SENSING LIGHT - SMART URBAN LIGHTING

Carlo Ratti, director of the Massachusetts Institute of Technology (MIT), never stands still for a minute. He is a busy man, tackling the challenges of our time and offering their solutions with his students and teammates. His latest project takes us into lighting infrastructures in urban environments. In Sensing Light, existing cases of cities that want to digitize their public lighting infrastructure are reviewed. Digital sensors are used to explore new functional possibilities for streetlights. They are used to conduct a series of investigations that integrate air quality monitoring, hyperspectral digital imagery, and artificial intelligence to monitor urban spaces, for example. Ubiquitous and embedded in urban spaces, streetlights could become key resources for street-level data collection. For example, standardizing the size of parking lots leads to underutilization of valuable urban space. With the help of cameras and artificial intelligence, parking spaces could be identified and inefficiencies addressed. At the same time, the project exposed three problems: The lighting industry is predominantly focused only on illumination, academia overlooks social value creation, and risk-averse city governments and citizens are wary of losing their privacy . To overcome these obstacles, MIT recommends clear strategies for transforming a local lighting infrastructure into a superstructure of urban intelligence for the benefit of the community and for a city of the future.