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|---|---|---|---|---|---|

| OUTPUT |
|---|

| Indicator | Accessibility of cycle paths |
|---|---|
| Description | Proportion of the population that is less than 400m from a cycle path.<br>In this case, the 400m distance also represents the proportions of superblocks (400x400m). This indicator aims to include cycle paths as a sustainable mode of transport that the population has access to. |
| Type | GIS | Source | Based on the 5-minute city principle (UMF, JRC) and the indicators "Bicycle traffic" (JRC) and "Km of cycle paths" of the Strategy for localisation of the SDGs in the city of Madrid |

**Data source**

| | | | | |
|---|---|---|---|---|
| **Madrid Nuevo Norte** | Cycle paths in Madrid Nuevo Norte | | **BIM** | YES |
| | Combination of the following files into a single GIS layer:<br>• DOC. 3: DESIGN PRINCIPLES OF THE LANDSCAPE FRAMEWORK. LANDSCAPE MASTER FRAMEWORK<br>• 1997 SPECIFIC MODIFICATION OF THE CITY PLAN in the Planning Areas: APE 08.03 "Prolongación de la Castellana" AND APE 05.27 "Colonia Campamento" for the Definition of the Determinations and Planning Parameters of the Urban Development Operation "MADRID NUEVO NORTE". IV. ANNEXES. Annex 9. Mobility strategy in the SMCP<br>• MNN_AD.GDB<br>• Red - Transportes_MPG_200211. | | | |
| | Street layout | | **BIM** | NO |
| | Combination of the following files into a single GIS layer:<br>• MNN_AD.GDB<br>• Red - Transportes_MPG_200211 | | | |
| | Population: Location and number of inhabitants | | **BIM** | NO |
| | Combination of the following files into a single GIS layer:<br>• AreaMovimiento.GDB<br>• 1997 SPECIFIC MODIFICATION OF THE CITY PLAN in the Planning Areas: APE 08.03 "Prolongación de la Castellana" AND APE 05.27 "Colonia Campamento" for the Definition of the Determinations and Planning Parameters of the Urban Development Operation "MADRID NUEVO NORTE". V. DETAILED PLANNING DOCUMENTATION 4. Specific Urban Development Regulations | | | |
| **Comparison** | Cycle paths and cycle streets in Madrid | | | |
| | Combination of the following files into a single GIS layer:<br>• Bike. Calles tranquilas (2015) (https://datos.madrid.es/)<br>• Cycle paths: 1:1000 municipal maps by districts (2016) (https://datos.madrid.es/)<br>• Cycle paths: NOMECALLES. Official nomenclator and street map of the Region of Madrid (https://www.madrid.org/nomecalles/DescargaBDTCorte.icm) | | | |
| | Street layout | | | |
| | • Roadway: Travel axes. NOMECALLES. Official nomenclator and street map of the Region of Madrid (https://www.madrid.org/nomecalles/DescargaBDTCorte.icm) | | | |
| | Population: Location and number of inhabitants | | | |
| | • Population polygons: Urban Atlas 2018 (https://land.copernicus.eu/) | | | |

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|---|---|---|---|

## OUTPUT

### Calculation method

The information from different layers of Madrid was combined to identify the separated cycle paths.

All of the cycle paths included in the documentation analysed was considered in Madrid Nuevo Norte.

To calculate accessibility, the methodology in the "Method of calculating accessibility indicators" section was followed, with the difference being that, since they are linear and not point layers, before calculating the service areas, based on the steps recommended by the JRC in the paper "A short walk to the park? Describing the updated methodology" (Poelman et al., 2021), the Points along geometry tool was applied with a distance of 50 m, and from this point layer, the service area was created and then dissolved by the unique identifier of each cycle path.

During the activity of Madrid Nuevo Norte, the precision of the indicator may be improved with the actual population figures and locations, the detailed layout the real sections of the streets in Madrid Nuevo Norte.

## OUTCOME

| Indicator | Unit | Source |
|---|---|---|
| Total kilometres of cycle paths | Km | Strategy for localisation of the SDGs in the city of Madrid (https://www.madrid.es/portales/munimadrid/es/Inicio/El-Ayuntamiento/Cooperacion-y-Ciudadania-Global/Agenda-2030/Estrategia-de-localizacion-de-los-ODS-en-la-ciudad-de-Madrid/?vgnextfmt=default&vgnextoid=b7b75cd724a38710VgnVCM1000001d4a900aRCRD&vgnextchannel=5347a62071048710VgnVCM1000001d4a900aRCRD) |
| Kilometres of exclusive-use cycle paths | Km | |
| Number of users of the BiciMAD system | N/year | |
| Number of districts reached by the BiciMAD system | N | |