马斯达尔总部

Masdar Headquarters

建筑设计 Adrian Smith + Gordon Gill 建筑设计事务所
资料提供 Adrian Smith + Gordon Gill 建筑设计事务所

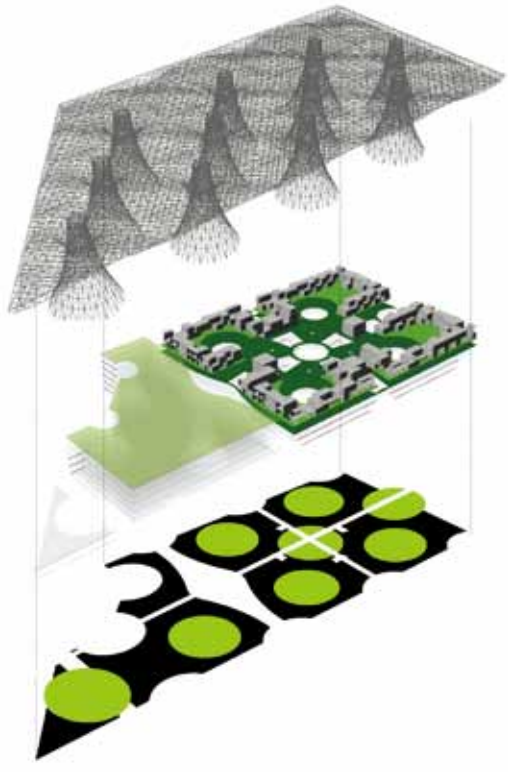
建筑夜景效果

马斯达尔总部将成为世界上第一个复合功能的主动式节能建筑。它应用可持续发展的设计战略和系统，以产生比建筑本身消耗的更多的能量。该项目是马斯达尔城发展的核心，它位于阿联酋的阿布扎比外侧，是一个零浪费、零碳排放的开发项目。

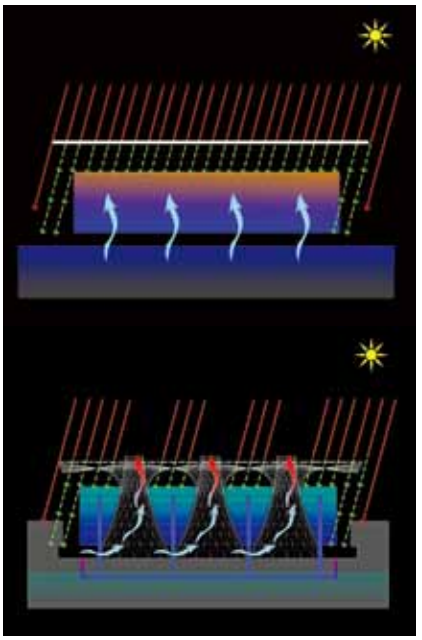
这栋7层的135 000m^{2}的建筑（包括景观区）将容纳商业、零售及文化的功能。建筑的形式深刻地反映了对环境广泛的分析，从古代的建造科学、阿拉伯风塔、影壁和其他民居建筑的美学要素中汲取养分，强调自然通风、遮阳、高热惰性、庭院和植被。

马斯达尔总部建筑的标志性特点是11个风锥的集合实现自然通风和冷却的功能（引导暖空气到屋顶平面，使之被风带走），并形成类似绿洲的内部庭院和在地面上的灵活空间。一个巨大的覆盖顶棚提供了天然的遮蔽，形成了世界上最大的光伏和太阳能电池板阵列一体化的建筑。这使得可以收获一年运行所需能量的103%。一个郁郁葱葱的空中花园在顶层也创建了一个微气候，其中包括水景和种植当地植物的宁静社区空间。

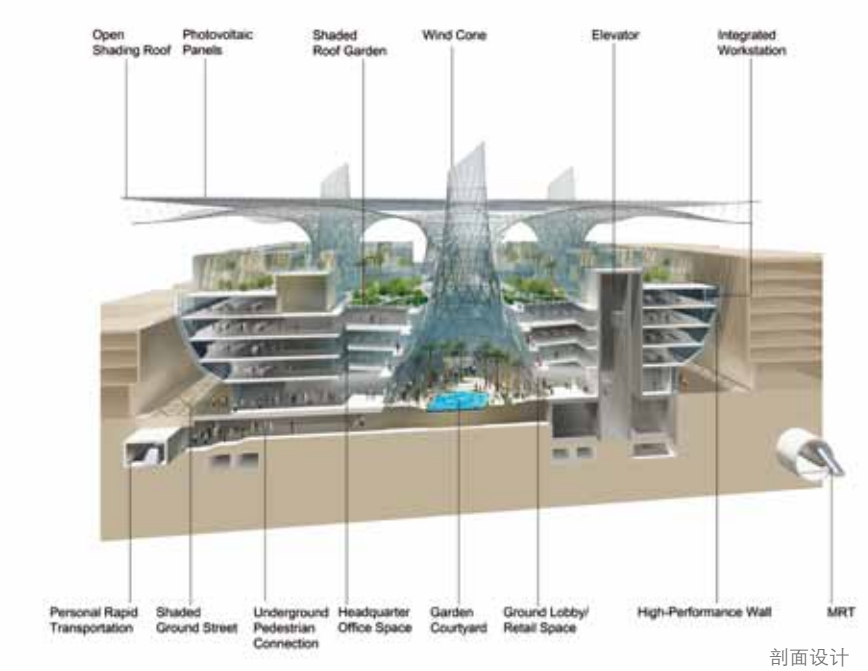
高热惰性的外部玻璃幕墙阻断太阳能热量的进入，同时保证视野的通透。热工技术在该项目的应用还包括利用地下管道降低外界空气的温度，并提供地下行人通道以连接公共园林空间与公共交通系统。（译/李岩，校/朱晓琳）



设计理念



采光节能分析



剖面设计

室外平台

西侧广场

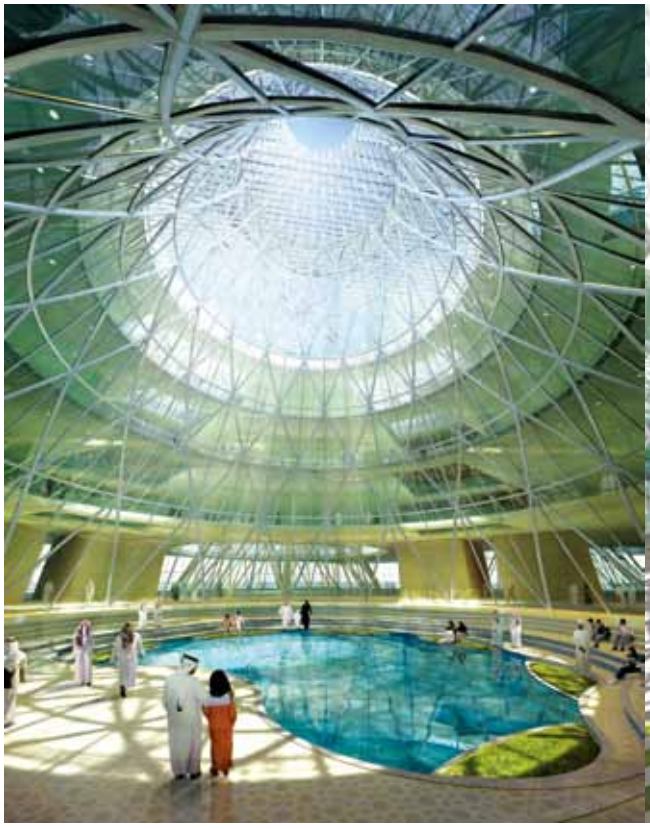
开放式办公空间

行政办公室

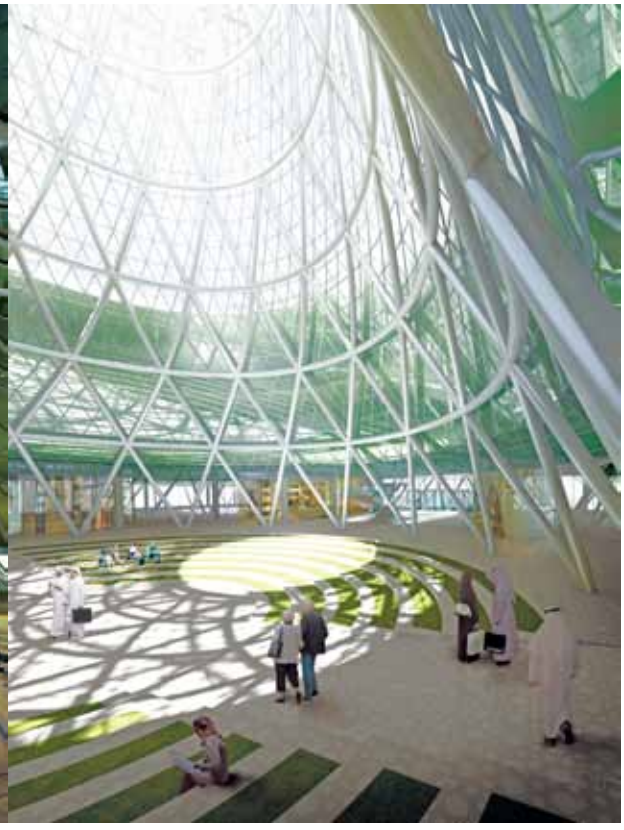
休息空间

接待空间

屋顶花园



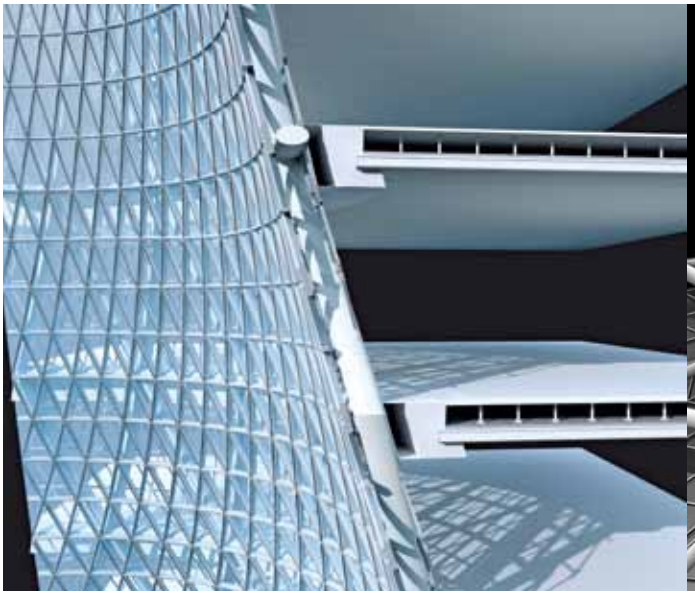
内部庭院

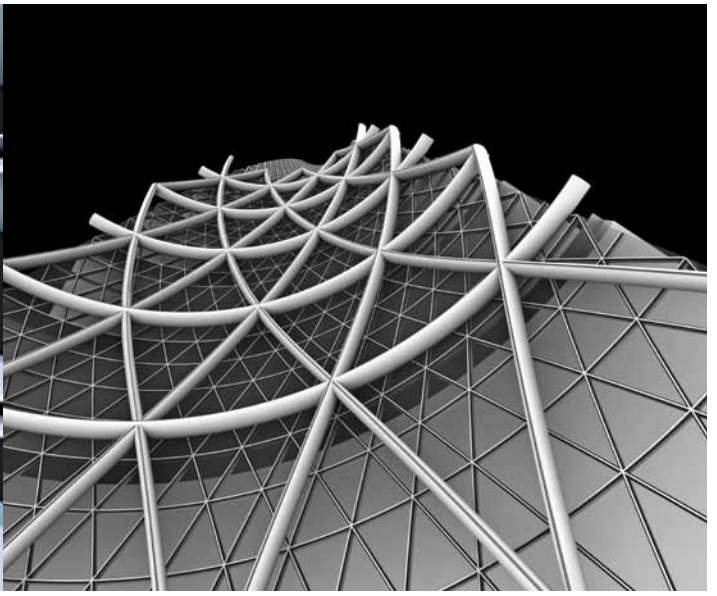


中庭剧场

餐饮空间

内部空间





幕墙细部

Masdar Headquarters will be the world's first mixed–use, positive–energy building, using sustainable design strategies and systems to produce more energy than it consumes. The project is the centerpiece of Masdar City, a zero–waste, zero–carbon–emission development outside Abu Dhabi in the United Arab Emirates.

The seven–story, 135,000 square–meter structure (including landscaped areas) will accommodate commercial, retail and cultural uses. The building's form, sculpted in response to extensive environmental analysis, adapts the ancient science and aesthetics of Arabic wind towers, screens and other vernacular architecture, which emphasize natural ventilation, sun shading, high thermal mass, courtyards and vegetation.

Masdar HQ's signature architectural feature is a collection of eleven wind cones which provide natural ventilation and cooling (drawing warm air up to roof level, where wind moves it away) and form oasis–like interior courtyards and/or flexible spaces at ground level. A vast roof canopy that provides natural shading and incorporates one of the world's largest building integrated photovoltaic and solar–panel arrays, which will harvest 103% of the energy needed to power the building on an annual basis. A lush sky garden on roof level also creates a microclimate that includes water features and restful community spaces landscaped with indigenous vegetation.

High–thermal–mass exterior glass cladding provides solar heat blocking while remaining transparent for views. Thermal technology in the project also includes earth ducts which reduce temperature of outside air and provide underground pedestrian passages that connect public garden space with the proposed mass transit system.

Adrian Smith和Gordon Gill 对Masdar的模型进行研究讨论