# Renaissance: Filippo Brunelleschi As A Pioneer Of Architecture

Each period throughout human history has been undeniably marked by its own unique architecture, from the Renaissance period to the modern age and into the 21st century. In order for this progression, there is a need for pioneers to create change and challenge conventions of architecture within certain periods.

Filippo Brunelleschi, Frank Lloyd Wright and Zaha Hadid are all pioneers of their respective time periods who have experimented with materials, form and techniques to create truly magnificent feats of architectural ingenuity. Born in Florence in 1377, amid the beginnings of the Italian Renaissance, Filippo Brunelleschi was leading engineer and architect of this period. He developed new techniques and rediscovered established practices from the Romans, emulating their styles and incorporating them into his practice. Studying the ancient ruins in Rome with a particular interest in Roman engineering, Brunelleschi later showcased his new methods and techniques in the State orphanage in Florence, “Ospedale degli Innocenti” (1419-1424). He revolutionised architecture, reviving Roman capitals and pillars and the monumental windows and carved stones typical of the Ancient Romans. This was an architectural milestone and masterpiece that marks the very first building in Renaissance forms, a stark contrast to the medieval buildings that preceded it. The first organic creation of Brunelleschi opened as an orphanage in 1445, and its most prominent feature the majestic portico was revived from Classical Roman architecture with a desire for regularity and geometric proportions.

Brunelleschi’s seminal work, The Dome of The Florence Cathedral was a staggering 16-year construction process from 1419 to 1436. The brief of the dome was that it was self-supporting, a concept that no-one had solved before. His model, showcased a Dome, not with the traditional wooden support structure but a design with a herringbone brick pattern enclosed by a framework of steel beams, a technique recognised to have emerged from the Ancient Romans and later formed the basis of Renaissance architecture. Other features of the dome included many intricately detailed architectural reliefs, circular windows and a lantern on top, to let the light into the dome. His aptitude for engineering and innovative technologies were the first of their kind and significantly helped the Dome construction process. He invented an effective and relatively fast hoist that was able to raise and lower a load by a switch. His technological ingenuity contributed to the success of the project and his inventive machines became frequently used from then on in the construction of buildings. Therefore, Brunelleschi’s technological innovation paired with his original and daring ideas in Architecture and engineering made his status a prominent, leading and progressive architect of his time, whose work is still seen today to generate a similar effect and influence on others.