Typology Creation

To begin developing typologies, we assessed data that was available for multiple years to track change over time. As such, this greatly reduced the number of indicators that we could use. To account for data sources being available for different points in type, we decided to draft multiple sets of typologies, from 2000-2010, 2010-2015, and a "risk factor" typology for 2015-present. Because of the pervasiveness and vulnerability of informal settler families (ISFs) in the region, our team decided that this indicator would underlay the draft typologies.

Table 2. Typologies 2000-2010

Data Source	Indicators
Receiving Communities	• Increase in Migration from Outside Metro Manila • Increase in ISF population
Displacement without Gentrification	• Loss in ISF population • Disaster Risk Overlay • Existing Infrastructure Overlay (Transit Lines, but not Stations)
Gentrification and Displacement	• Existing Transit Overlay (Transit Stations, but not Lines) • Increase in Homeownership • Loss in ISF • Existing CBD
Exclusion	• Decrease in Migration from Outside Metro Manila • High Homeownership • No ISF population

Table 3. Typologies 2010-2015

Data Source	Indicators
Receiving Communities	• No Major Economic Investments/Proximity (Economic Zones and/or CBDs) • Increase in ISF population
Displacement without Gentrification	• Loss in ISF population • New Infrastructure Overlay (Transit Lines, Highways, not Stations) • Disaster Risk Overlay
Gentrification and Displacement	• Existing Transit Station • Increase in Homeownership • Loss in ISF • Major Economic Investments/Proximity (Economic Zones and/or CBDs)

Exclusion	• High Homeownership • High Housing Quality • No ISF population

Table 4. Risk Factor Typologies, 2015-Present

Data Source	Indicators
Disaster-Induced Displacement Risk	• High ISF population • Flood or Storm Surge Risk • Low Housing Quality
Infrastructure- Induced Displacement Risk	• High ISF population • New Transit Line • New Highway Project • Low Housing Quality
Gentrification- Induced Displacement Risk	• Decreasing ISF population • Economic Zones or CBD Proximity • New Transit Station

To prevent oversimplification of data thresholds, 75th percentile cut-offs were employed. For example, to designate a barangay as "High Homeownership", we would only take barangays with homeownership levels in the 75th percentile or higher.

Spatial analyses were processed using ArcGIS and CARTO. Buffers were created for several indicators, such as transit lines, transit stations, and highways/roads. A 100 meter buffer (roughly 300 feet) was used for transit lines and highways/roads, to capture barangays that might have been directly impacted by construction activities. This metric for right-of-way clearance was mentioned several times during our interviews. Buffers for transit stations were set to a 10 minute walking distance, rather than the common ½ or ¼ mile radius buffers utilized in U.S. literature about transit-oriented development (TOD). This was done to account for topographical and access features that might vary greatly by transit station location and its surrounding physical environment (such as its street network). To label a barangay as containing or intersecting a spatial feature, we utilized the "Intersect and Aggregate" tool in CARTO.

Other spatial indicators, such as Philippine Economic Zone Authority (PEZA) Special Economic Zones, central business districts (CBDs), and natural disaster risks, were included as overlays.