the important advances in material science, leading to the technologies required to build the modern particle accelerators such as the LHC at CERN are just a few examples. Today, fundamental physics may be at the edge of a new exciting age which will exploit the development of so-called quantum technologies. At the heart of this new field, lies quantum information and the idea that manipulating quantum matter may be useful not only for processing information - quantum computers - but for performing better measurements - and building quantum enhanced measurement devices. In this talk I will discuss examples of how precise control over quantum matter can lead to new developments in fundamental physics ranging from gravitational waves to the search for new particles and interactions of nature. This may lead to a new generations of fundamental physics experiments that can fit at tabletop, yet with a reach for new discoveries well beyond currently possible with traditional high-energy experiments.