Abstract: Indoor map design is still an uncharted territory. More often than not, existing architectural floor plans are used as visualization means that do not fulfill cartographic requirements. In collaboration between geoinformation science and sociology, we develop and investigate cartographic methods for effective route guidance in indoor environments. The baseline for our evaluation is the annual user studies with up to 1100 participants per year. Since 2009, they were conducted during the "Long Night of Sciences," a big event where large scientific institutions present themselves to the general public. For the 2011 study, we developed eight maps, which varied in design with respect to two map properties: map perspective and landmark representation. We evaluated the map design features as well as route complexity and sociodemographic characteristics. In order to rate their effect on an user satisfaction as an indicator of navigational success, we carried out a series of analyses of variance. Our results underline the importance of a map design: Map perspective and landmarks alone explain about 30% of the variance in the user satisfaction with maps, which is by far the biggest share in a navigational success.