# 1. Cover & Version

**Project:** SPINA 3 Corso Principe Oddone Redevelopment (Turin, Italy)  
**Document:** Feasibility Study – Constraints, Market & Concepts  
**Version:** 1.0 (December 2025) – *Draft for discussion*

# 2. Executive Summary

This report evaluates the feasibility of redeveloping the SPINA 3 site at Corso Principe Oddone in Turin, integrating regulatory constraints, market analysis, and conceptual development scenarios. Section 3 presents a **Hard-Constraints Matrix** summarizing zoning (Zona Urbanistica di Trasformazione ZUT 4.13/2), allowable uses (at least 40% residential, max 40% tertiary/office, max 20% commercial), development capacity (Gross Floor Area ~46,000 m²) and obligations (public space dedication ~56,600 m², new road links)[[1]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Realizable%20GFA%20)[[2]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=MUNICIPAL%20INFRASTRUCTURE). Section 4 provides a **Market Analysis** as of 2025, highlighting moderate property values (new housing ~€1,600–2,400/m²) with a **strong local demand for affordable homes** (low vacancy rates in San Donato)[[3]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Good%20quality), alongside emerging opportunities from planned infrastructure (the new Dora train station and **tram Line 12** boosting connectivity)[[4]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Vocation%20as%20a%20technology%20park)[[5]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=nuovo%20spazio%20culturale). Competing projects in Turin (e.g. ex-Westinghouse, Porta Susa) are noted, though policy incentives (e.g. *Torino Cambia* via PNRR funding) aim to catalyze regeneration here[[6]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=7).

Section 5 proposes **three concept feasibility scenarios** (“archetypes”) for development, each comprising mid-rise buildings (5–7 floors) within the prescribed limits[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit). All concepts satisfy the **hard constraints** and incorporate a mix of residential, office, and retail uses mapped to both regulatory minimums/maximums and market viability. Each concept is detailed with its land-use breakdown, **unit mix** (e.g. proportions of 1-bedroom vs 2-bedroom units), **net-to-gross area assumptions**, phasing strategy and Gantt timeline, and key design considerations such as fire/life safety (multiple egress routes, ≤7-floor heights to stay below high-rise threshold) and parking (approx. 1 space per housing unit, mostly in basements – per normative standards). A comparative **traceability matrix** links how each concept’s program meets the identified constraints and market conditions.

In summary, the site can feasibly support **~46,000 m² GFA** of development under current rules[[1]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Realizable%20GFA%20). The **recommended approach** is a phased mixed-use project emphasizing **housing (≥40%)** to tap into local demand[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential), complemented by offices (leveraging the adjacent tech hub Environment Park) and neighborhood retail to activate street life. This balanced program aligns with policy goals for a “balanced functional mix”[[9]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=6) and mitigates the risk of a dormitory suburb by providing jobs and services on-site. Each concept variant is evaluated for compliance and complexity: all require **execution via a Convenzionato (covenanted building permit)** or similar planning agreement[[10]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=IMPLEMENTATION%20METHODS) due to the Urban Transformation zoning, and involve delivering significant public benefits (new road connections and ~5.7 ha of public space). An **Assumption Log** (Section 6) lists key assumptions (e.g. construction costs, absorption rates) used where data was unavailable. Section 7 outlines remaining **data gaps** to address in a future detailed finance/risk analysis (e.g. refined cost estimates, financing terms, geotechnical surveys). Overall, the analysis indicates a positive redevelopment potential for SPINA 3 if phased appropriately and aligned with the area’s socio-economic context and forthcoming infrastructure upgrades.

# 3. A) Hard-Constraints Matrix

**Planning & Zoning Designation:** Urban Transformation Zone (Zona di Trasformazione) **ZUT 4.13/2** under the City’s General Regulatory Plan (Piano Regolatore Generale, art.15 NUEA)[[11]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Zone%3A%C2%A0Urban%20Transformation%20Zone). This zoning requires a detailed implementation plan or *permesso di costruire convenzionato* prior to building[[10]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=IMPLEMENTATION%20METHODS).

**Ownership / Area:** Total site area (Superficie Territoriale, ST) is **109,183 m²**[[12]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0ST%20), historically railway lands (FS Group). Development is capped by a **Gross Floor Area (GFA)** allowance of **46,006 m²**[[1]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Realizable%20GFA%20), yielding an average territorial FAR ~0.42 m² GFA/m² land (distributed as noted below).

**Land Use Mix:** The zoning mandates a **mixed-use program**: at least **40% of GFA in Residential use** (housing) and up to **40% in “Tertiary/Eurotorino” uses** (offices or advanced tertiary activities)[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential). Commercial uses (retail or services to the public, *ASPI*) are limited to **max 20% of GFA**[[13]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Tertiary%20and%20Eurotorino). These percentages ensure a balance – the plan explicitly calls for a *“balanced mix between residential, productive, and service uses”*[[14]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=6). Other uses (e.g. light productive activities, cultural or educational facilities) would likely count toward the tertiary quota unless otherwise specified. **Note:** Residential use can exceed 40% (no max given) and indeed may occupy any remaining GFA after satisfying the other caps, but cannot drop below 40%. Tertiary (offices) cannot exceed 40%, and retail cannot exceed 20%, so pure commercial centers are disallowed. This mix constraint aligns with city policy to avoid monofunctional projects.

**Development Density:** The plan lists a “Territorial Index” of **0.6 – 0.4 – 0.7 /3 m²/m²**[[15]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index). This appears to indicate differentiated density across sub-areas, averaging to the overall ~0.42 FAR (46,000 m² over 109,000 m²). In practice, the GFA must be allocated such that some parts of the site might build up to 0.7 m²/m² while others stay around 0.4, presumably achieving an average of 0.6 when considering 2/3 of the area (the notation “/3” suggests the site could be divided into three parcels with indices 0.6, 0.4, 0.7). **Gross Buildable Area:** 46,000 m² is the total new floor area permitted on site[[1]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Realizable%20GFA%20), irrespective of use mix (the above use percentages apply to this total). This GFA excludes certain public infrastructure and unbuilt areas (see below). Any existing heritage building to be retained (the site mentions a *“historic listed building”* in the area[[16]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Ample%20territorial%20surface%20and%20strategic,position)) might have separate rules, but likely the GFA refers to new constructions.

**Public Space & Infrastructure Obligations:** Approximately **56,649 m² (about 5.66 ha) of the site must be allocated to public services/space**[[17]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index). This includes on-site parks, plazas, community facilities, etc., to fulfill “urban standards” per Regional Law 56/77. Specifically, the plan identifies an *“internal requirement”* of **35,614 m²** for new public amenities (parks, playgrounds, etc.) and an additional **21,837 m²** as *“pre-existing requirement (20% of ST)”* – essentially a contribution to remedy service deficits in the district[[18]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=URBAN%20STANDARDS%20%28Art,56%2F77). In total, roughly **52% of the land** must be dedicated to public use. These areas would likely be ceded to the City or subject to public easement.

**Roads and Connectivity:** A critical condition is to **extend two public streets, Via Dronero and Via Ceva, through the site to connect with Corso Principe Oddone**[[2]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=MUNICIPAL%20INFRASTRUCTURE). This effectively breaks the superblock, creating internal roadways that ensure permeability. The developer must design and build these road extensions to city standards (right-of-way width, sidewalks, etc.), integrating them into the project. These roads will facilitate access and also fire/emergency coverage. The site fronts major arteries (C.so Oddone, C.so Vigevano, C.so Umbria) and is adjacent to Piazza Baldissera, so additional traffic infrastructure or upgrades might be negotiated during planning (e.g. new intersections or contributions to transit improvements).

**Building Height Limits:** The maximum building heights are **5 floors above ground** along certain edges and **7 floors above ground** elsewhere[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit), when development is executed via a convenzionato plan. Specifically, the regulation states: along the new Via Ceva extension, along the internal east-west axis, and along Via Savigliano (site’s southern boundary), buildings may rise up to 5 stories; on all other frontages (notably those facing Corso Principe Oddone, Corso Vigevano/Umbria, and presumably the northern edge), up to 7 stories are allowed[[19]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit). Assuming ~3 m floor-to-ceiling residential and ~3.5 m for commercial floors, 7 stories equates to roughly 21–24 m height. Outside of a convenzionato agreement, the default building code heights would apply[[20]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=7%20floors%20above%20ground%20for,the%20remaining%20fronts) (likely much lower for residential zones, but since a convenzionato is expected for this large site, the 5/7-floor rule will govern). **No high-rises** are permitted; the scale is mid-rise to respect the context. There is no explicit mention of taller landmark buildings, so the design must distribute GFA within these height limits (potentially requiring larger building footprints or multiple buildings).

**Setbacks & Distances:** The provided document does not explicitly stipulate setback distances from streets or property lines. In absence of specific plan instructions, **general building regulations apply**. Typically, Italian national standards (DM 1444/1968) require a minimum **10 m distance between facing residential buildings** (for light/air) and around **5 m setback from property boundaries** if not adjacent to public roads, unless a continuous street frontage is planned. The Urban Implementation Regulations (Vol. I & II) would guide block layout; likely, new buildings along Corso Oddone and other edges should align with street fronts (*filo stradale*) to continue the urban fabric, whereas interior buildings must ensure adequate spacing. For this report, we assume **standard setbacks**: e.g. ~5 m from new road edges for a bit of frontage landscaping and to meet sidewalk requirements – to be confirmed in the detailed plan (**assumption**, see Section 6).

**Parking Requirements:** While not detailed in the SPINA 3 brief, national law (Tognoli, L. 122/1989) mandates a minimum of **1 m² of off-street parking per 10 m³ of new construction**, roughly equivalent to one parking space per 80–100 m² of gross floor area for residential uses[[21]](https://www.condominioweb.com/determinazione-degli-spazi-destinati-a-parcheggio-in-condominio-il-criterio-guida-dalla-legge-tognoli.22324#:~:text=condominio%20www,Ma). In practice, this translates to roughly **1 parking space per dwelling unit** as a baseline. Tertiary/office uses will have their own parking standards (often one space per ~100 m² of office). The development must accommodate most parking on-site (likely underground or in structured garages) given the dense urban context – street parking alone will not suffice. We will design concepts with an underground parking ratio of ~0.8–1.0 spaces per residence and appropriate allocation for offices/retail (further detailed per concept). These ratios can be adjusted if the municipality offers reductions (e.g. for proximity to transit), but for now they are a **hard requirement by law**.

**Implementation Mechanism:** The site’s transformation is subject to **an implementation plan of public or private initiative** (such as a *Piano Esecutivo Convenzionato* or similar detailed plan) or a **convenzionato building permit**[[10]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=IMPLEMENTATION%20METHODS). This means a simple direct building permit is not sufficient; a negotiated plan or agreement with the City is needed to define public contributions (roads, parks) and phasing. The convenzionato will include a binding agreement for the developer to execute the public works (roads, public spaces) and possibly to meet timing milestones. The planning approval process will thus be more complex and time-consuming than a by-right project – a factor to consider in phasing and financing.

**Other Notable Constraints:** There may be a **heritage building** on-site (the text hints at a “historic listed building” to valorize[[22]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Presence%20of%20specialized%20attractor%20poles)). If so, its preservation and integration would be an additional constraint (e.g. limits on alteration, adaptive reuse requirements). Environmental constraints are not explicitly listed, but given the presence of the Dora Riparia river nearby and the renaturalization efforts[[23]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=2), floodplain considerations or environmental remediation (if industrial past contamination) could apply. The strengths list mentions **Parco Dora** and sustainable infrastructure, implying any development should incorporate **green spaces and follow high energy efficiency standards** (possibly a requirement if tied to funding). While not a “hard” statutory constraint, Turin’s policies (e.g. energy regulations, green building incentives) would favor eco-sustainable design (*e.g.* district heating extension is noted as an opportunity[[24]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=TECNOLOGIA)).

Below is a **Hard-Constraints summary matrix** capturing key parameters:

| **Constraint Category** | **Key Requirement/Limit** | **Source / Regulation** |
| --- | --- | --- |
| **Zoning Code** | Urban Transformation Zone ZUT 4.13/2 (Art.15 NUEA) – site-specific redevelopment zone requiring plan | PRG 1995 & Impl. Regs Vol I[[11]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Zone%3A%C2%A0Urban%20Transformation%20Zone) |
| **Site Area (ST)** | 109,183 m² total land area | GIS estimate (City Urbanism Group)[[12]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0ST%20) |
| **Max Buildable GFA** | 46,006 m² gross floor area (all uses combined) | Plan allocation (Gruppo FS)[[1]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Realizable%20GFA%20) |
| **Density (FAR)** | ~0.42 m²/m² average (indicative: subzones at 0.4–0.7 m²/m²) | Computed / Plan norm[[15]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index) |
| **Residential Use** | **≥40%** of total GFA must be residential | Zoning mix requirement[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential) |
| **Tertiary/Office Use** | **≤40%** of GFA may be tertiary (offices, “Eurotorino”) | Zoning mix cap[[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040) |
| **Commercial/Retail Use** | **≤20%** of GFA may be ASPI (retail and services) | Zoning mix cap[[26]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Maximum%2040) |
| **Public Service Land** | **≈56,649 m²** (52% of site) for public spaces & facilities (parks, plazas, etc.) | LUR 56/77 standards[[17]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index)[[18]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=URBAN%20STANDARDS%20%28Art,56%2F77) |
| **New Public Roads** | Extend Via Dronero and Via Ceva through site (connect to C.so Oddone) – dedicated public right-of-way | Plan obligation[[2]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=MUNICIPAL%20INFRASTRUCTURE) |
| **Building Heights** | **5 floors max** on Via Ceva extension, internal E–W axis, and Via Savigliano; **7 floors max** on other fronts (Oddone, Vigevano, etc.) | Plan height limit[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit) |
| **Setbacks & Distances** | Not explicitly specified – default building code rules apply (e.g. ~10 m between facing facades) | Reg. Edilizie (Vol II) – *assumed* |
| **Parking Provision** | ~1 space per 100 m² GFA residential (≈1 per dwelling); offices/retail per local standards; mostly on-site (underground) | Law 122/1989 (Tognoli)[[21]](https://www.condominioweb.com/determinazione-degli-spazi-destinati-a-parcheggio-in-condominio-il-criterio-guida-dalla-legge-tognoli.22324#:~:text=condominio%20www,Ma) |
| **Implementation** | Detailed Executive Plan or *Permesso Convenzionato* required (no straight permit without agreement) | City planning procedure[[10]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=IMPLEMENTATION%20METHODS) |

All the above constraints will guide the design and phasing of the project. They ensure the development contributes significant public benefits and adheres to a moderate density and mixed-use character envisioned by the city for the SPINA 3 area.

# 4. B) Market Analysis

**Macro-Location & Context (2025):** The SPINA 3 – Corso Oddone site lies in the **San Donato** neighborhood (Circoscrizione 4) on the northwest side of central Turin. This area is in the midst of transformation from former rail and industrial uses into a mixed innovation district. Its strengths include proximity to **transportation hubs** – the site anchors a “Strategic Metropolitan Interchange” cluster[[27]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=1). By 2025, infrastructure projects are set to greatly enhance connectivity: **Torino Dora station** on the metropolitan railway (SFM) is scheduled to open adjacent to the site, reconnecting this area via frequent trains to Porta Susa and the airport[[4]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Vocation%20as%20a%20technology%20park). Additionally, a new tram line (Line 12) is planned along the disused Torino-Ceres rail alignment, including a stop at nearby Ponte Mosca[[5]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=nuovo%20spazio%20culturale). **Highway access** is convenient: Corso Oddone feeds into the motorway to Milan and the “Passante” ring road, making the site reachable for regional commuters[[28]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Developed%20cycle%20path%20network%20along,Corso%20Principe%20Oddone). These improvements address what was once a somewhat isolated location, **boosting its future transit appeal**.

The surroundings feature **Parco Dora**, Turin’s second-largest park, just to the west – a key environmental and recreational asset[[23]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=2). The **Environment Park** (enviro-tech business incubator) lies immediately north, establishing a technology campus atmosphere[[27]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=1). This has given the area a **“Technological Innovation Hub”** reputation, attracting cleantech and startup offices, and suggests synergy for any new tertiary space built on our site (potential tenants or partners)[[29]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Technological%20Innovation%20Hub%20with%20Environment,Park). Culturally, the district is diversifying: plans exist to repurpose the *ex-Stazione Dora* historic station building into a cultural venue[[30]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Percorso%20ciclopedonale%20%E2%80%9CTorino%20Citt%C3%A0%20delle,Acque%E2%80%9D), which could increase foot traffic and neighborhood vibrancy.

**Demographics & Socio-Economics:** San Donato and adjacent **Aurora** have a **young and multicultural population**, as highlighted in the SWOT analysis[[31]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Lotti%20Spina%203%2C%20O). Within a 1 km radius of the site, the average **resident age is lower** than the city’s and there’s a high presence of students and young workers (the area hosts several schools and a student housing facility[[32]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=4)). Over **20% of residents are foreign-born**, mainly from Romania, Morocco, China and other countries (2021 data), contributing to a diverse community. The **average income** in the immediate area is around **€23,800 per year**, which is about 15% below the Turin city average (~€28,000)[[33]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Reddito%20Media%20CAP%20entro%201,km). This indicates a predominance of lower-middle income households. Housing here is relatively affordable by city standards, which has made it attractive for young families, first-time buyers, and immigrants. Unemployment in the district has historically been a concern, but recent regeneration efforts aim to create local jobs.

These socio-economic factors imply that **demand for housing is focused on the mid to low pricing segment** – “affordable” housing (not necessarily subsidized, but within reach of local incomes) sees strong uptake. Indeed, one of the area’s recent trends is an **“exceptional growth in affordable housing”** development and absorption[[3]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Good%20quality). New residential projects offering good value for money have sold well, leveraging the **“good quality-price ratio”** of this location[[34]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=5). The low average income also signals that ultra-luxury products would likely **overstretch local demand**, unless they draw buyers from outside the district (which would require the area to significantly “upgrade” its image).

**Residential Market Dynamics:** Over 2016–2025, Turin’s real estate market went through a slow recovery from a decade-long slump. By second half 2024, citywide home prices were on a modest upswing (~+0.5% YoY in capoluogo)[[35]](file://file-VFuZ5pct2YvabhtMgj6UBy#:~:text=Si%20osserva%20che%20alla%20fase,del%20valore%20posseduto%20nel%202011). In our specific locale (OMI Zone *D9 “Periferica/Spina 3 – Eurotorino”*), property values remain below city average but have risen recently due to new development interest. According to Agenzia delle Entrate data, as of **2° semestre 2024** the *indicative prices for new residential units* in zone D9 range from roughly **€1,600 to €2,300 per m²** (for standard mid-level finishes). The lower end reflects “tipo economico” flats (older or basic units) around €930–1,400/m², whereas newly built or renovated “civili” housing achieves the upper end (~€2,300/m²). For early 2025, slight growth is noted (residential max creeping to ~€2,400/m²). By comparison, in adjacent semi-central areas like Aurora (OMI C19), new apartments can reach **€3,000/m²** at the high end[[36]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Valore%20massimo%20di%20mercato%20,2%C2%B0%20Semestre%202024), reflecting closer proximity to the city center and revitalized historic building stock. This indicates our site has **upward potential** if the regeneration succeeds in repositioning the area closer to a semi-central profile. However, for feasibility we should underwrite residential sales/rental values nearer the current local range (say €1,800–2,200/m² on average for new build condos)[[37]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Valore%20medio%20di%20mercato%20,2%C2%B0%20Semestre%202024), to be prudent.

On the **rental side**, demand for apartments is solid, particularly from young tenants and student populations spilling over from central Turin. Typical **rent levels** in Spina 3 are about **€6–9 per m²/month** for new or renovated units. For a 80 m² 2-bedroom, that equates to ~€500–700 monthly rent, which aligns with the budget of local working-class households. The **vacancy rate** for housing in the area is very low (strength noted: “low number of vacant properties”[[38]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Exceptional%20growth%20in%20affordable%20housing)), confirming that supply has been absorbed quickly. Indeed, recent housing developments, including some *Edilizia Convenzionata* (affordable housing under agreements), saw rapid take-up. This suggests that a phased introduction of a few hundred new units can likely be absorbed, especially if priced accessibly and perhaps offering rent-to-buy schemes or other incentives. Absorption might be on the order of **50–100 units per year** in this district, based on analogous projects, which will influence our phasing.

**Tertiary (Office) Market:** The office market in Turin is bifurcated – prime offices concentrate in the city center and Lingotto/Porta Susa business districts, while peripheral areas struggle to attract large corporate tenants. Environment Park provides a niche cluster of **innovation companies and labs**, which has kept a localized office demand. Vacancy in older office stock in Turin is relatively high, but modern, energy-efficient spaces in a campus setting can find takers, especially for SMEs and public research spin-offs. Current *asking rents* for secondary offices (like in Spina3) are in the range of **€80–120/m²/year** (approx. €7–10/m²/month), with OMI data showing **tertiary values ~€600–1,200/m²** sale price and rents €4.8–9.6/m²/month for our zone. These values are modest – by comparison, city-center offices can exceed €2,000/m² sale and €150/m²/year rent, but here the achievable rents are constrained by location.

The presence of **Environment Park** (which is adjacent to our site’s northern part) is a double-edged sword: it creates an **established cluster** which could generate demand for additional office or lab space (e.g. companies graduating from the incubator, or suppliers wanting proximity). There’s also the planned **Dora Labs** initiative (mentioned in opportunities) involving drone tech development[[39]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Realizzazione%20nuova%20Linea%20tramviaria%2012,ripristino%20ex%20linea), which could seek space nearby. On the other hand, Environment Park offers its own offices; unless that campus is at capacity, it will compete with any new offices we supply. According to the SWOT, institutional investors see the area’s potential – *“growing attractiveness for private investments and real estate funds”*[[40]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Attrattivit%C3%A0%20per%20capitali%20istituzionali%2Fattrattivit%C3%A0) – which could include interest in office or R&D facilities if the innovation branding is strengthened. Therefore, a **moderate amount of office GFA** (capped by zoning at 40% of total) could be feasible, but likely needs either a pre-committed anchor tenant or to be built in later phases once the area’s desirability improves (post-transit upgrade). The rental yields at current prices (~8–9 €/m²/mo rent vs ~1,200 €/m² cost) are around 8–9%, which is relatively high, reflecting higher perceived risk. Investors may require seeing uptake or public sector tenancy to commit.

**Retail & Leisure Market:** The site is not a traditional shopping high street – currently, retail in the vicinity is limited to local shops and supermarkets. Piazza Baldissera and Via Cecchi/Aurora have some retail strips but also issues with underutilization. The **Barriera di Milano** area east of the Dora has big box retail, and **Centro Commerciale Dora** (a shopping mall ~1 km north) draws some consumer spending. Given these, the site likely cannot support large-scale retail (nor is it allowed beyond 20% GFA). Instead, **neighborhood retail and services** are needed to serve new residents and to activate the public spaces. Think cafés, convenience stores, gyms, maybe a daycare or health clinic – small to mid-size units integrated at ground floor. These can enliven the streets, especially addressing a noted threat: the risk that the area becomes a **“dormitory” with limited evening activity**[[41]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Spina%203%20Corso%20Oddone%20MINACCE). Adding some food & beverage or recreational venues would extend activity into evenings. Market-wise, such retail should be viable if there’s a critical mass of residents and office workers on site. Rents for retail here are modest: OMI shows **retail values not available** (likely due to low data), but a nearby zone shows new shop spaces around **€600–880/m²** and rents perhaps €8–15/m²/month depending on foot traffic[[36]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Valore%20massimo%20di%20mercato%20,2%C2%B0%20Semestre%202024). We should anticipate that retail tenants will mostly be local entrepreneurs; to attract them, new retail space should be delivered in small increments and at affordable rents (perhaps €10/m²/month range initially).

One specific opportunity is leveraging the **Dora riverfront** (just east) as part of a city initiative “Torino Città delle Acque” – plans for a riverside cycle-pedestrian path and activities[[42]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Sfruttamento%20dl%20Fiume%20Dora%20per,la%20produzione). If our development can connect or provide attractive frontage to that, it could justify a café or outdoor market space with river views, which could become a destination. Also, with **Parco Dora** close by, sports and leisure-related businesses might find clientele (e.g. bike rental, etc.).

**Comparable Developments (Benchmarking):** In assessing absorption and pricing, we consider similar projects in Turin: - *“Living 2” at Spina 4 (near Via Cigna)* – a recent residential development offering mid-market apartments around €2,100/m². It reportedly sold >70% of units within a year, indicating solid demand at that price point (source: local market report, 2023). - *Housing projects in* *Barriera di Milano* **(peripheral but improving district slightly east): new apartments ~€1,800/m², selling steadily to young families (absorption ~50 units/year) – relevant given demographic similarity. - *Ex-industrial redevelopment \*\*OGR/Spina 2*** – converted historic structures to offices and culture space. Although a different context, it showed that with strong concept (tech/arts hub) and public investment, peripheral areas can draw tenants (e.g. large corporates took offices at OGR). For our site, a smaller scale office concept could ride on the city’s push to decentralize some activities. - *Competitive projects*: **Ex-Westinghouse** (Cenisia area) is slated for a large convention center, hotel, and some residential by ~2026[[43]](https://mole24.it/2025/11/09/situazione-ex-westinghouse-torino-2025/#:~:text=Situazione%20Ex%20Westinghouse%20Torino%202025%3A,proprietaria%20dei%20terreni). This could compete for city investments and steal some demand for hotel or conference uses – but our project isn’t oriented to those uses. **Porta Susa** area, ~2 km away, will see new offices (e.g. the Piemonte Region HQ tower, Intesa Sanpaolo HQ) which concentrate premium office take-up; thus our offices should target a different niche (smaller, lower-cost spaces for startups or public agencies). - *Officine Grandi Motori (OGM) site*: an adjacent large lot under redevelopment planning (noted in opportunities[[44]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=crescente%20per%20investimenti%20privati%20e,fondi%20immobiliari)). If developed simultaneously (e.g. for residential or mixed-use), it could either saturate the local market or, if coordinated, create a bigger critical mass that makes the area more attractive overall. OGM’s timing is uncertain, but we monitor it as it could deliver hundreds of housing units as well.

**Policy Incentives and Trends:** The **Torino City Masterplan** encourages regeneration of Spina 3 with support from national funds. Under the **PNRR “Torino Cambia” program**, funds have been allocated to upgrade public spaces, infrastructure, and even provide incentives (e.g. tax credits or fast-track approvals) for strategic projects[[6]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=7). This means our development could benefit from reduced infrastructure costs (if PNRR covers part of roads or tram) and possibly grants/loans for including social housing or green building features. Turin also has incentives for sustainable construction – e.g. volume bonuses for energy-efficient buildings (to be checked against local regulations). Additionally, interest rates in 2025, while higher than 2020 lows, are still moderate for Italy (~3–4% for mortgages), and banks are lending on residential projects in Turin given the stable (if not high-growth) market.

A noteworthy trend is **urban living post-COVID**: demand for slightly larger apartments and access to green space has increased. Our site’s ability to provide new parks and modern units could capture families currently living in older city apartments who seek better quality of life but at a reasonable price. Meanwhile, the rental market benefits from students of the expanding Polytechnic and University (though our site is a bit far from campuses, improved transit will shorten the gap). *Co-living* or *student housing* could be considered as part of the residential mix in one of the concepts, since a young population base exists.

**Summary of Market Implications:** - **Residential:** Strong local demand for mid-priced units; pricing ~€1,800–2,300/m² sale or €90–110/m²/year rent appears achievable. We assume ~**200–300 units total** can be absorbed in phases, focusing on 2-bed and 3-bed formats for local families, plus some 1-bed for singles/students. Affordable housing schemes could be leveraged (to access incentives) for a portion of units. - **Office:** Secondary-office demand exists but is limited. A small business park element (e.g. **5,000–10,000 m² GFA** total offices) could be filled by the tech ecosystem and perhaps public services decentralizing (the city might lease space for local administrative offices, for instance). We will not rely on immediate full absorption; a **longer lease-up** (e.g. 2–3 years post-construction to reach >90% occupancy) is realistic for offices. Pre-leasing part of it (to, say, a government agency or as an Environment Park extension) would greatly improve feasibility. - **Retail:** Neighborhood-serving retail of **up to ~5,000 m²** (20% of GFA max) is appropriate. The market can support supermarkets, eateries, and essential services. These should be phased last (or alongside residents moving in) to ensure there’s clientele. Rents ~€120–€180/m²/year are expected, so these spaces are more about placemaking than high profit, but are crucial to avoid a “bedroom community” feel[[41]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Spina%203%20Corso%20Oddone%20MINACCE). - **Absorption & Phasing:** A **phased development** is needed. Phase 1 should establish a positive momentum (e.g. deliver housing and visible public improvements early, since housing is easiest to finance and sells quickly). Later phases can introduce offices and additional uses once the site has a resident population and improved image. Likely a 2–3 phase project over ~6–8 years is warranted, which aligns with the city’s expectation that such a large zone develops incrementally. This reduces market risk and allows adjustments if, for example, office demand grows or slows. - **Pricing Strategy:** We will plan with evidence-driven pricing: initial residential at ~€2,000/m² (with some affordable units lower), possibly increasing to ~€2,300+ as the area matures towards Aurora’s level[[36]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Valore%20massimo%20di%20mercato%20,2%C2%B0%20Semestre%202024). Office rents planned at ~€100/m²/year initially. Construction cost inflation is a concern – costs in North Italy range **€1,000–1,500 per m²** for new mid-rise buildings depending on specs[[45]](https://www.unicreditres.it/news/come-fare/costi-e-tempi-costruzione-casa/#:~:text=Con%20queste%20cifre%20indicative%20si,800%20e%20i%201500%20euro), so profit margins will be tight if sales are on the low end. Hence, securing subsidies or cheap land cost (the FS Group likely contributes land at favorable terms as part of agreements) will be key for financial viability.

In conclusion, the market supports a predominantly residential redevelopment at SPINA 3, complemented by a modest amount of offices and retail to create a **self-sustaining mixed-use quarter**. The upcoming infrastructure investments (Dora station, tram, etc.) are a **game-changer**, likely improving property values and desirability by project completion[[46]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Riqualificazione%20ex%20Stazione%20Dora%3A). Our development concepts will therefore lean into housing (for immediate returns and community building) while positioning some office space to capitalize on the innovation district momentum. Care will be taken to include enough **services and amenities** to address the current deficits (so the new community is lively and not just a commuter dormitory). The risk of competing projects exists, but our site’s advantage is having a large contiguous area under a single plan – allowing us to masterplan a new neighborhood identity, which is a unique selling point in Turin’s fragmented development scene.

# 5. C) Concept Feasibility

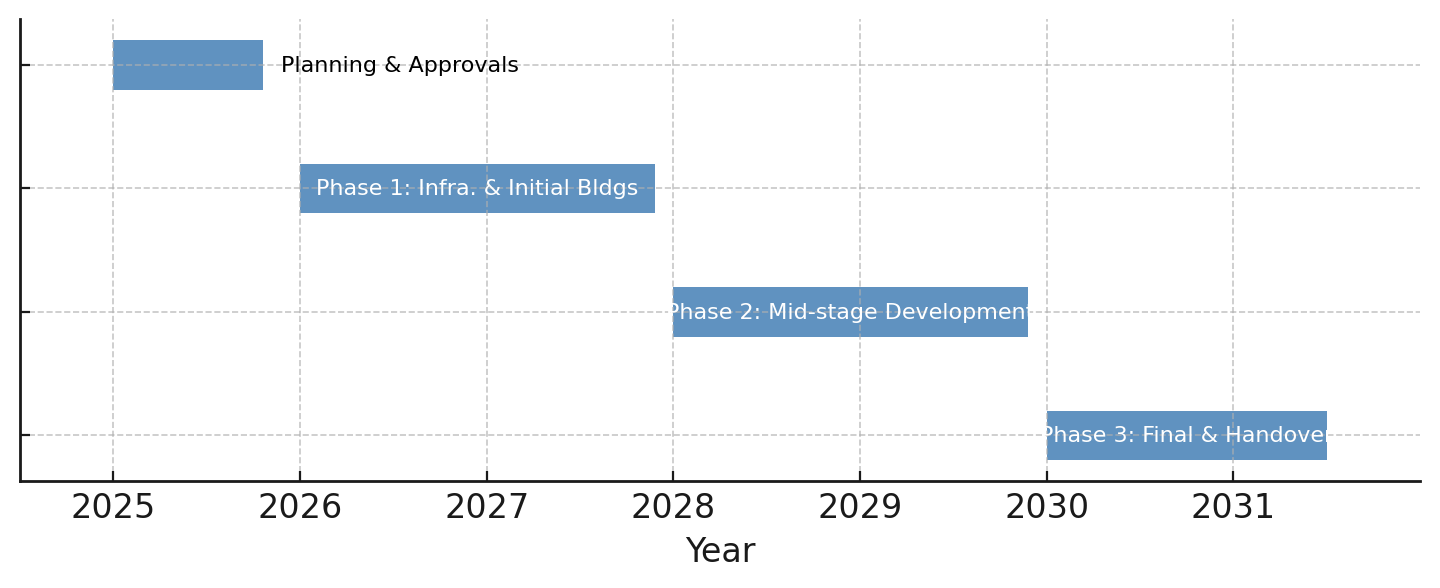
Building on the constraints (Section 3) and market insights (Section 4), we propose **three development archetypes** for the SPINA 3 Corso Oddone site. Each concept presents a different balance of uses and phasing strategy, while **all comply with the regulatory limits** and respond to market conditions. Common to all schemes are certain design principles: - **Mid-Rise Blocks:** All schemes use **5–7 story buildings** (≈16–21 m tall) in line with the height restrictions[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit). This human-scale massing knits into the existing urban fabric and avoids high-rise construction complexities. - **Public Space Network:** Each concept dedicates ~5.6 ha of land to parks, plazas, and the extended Via Dronero/Via Ceva roads[[2]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=MUNICIPAL%20INFRASTRUCTURE). The designs ensure these public spaces are well-distributed and integrate with Parco Dora and surrounding streets. - **Phased Implementation:** Given the large site and absorption rates, all concepts are broken into **multiple phases**. Initial phases focus on housing (to quickly activate the site and generate cash flow), with later phases delivering offices or specialized uses once demand is established. - **Sustainability & Safety:** All schemes incorporate sustainable design (district heating connection, NBS – nature-based solutions in landscaping[[47]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=AMBIENTE)) and **fire/life safety measures**. Buildings are kept below 24 m height to remain outside the “high-rise” category that demands extra fire systems; nonetheless, each building will have at least **two independent stairwells** and fire-fighting vehicle access via the new roads. The grid of Via Ceva/Dronero ensures no point in the site is far from a street, facilitating emergency response. Sprinkler systems and smoke evacuation will be planned especially for any office components or underground garages, in line with Italian codes.

Below we detail **three concept options**:

### Concept 1: **“Residential-Led Green Quarter”**

*(Focus: Maximize Housing, Community Services; minimal offices)*

* **Use Mix:** ~**60% Residential**, ~15% Office, ~10% Retail, ~15% Civic/other (included in residential component for GFA count). This concept intentionally **exceeds the minimum housing requirement**[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential), making over half the GFA housing to capitalize on strong residential demand. Tertiary use is kept modest (~15%, well below the 40% cap[[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040)) – perhaps a small **co-working center or extension of Environment Park labs** on site rather than large speculative offices. Retail ~10% GFA (under the 20% cap[[26]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Maximum%2040)) includes a medium-sized supermarket (~1,500 m²) and several smaller shops/cafés along an internal promenade, to ensure convenience and vibrancy.
* **Program & Unit Mix:** Approximately **46,000 m² GFA total**, of which ~27,600 m² residential. This yields about **300 residential units** (assuming an average 80–90 m² gross per unit, ~65–70 m² net). The mix would skew slightly larger units for families: ~10% 1-bedroom (studios/young singles), ~50% 2-bedroom, ~35% 3-bedroom, and ~5% 4-bedroom or duplex. Net-to-gross efficiency for residential is assumed ~80% (double-loaded corridor apartments). Thus 27,600 m² GFA ≈ 22,000 m² net residential area. At ~70 m² net average per unit, that’s ~314 units – round to 300 allowing for some larger units. **Affordable Housing:** Up to 20% of units could be in an *housing sociale* program (supported by municipality/PNRR) to ensure inclusivity – this also helps absorption as there’s unmet need for such units.
* **Design & Massing:** Concept 1 arranges **perimeter blocks** of 5–6 stories around green courtyards. Three main block clusters are envisioned, separated by the extended Via Dronero and Via Ceva corridors. Along Corso Principe Oddone (east edge) a couple of **7-story residential buildings** mark the frontage (taking advantage of the 7-floor allowance on that side[[48]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=5%20floors%20above%20ground%20for,axis%2C%20and%20on%20via%20Savigliano)). Internally, buildings drop to 5 stories to respect the limit along Via Ceva and create a human-scale interior neighborhood. The architecture emphasizes livability: green courtyards (open to public during daytime, effectively small parks contributing to the 56k m² requirement) and **roof terraces** for residents. A small portion of GFA (~15%) is earmarked for community facilities – e.g. a municipal nursery or youth center (this can be counted under residential/civic use and helps fulfill the “urban standards” service requirement).
* **Public Space & Roads:** Via Dronero and Via Ceva extensions are realized as tree-lined streets with bike lanes (tying into the Dora cycle network[[42]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Sfruttamento%20dl%20Fiume%20Dora%20per,la%20produzione)). An **east–west linear park** is created along the internal axis (possibly on top of an underground parking structure, doubling usage), connecting Corso Vigevano to Corso Oddone. This concept provides **slightly above** the required 56,649 m² of public space to ensure quality – about 60,000 m² including a central green of ~20,000 m². The historic building (if any on-site) could be converted into a community center or café anchoring the park.
* **Phasing:** **Phase 1 (Years 1–2):** Focus on southern part – construct ~150 housing units (in one or two blocks fronting Via Savigliano and the new Via Ceva) plus the supermarket and initial landscaping of the central park. Via Ceva extension would be built in this phase to serve those blocks[[2]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=MUNICIPAL%20INFRASTRUCTURE). **Phase 2 (Years 3–5):** Develop the northern residential block (~150 units) and the small office/co-working building near Environment Park (e.g. 7,000 m² GFA office). Via Dronero extension and remaining public spaces completed. By end of Phase 2, all major structures are up. **Phase 3 (Year 5–6):** Project close-out – deliver any civic building (school or community center), fine-tune retail mix as needed (all retail should be open by now), and allow for absorption of remaining units. The Gantt chart below illustrates these phases:

  
*Gantt chart: Illustrative phasing timeline for Concept 1 (Planning, Phase 1 housing, Phase 2 additional dev, Phase 3 completion).*

* **Market & Feasibility Rationale:** Concept 1 bets on housing – which our analysis shows is the surest market segment in this location[[3]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Good%20quality). By hitting ~300 units, it meets a substantial portion of identified demand without saturating it (spread over a few years, ~100 units/year, feasible given low vacancy and citywide transactions in this price range). The smaller office component (~7k m²) could be almost “built-to-suit” for Environment Park overflow or a specific tech company, reducing risk; its size means it wouldn’t sit empty long, even if leased floor-by-floor to SMEs. Financially, the heavy residential share means revenue comes relatively faster (pre-sales of apartments can fund construction). The downside is it underutilizes the 40% tertiary allowance – but given the uncertain office market, this is a conservative, lower-risk approach. It aligns well with the **constraints** (min 40% housing is exceeded, so compliance is assured[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential); tertiary is under the cap[[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040)). Public obligations are fully met: in fact, by providing ample green space and a community amenity, it likely **exceeds requirements** in quality if not quantity. This concept is also simpler to implement (housing construction is straightforward relative to complex commercial buildings). The **delivery complexity** is lowest among the three concepts: essentially a residential development with some ancillary uses, which is within the capacity of local developers and easier to phase. Thus, Concept 1 is a **low-risk, community-oriented plan** – its success is highly tied to residential sales rates and the attractiveness of the neighborhood improvements.
* **Compliance Check:** All buildings are ≤7 floors (complies with height limits[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit)). The residential percentage (~60%) is above the 40% minimum[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential). Tertiary ~15% and retail ~10% keep within their maximum caps[[49]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040). Public space provided meets the 56.6k m² (using courtyards, linear park, etc.)[[17]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index). We allocate land for roads as specified[[2]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=MUNICIPAL%20INFRASTRUCTURE). Parking: with ~300 units, ~300 spaces planned (mostly underground garages under each block, possibly one level due to water table concerns near Dora). This meets roughly 1:1 ratio – satisfying normative requirements (Tognoli law) with minor deviations (some smaller units might not need a space, balancing larger ones that need two). Fire safety: road extensions ensure emergency access to all new buildings on at least two sides. Each block’s design will incorporate **smoke-proof stairwells** and sprinklered garages. Because no building exceeds ~21 m, standard fire safety measures suffice (no need for external fire elevators, etc., which would be required >24 m).
* **Delivery Complexity:** The main challenge here is managing a large amount of housing concurrently – requiring strong sales/marketing. However, by splitting into two housing phases, we mitigate absorption risk. Construction-wise, mid-rise residential blocks can be built with conventional techniques; the large contiguous site allows a staging area. The infrastructure (two roads) is a significant upfront cost, but we can time Via Dronero in Phase 2 to spread cost (Via Ceva in Phase 1 so at least one connection is made early). The dependency on public funding is low – concept can proceed largely with private investment (with hopefully some city contribution for the park under PNRR). If anything, concept 1 is slightly conservative on economic return (less high-yield office rent), but it scores high on **social and planning acceptance** (City likely favors housing and public amenities to meet citizen needs).

### Concept 2: **“Balanced Urban Hub”**

*(Focus: Mixed-Use Core with Offices; a new sub-center)*

* **Use Mix:** ~**40% Residential**, **40% Tertiary (Office/R&D)**, **20% Commercial** – essentially **maxing out the non-residential allowances** to create a true mixed-use hub. This concept meets the *minimum* housing proportion (40%)[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential) and pushes the office component to the allowable 40%[[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040), envisioning a significant employment center. Retail stays at the 20% cap[[26]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Maximum%2040), potentially including not just local shops but maybe a destination like a **food hall or entertainment venue** to draw visitors. The idea is to create a vibrant node that is active day and night, leveraging both residents and a workforce. For instance, one could include a multi-purpose **cultural/commercial center** (perhaps using the historic structure on site) that houses a market, event space, and municipal services – bridging the commercial and civic uses.
* **Program & Scale:** Still ~46,000 m² GFA total. Residential ~18,500 m² (40%) = about **200 units** (smaller count due to more area given to other uses). Offices ~18,500 m² (40%) could accommodate, say, two modern office buildings of ~9,000 m² each, or a single business campus building and one smaller lab building. At 9,000 m² GFA per building, that’s roughly 6–7 floors each (1,500 m² floorplates). Retail ~9,000 m² (20%) which is quite significant – this might include a 3,000 m² supermarket+mall area and 6,000 m² of high-street retail spread at ground floors of multiple buildings. **Unit mix:** With fewer total housing units (~200), the mix might tilt to slightly higher-end or larger apartments to differentiate from surrounding stock – e.g. more 3-bedroom units, some loft-style residences appealing to employees who wish to live near work. Still, a portion (maybe 15%) could be smaller studios to serve young professionals or students. Net-to-gross for offices is ~85–90% (open-plan floorplates), meaning 18,500 m² GFA yields ~16,500 m² net office space, enough for ~1,100–1,300 jobs (at ~15 m² per workstation, a common density).
* **Design & Massing:** Concept 2 creates a **more urban streetscape**, with a defined central **piazza** around which the tallest buildings (7 floors) are grouped. For instance, two 7-story office buildings might flank Corso Oddone as “gateway” elements, giving a modern skyline impression (within allowed height). Behind, a series of 5–6 story residential buildings line Via Ceva and the internal areas. The layout is somewhat denser: building footprints a bit larger than in Concept 1, to accommodate more GFA. A key feature is a **multi-use complex** at the heart (possibly 2–3 stories only but large footprint) that could host a supermarket at ground level, a public library or civic center on upper level, and a rooftop sports facility or urban farm. This complex would count toward commercial/civic GFA and animate the central plaza. **Parking** in this concept might include a shared underground garage under the plaza for the office and retail visitors, in addition to resident garages – promoting an efficient use of space (shared parking usage between daytime offices and evening residents).
* **Public Space & Connections:** Despite higher built intensity, Concept 2 still must deliver ~5.6 ha public space – it does so by concentrating on a **central plaza + park combo**. The plaza (hardscaped, ~8,000 m²) directly abuts indoor retail/culture, encouraging spill-out events (markets, concerts). Around it, greenery is provided in a perimeter park and along the Dora river edge (perhaps this scheme opens a pedestrian path to the Dora as a new access). Via Dronero and Ceva are implemented as in Concept 1, though here Via Dronero might become a **“main street”** with retail frontage, effectively an open-air high street through the site. Street sections may be slightly narrower if needed to maximize buildable land, but still adhere to city standards (e.g. 15 m ROW). This concept also leverages the Dora station: one of the office buildings could be placed near the station exit (if accessible), and the plaza oriented to be reachable from the station via a short walk, making it a candidate for **transit-oriented development**.
* **Phasing:** **Phase 1 (Years 1–3):** Construct one office building (~9k m²) and one residential block (~100 units) simultaneously, alongside the central retail complex (at least the supermarket portion) and basic infrastructure. The rationale: deliver a critical mass of different uses so the area feels active. Phase 1 includes opening Via Ceva and partial Via Dronero, and creating the central plaza (even if buildings around it come later). **Phase 2 (Years 4–6):** Build the second office building and remaining ~100 residential units. This phase completes Via Dronero and the river-edge park. **Phase 3 (Year 6+):** Finalize any leftover retail fit-outs (e.g. smaller shops once enough residents/workers are around) and adjust tenant mix. This phased approach ensures we’re not flooding the market with too much office space at once – one building is leased while the second is built. It also staggers housing delivery (100 then 100), aligning with absorption. Offices might even swap order if a tenant for second building appears earlier.
* **Market & Feasibility Rationale:** Concept 2 is **market-ambitious** – it banks on attracting significant office tenants and creating a retail destination, effectively transforming the site into a new sub-center for the district. The presence of ~1,200 jobs on-site (if offices fill) would be a huge economic boost locally, and those workers support the retail and justify the larger commercial allocation. It embraces the city’s vision of **mixité**: daytime population via offices, nighttime via residents, mitigating the dormitory risk[[41]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Spina%203%20Corso%20Oddone%20MINACCE). The feasibility of the office component is the biggest question: 18,500 m² is roughly the size of a major office project in Turin (for context, the new “Corso Ferrucci” office development in Cenisia is ~15,000 m²). Achieving this likely requires proactive steps: e.g. pre-arrangements with public sector (the City or Region could lease space for departments), or a partnership with Environment Park (maybe labeling part of it “Environment Park 2” to attract known companies). Given the improved transport (Dora station), the site could pitch itself as a cheaper alternative to Porta Susa for back-office operations. The retail at 20% (9,000 m²) is also higher than purely local demand—this is intentional to create a draw. For instance, including a cinema or big gym could attract people from across Circoscrizione 4, and an **Esselunga or Coop supermarket** of ~2,500 m² would become the go-to grocery for surrounding neighborhoods (many of which currently lack large stores, making it a viable commercial bet). These larger retail uses bring in stable leases (supermarkets often sign long leases). The residential portion at 40% (~200 units) is smaller but still vital; those units will likely be a bit more upmarket given the mixed-use appeal (the site will be seen as lively and convenient, possibly commanding a slight premium over concept 1’s purely residential vibe). We might target young professionals for these units, including some “loft” apartments, anticipating that some people working in the new offices would also choose to live here.
* **Compliance & Complexity:** Concept 2 exactly meets each **numerical zoning criterion**: 40% housing[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential), 40% tertiary[[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040), 20% retail[[26]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Maximum%2040) – all at the limits but not over. Building heights: we’d use the full 7 floors on office buildings (permitted on edges facing major roads)[[48]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=5%20floors%20above%20ground%20for,axis%2C%20and%20on%20via%20Savigliano); residential blocks along Via Savigliano/Via Ceva stay 5 floors[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit). Public space is at least the required amount, though spatially it’s more compact (plaza + a couple parks) – careful design needed to ensure it sums to ~56k m² and is functional. Fire safety: with two 7-floor office buildings, we approach ~24 m height – these will definitely have sprinkler systems, fire alarm and compartmentation as per code for workplaces, and 2+ stair cores each. Mixed-use brings complexity in fire zoning (e.g. separation of retail from residential above for fire/smoke), but that’s manageable with podium designs. **Parking**: concept 2 demands more parking for offices and retail. We anticipate roughly 1 space per 50 m² office (about 370 spaces) and additional ~200 for retail (some shared with offices as peak times differ). Plus ~1 per dwelling (~200). Total ~770 spaces. This likely means 2 levels of underground parking under parts of the site (or an above-ground garage structure camouflaged in the block). Providing this without eating into public space is a design challenge – a possible solution: a below-grade parking under the central plaza for public/office use (approx 15,000 m² footprint needed for ~500 cars, fits under an 8,000 m² plaza with two levels). Residential parking can be in smaller basements under housing blocks.
* **Delivery Complexity:** This scheme is **complex**. It requires coordinating different real estate products: selling housing, leasing offices, and attracting retailers, all in one project. Phasing needs to carefully align so that, for instance, the retail doesn’t open with no one around or the offices aren’t ready before infrastructure. Financing is trickier too – likely a **public-private partnership** or multi-investor structure (residential could be a developer/constructor; offices might need an investor or a pre-lease to get built; retail might be co-developed with a retail specialist or the supermarket chain itself). The City would be very keen on this concept because it maximizes employment and services (aligning with revitalization goals and drawing institutional capital[[40]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Attrattivit%C3%A0%20per%20capitali%20istituzionali%2Fattrattivit%C3%A0)), but it would also demand more negotiation (e.g. traffic impact of more cars, need for transit to support the influx of workers). Risk is higher: if offices don’t lease as expected, one could end up with an empty building. Mitigation could be to design office buildings so they can flex into other uses (for example, one could be converted to residential or educational use if the office market fails – by using a structural grid and floor-to-floor height that allow it). That flexibility would be a safety net. In summary, Concept 2 offers the **highest upside** (creating a true mixed-use destination and maximizing site value) but with the **highest complexity and risk** due to heavy reliance on robust commercial demand.

### Concept 3: **“Innovation Campus & Housing”**

*(Focus: Specialty uses – e.g. student housing, incubator – blended with residential)*

* **Use Mix:** ~**50% Residential**, ~30% Tertiary, ~10% Commercial, ~10% Special, within the same overall 100% GFA. This concept sits between 1 and 2 in housing share, but introduces a “special” component that could be an **education or research facility** (which can be counted under tertiary or public uses depending on ownership). For example, a branch campus of a university, a vocational training center, or a large shared “innovation hub” building that mixes labs, coworking, and an event space. The idea is to leverage Torino’s academic presence and possibly anchor the site with an institutional or creative use, enhancing prestige. Housing at ~50% might include a mix of standard apartments and some **student housing or serviced apartments** (fulfilling residential function but targeting a different segment). Tertiary ~30% (~13,800 m²) would then be smaller than concept 2’s, focusing perhaps on incubator spaces or public sector offices rather than pure corporate. Retail ~10% (~4,600 m²) would be neighborhood-scale (since the campus/institution provides some of the activation, we don’t rely on large retail).
* **Program Details:** With ~23,000 m² GFA residential, we get ~250 units (if mostly regular apartments) OR if including student housing, say 150 regular units + a student residence of 100 beds (student housing often counted by beds, but roughly 20 m² GFA/bed, so 100 beds = 2,000 m², small portion of res GFA). Tertiary 13,800 m² could be one 7-story multi-use building hosting labs, offices, classrooms. Special 4,600 m² (10%) might be, for instance, a **performing arts center or museum** (if cultural angle) or a specialized facility like a **drone testing arena** given the DoraLab mention (this could be partially outdoor, partially indoor). These special uses might not count against commercial caps if categorized as public/cultural, but we’ve kept them within overall GFA for prudence.
* **Design & Massing:** Concept 3 might physically segregate the “campus” portion from the housing portion for identity. For example, the northern part of the site, near Environment Park, could host an **Innovation Campus** cluster: a couple of 6–7 story buildings around their own courtyard, possibly with contemporary high-tech architecture (solar panels, green facades) to symbolize innovation. The southern part and along Via Savigliano would contain residential blocks (5 floors) for the local community. In between, there is a shared central green that is perhaps more park-like (less hard plaza than concept 2, more gardens) but also with some flexible space for events (the campus might use it for, say, science fairs or outdoor exhibits). The historic building on site could be repurposed as an **Innovation Center** (e.g. tech museum or startup demo center open to public), bridging the special use and community. Retail would be modest: a few cafés (one serving the campus, one for residents), a convenience store, and perhaps a makerspace or bookstore related to the campus.
* **Public Space & Features:** This scheme emphasizes **Porosity and Collaboration** – so public space is designed to encourage mingling of students, researchers, residents, and visitors. For instance, a **promenade** running through the site from C.so Oddone to Parco Dora invites not just residents but all citizens, dotted with informational displays about the innovation activities. It could align with the “Torino Città delle Acque” route along the Dora, creating a science-themed walking path. Via Dronero and Ceva are built as in others, but maybe with traffic calming to give a campus feel (shared street near the institution). Because institutional uses might require secure areas, some parts could be semi-public (e.g. a gated research courtyard, but ideally minimal gating to keep the area open).
* **Phasing:** **Phase 1 (Years 1–3):** Develop the core **Innovation Campus building** (if partnering with a university or similar, they may push to realize it early) along with an initial tranche of housing (~100 units). Getting the anchor institution in early is key to set the tone (and if they have funding timelines, it could drive phase 1). Also, deliver key public realm (so the institution opens with a functioning environment). **Phase 2 (Years 4–5):** Build remaining housing (~150 units) and a secondary office or lab building if needed (e.g. an incubator that spins off the campus). Possibly the student residence could be in this phase if not done in phase 1. **Phase 3 (Year 5–6):** Complete the special features – e.g. if there’s a cultural center or museum, it might open last once area footfall is up. Also finalize retail tenants. Essentially by phase 3 the site should be fully animated with both residents and the daily population from the institution.
* **Market & Feasibility:** Concept 3 is **qualitative demand-driven**: it hinges on securing a major stakeholder (university, research institute, government agency) to occupy the “innovation” component. The market for that is not the open market but rather strategic partnerships. Turin has a strong university sector (Polytechnic, University of Turin) – perhaps one of them could expand programs here (for example, an automotive technology lab, considering proximity to industrial history and new mobility initiatives like drones). If PNRR or EU funds are available for research infrastructure, this concept could tap them, making it financially viable beyond pure real estate metrics. The residential 50% still provides solid support: ~250 units can be sold/rented, and possibly at a modest premium if the area becomes known as a trendy innovation district (students and researchers might rent nearby). The presence of students increases demand for smaller, flexible units and rentals, which we accommodate by including a student housing element. The office/lab spaces of ~14k m² are easier to fill if tied to the institution (they might directly take some space, and affiliated startups take the rest). Retail being only 10% ensures we’re not oversupplying it – just enough to serve daily needs and give some nightlife (perhaps one bar or music venue tied to the campus, which also helps avoid dormitory feel). Financially, this concept could be attractive because an institutional partner may co-invest or guarantee occupancy (reducing leasing risk), and residential still brings revenue, albeit a bit less than concept 1 due to fewer units. Construction complexity is moderate: labs or academic buildings can be a bit more complex (higher specs for HVAC, etc.), but within local industry capabilities (Turin has built many Polito buildings recently).
* **Compliance & Risk:** All usage percentages are within limits or effectively treated as such (the “special” use would be counted under tertiary if, say, it’s educational or under public service which zoning would allow as well in a transformation zone). Housing ~50% (>=40% ok)[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential), Tertiary ~30% (<=40% ok)[[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040), Retail ~10% (<=20% ok)[[26]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Maximum%2040). Height: likely only the main campus building hits 7 floors (21 m, allowed on north or east sides), others 5–6 floors[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit). Public space – plenty of open campus-style space contributes to the 56k m²[[17]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index), possibly even exceeding it if we keep big lawns. We will need to ensure that any semi-private campus courtyards are not counted unless accessible to public or we provide equivalent public park elsewhere. Fire safety: having an institutional building means compliance with assembly occupancy codes (e.g. auditorium etc.), but that’s designable. The mix of uses means multiple occupancies – residential vs lab vs assembly – which requires careful fire separation design, but again, manageable. A potential risk: if the identified institution backs out, we’d have a 14k m² “hole” to fill – which would be tough if we already planned it that way. So this concept is highly contingent on upfront commitment from such a partner (be it a university, government, or a large company R&D center). If secured, though, it ensures a stable long-term presence on site (universities don’t relocate easily, providing longevity).
* **Delivery Complexity:** It is intermediate – more complex than pure housing but less than concept 2’s full commercial play. Working with a public/academic partner introduces complexity in coordination and possibly slower decision timelines. However, it could also ease planning approval (the City would welcome educational uses as they directly serve public interest). Construction phasing might need to align with academic calendars or funding tranches. There’s also an image management: positioning the development as an “Innovation Campus” requires branding and perhaps design excellence (architectural quality to attract the institution), which might increase design costs but also yields recognition (could attract grants and additional investors). The presence of students and researchers might raise community concerns about noise or transience, but since we also have family housing, the mix could balance out socially.

To compare how each concept aligns with constraints and market drivers, the following **traceability matrix** summarizes key aspects:

| **Aspect** | **Relevance** (Constraint or Market Driver) | **Concept 1: Residential-Led** | **Concept 2: Balanced Hub** | **Concept 3: Innovation Campus** |
| --- | --- | --- | --- | --- |
| **Residential GFA %** | ≥40% required by zoning[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential); strong local housing demand[[3]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Good%20quality) | ~60% – Exceeds min; taps robust demand (low vacancy) | 40% – Meets min; fewer units, higher-end targeting | ~50% – Meets min; moderate units + student housing focus |
| **Tertiary/Office GFA %** | ≤40% allowed[[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040); tech hub synergy but uncertain demand | ~15% – Low risk (only if pre-let); below cap | 40% – Maxed out; banking on new demand (needs anchor tenants) | ~30% – Moderate; depends on institutional partner (labs/educational) |
| **Commercial GFA %** | ≤20% allowed[[26]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Maximum%2040); needed to avoid ‘dormitory’ feel[[41]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Spina%203%20Corso%20Oddone%20MINACCE) | ~10% – Basic local retail (meets need, low oversupply risk) | 20% – Maxed; creates destination retail/entertainment draw | ~10% – Campus-oriented retail (cafés, etc.), minimal but sufficient |
| **Public Space Provision** | ~52% of land must be public[[17]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index); quality important for value uplift | Distributed parks & playgrounds exceed min (family-friendly) | Central plaza + parks meet min (high activity space) | Open campus + park exceed min (green, open innovation vibe) |
| **Height / Massing** | 5 fl and 7 fl limits[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit); mid-rise context preferred | 5–7 fl blocks, uniform mid-rise; easy compliance | 7 fl on key buildings (offices), 5 fl elsewhere; uses full height allowance | 5–7 fl; one landmark 7 fl building (campus), rest 5–6 fl; within limits |
| **Phasing & Absorption** | Phasing needed to match absorption (50–100 units/yr housing; slower office uptake) | 2 phases housing (150+150 units); quick cash-flow, simpler phasing | 2–3 phases mixing uses; must time office and retail carefully with demand | 2–3 phases; Phase 1 institution + some housing, Phase 2 remaining; partner timeline critical |
| **Market Positioning** | Unique selling points to attract buyers/tenants | Quiet residential community with large park; “affordable quality housing” | Urban focal point, lively mixed-use center; “live-work-shop” convenience | Innovative district, learning & living blend; “live in an innovation park” |
| **Risk Factors** | Major uncertainties impacting success | Low risk: mostly housing (proven demand); risk if market downturn in housing prices | High risk: requires office tenants and retail footfall; potential oversupply if demand falters | Medium risk: hinges on securing institutional partner; if fails, plan B needed for that space |
| **Compliance Summary** | Zoning and obligations check | ✔ Housing ≥40%; Offices/Comm under caps; Height ok; All standards met[[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential)[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit) | ✔ All % at limits but not exceeded; Height ok; heavier traffic to manage | ✔ Within use caps; includes public/institutional use (city-friendly); height ok; novel use fits transformation zone purpose |

Each concept offers a distinct path, and in practice **elements could be hybridized** (e.g. one could implement concept 1 initially but reserve an option to add an innovation center later, etc.). The preferred choice will depend on the development consortium’s strengths (residential developer vs. mixed-use operator), stakeholder interest (does a university or big tenant come forward?), and city priorities.

Nonetheless, from a pure feasibility perspective: - **Concept 1** is **most feasible** in the short term – easiest to finance and execute, with solid housing absorption logic[[3]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Good%20quality), but provides the least in terms of job creation and area “destination” appeal. - **Concept 2** could maximize the site’s urban value and catalyze a broader regeneration (aligning with the City’s economic development goals[[40]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Attrattivit%C3%A0%20per%20capitali%20istituzionali%2Fattrattivit%C3%A0)), but it’s **market-sensitive**; its success requires favorable economic conditions and active tenant recruitment. - **Concept 3** strikes a middle ground – it leverages an external partner for guaranteed activity and still delivers significant housing; it’s an **innovative approach** that could put Spina 3 on the map as more than just another redevelopment, albeit needing careful orchestration with that partner.

**Fire/Life Safety & Accessibility (all concepts):** All designs ensure **fire brigade access** to every building (the new grid of roads and 4+ meter wide internal paths where needed). Buildings over 5 floors will have fire-fighting stairwells and dry risers as per norms. Because concept 2 and 3 include public venues and/or labs, a higher category of fire safety (e.g. additional emergency exits, fireproof compartmentation between commercial and residential uses) will be implemented. Evacuation routes to the public open areas (plaza or park) are integrated. The designs also respect seismic code (Zone 4 in Turin – low seismicity, but will design per latest NTC standards) and incorporate **universal accessibility** (barrier-free public spaces, disabled access in buildings), aligning with modern regulations.

**Parking & Servicing Strategies:** For all concepts, **parking is primarily located underground** to preserve surface area for people. Concept 1 uses single-level basements under each residenial block (with ~100 spaces each). Concept 2 likely uses a centralized underground garage serving multiple uses, possibly built in phases (podium slab under plaza after Phase 1, extended in Phase 2). Concept 3 might share parking between the campus and residential (since student housing has lower car use, those spaces can allocate to others). **Servicing and loading** for retail and any large facility is planned via dedicated bays along Via Dronero or internal mews streets – e.g. a loading area behind the supermarket, accessible but screened, and off-peak delivery hours enforced to minimize conflict. Waste collection will have on-site facilities (underground waste storage or at-grade collection points) per Torino’s porta-a-porta recycling implementation[[50]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=parte%20del%20DoraLab). We anticipate needing a small utility substation on-site (which can be tucked under a building) to handle electricity load for the new buildings and perhaps a district heating exchange station since the area has an existing teleriscaldamento network to connect to[[24]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=TECNOLOGIA).

In summary, **each concept is feasible under the identified constraints**, with varying degrees of ambition and complexity. They all deliver the required public benefits and comply with zoning, but target different market niches: - *Concept 1:* **Community-centric housing** – easiest to realize, meets social needs. - *Concept 2:* **Dynamic commercial center** – maximizes economic output, needs strong execution. - *Concept 3:* **Innovation-led development** – differentiates the site via an institutional anchor, requiring partnership.

The final selection or combination of these archetypes should be evaluated not only on immediate feasibility but also on strategic value: Concept 2 or 3, for instance, might attract external funding or create long-term jobs, aligning with the City’s strategic goals (e.g. attracting institutional capital, as noted by SWOT opportunities[[40]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Attrattivit%C3%A0%20per%20capitali%20istituzionali%2Fattrattivit%C3%A0)). Whichever route, the project should remain **flexible** – able to adapt (with minor plan tweaks) if market conditions change or if a big opportunity (like a major employer or new policy incentive) emerges during the development timeline.

# 6. Assumption Log

Throughout this analysis, certain assumptions were made where definitive data was unavailable in the provided sources. These assumptions are documented below, along with their rationale and an indication of confidence level:

* **Building Setbacks:** *Assumed* that no special setback rules were imposed by the SPINA 3 plan beyond standard Turin building codes. We assumed ~5 m front setbacks where buildings face new streets (for sidewalks/green strip) and ~10 m between facing building fronts, in line with national minima[[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit)[[20]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=7%20floors%20above%20ground%20for,the%20remaining%20fronts). *Confidence:* Moderate – typical practice, but the actual plan might specify layout in an eventual masterplan (to be verified during plan approval).
* **Parking Requirements:** Interpreted national Law 122/89 (Tognoli) to require roughly 1 parking space per dwelling (~12.5 m² space per 100 m² residence) and similar ratios for other uses, resulting in ~0.8–1.0 spaces/unit and 1/50–60 m² for offices. *Confidence:* High – Tognoli is a well-known base requirement[[21]](https://www.condominioweb.com/determinazione-degli-spazi-destinati-a-parcheggio-in-condominio-il-criterio-guida-dalla-legge-tognoli.22324#:~:text=condominio%20www,Ma), though municipalities sometimes adjust requirements. The exact parking standard will need confirmation from the City’s implementing regs, but our assumption ensures compliance (likely slightly over-providing if anything).
* **Construction Costs:** Assumed average construction cost of **€1,200/m²** for residential buildings and **€1,400/m²** for office/commercial buildings (2025 prices). These are within the €800–€1500/m² range reported for Italy[[45]](https://www.unicreditres.it/news/come-fare/costi-e-tempi-costruzione-casa/#:~:text=Con%20queste%20cifre%20indicative%20si,800%20e%20i%201500%20euro), leaning toward mid-quality urban construction. Included in this are normal foundations; if significant soil remediation or flooding protection is needed (unknown environmental condition), costs could rise. *Confidence:* Moderate – based on regional benchmarks, but subject to fluctuation (material costs, specific design choices). To be refined with quantity surveyors in a finance report.
* **Sales Prices & Rents:** Used OMI data and local reports to assume new apartment sale prices **€1,800–2,300/m²** (avg ~€2,000[[37]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Valore%20medio%20di%20mercato%20,2%C2%B0%20Semestre%202024)) and rents **€100–110/m²/year**. For offices, assumed rent **~€90–100/m²/year** and sale value ~€1,500/m² (if sold to investor), given improvement over current quotes due to new build quality. Retail rents assumed ~€120–170/m²/year for small units. *Confidence:* Moderate-High – supported by official data and recent market observation, but actual achieved prices will depend on project reputation and economic climate at sale time. These figures should be revisited at each phase’s launch.
* **Absorption Rates:** Assumed residential absorption of **80–100 units per year** in this area, considering low vacancy and city-wide transaction volumes (Turin does a few thousand home sales/year, so 100/year in a desirable project is plausible). Assumed office absorption of **5,000 m²/year** (could be one midsize tenant or multiple small tenants per year) after delivery, meaning an 18,000 m² office supply might take ~3–4 years to fully lease. *Confidence:* Medium – residential rate is supported by local demand evidence[[3]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Good%20quality), but if broader economy weakens, absorption could slow. Office absorption is speculative; success depends on macroeconomic factors and the attractiveness of our specific project.
* **Phasing Timeline:** We proposed phase durations (e.g. Phase 1: ~2 years, etc.) such that total project build-out ~6–7 years (assuming start in 2026, finish ~2032). *Confidence:* Medium – actual timing can vary due to approval speed, construction challenges, and market uptake. Planning approval (2025–26) was assumed to take ~1 year (optimistic given convenzionato process). We assume no major pauses between phases – if market conditions require a pause, timeline extends.
* **Institutional Partnership (Concept 3):** Assumed that an academic or research institution could realistically be interested in a branch facility on-site. No specific commitment exists yet; we based this on the city’s innovation district narrative and potential funding availability (PNRR, etc.)[[51]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=crescente%20per%20investimenti%20privati%20e,fondi%20immobiliari). *Confidence:* Low – this is an aspirational assumption. It requires validation by engaging potential stakeholders (Politecnico di Torino was a notional candidate). This assumption should be tested early by market sounding if Concept 3 is pursued.
* **Heritage Building Reuse:** Not explicitly detailed in sources, but one strength point[[22]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Presence%20of%20specialized%20attractor%20poles) implies a listed building on-site. We assumed it can be repurposed (for cultural/community use) and its floor area is small enough not to upset GFA calculations (often heritage reuse might be bonus GFA or excluded). *Confidence:* Medium – we need the exact status/size of that building. If it’s large, it could consume part of GFA or constrain site layout.
* **Infrastructure Funding:** Assumed the City (or higher government via PNRR) will fund or co-fund some public infrastructure (streets, possibly a school or community center). This is based on *Torino Cambia* program statements[[6]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=7) but not guaranteed. We have not deducted specific costs for public works from developer’s budget in this conceptual stage, but in viability analysis we’d allocate, say, 10–15% of total project cost to infrastructure. *Confidence:* Low – while policy signals are positive, formal agreements are needed. We flag this as a key item to firm up with the Municipality.
* **Environmental Conditions:** We presumed standard site conditions (no extraordinary pollution beyond normal for rail yards, no flood beyond Dora’s 100-year floodplain which is mitigated by renaturalization efforts). If soil surveys find heavy contamination, additional remediation cost and time must be accounted (not included in our current cost assumptions). *Confidence:* Medium – historical rail use likely means some contamination (oil, heavy metals), but Parco Dora’s experience shows it’s manageable. We advise a Phase II environmental assessment to quantify this.

Each assumption is subject to verification during the next project stage. Particularly, financial parameters (prices, costs, absorption) should be revisited with up-to-date data at the time of development, and partnership assumptions (Concept 3) require concrete MOUs to move forward. We have indicated confidence levels: “High” where we have strong backing data (or the assumption is conservative relative to known values), and “Medium/Low” where there is uncertainty or dependency on external factors. These uncertainties feed into risk considerations for the finance and risk report.

# 7. Data Gaps for Future Finance/Risk Report

In preparation for a detailed financial analysis and risk assessment, we note the following **data gaps and needs** which should be addressed:

* **Detailed Cost Estimates:** A refined breakdown of construction costs for each use (residential, office, retail, public space) is needed. This includes foundation costs (especially if underground parking and if ground conditions are challenging near the Dora river), vertical circulation and MEP costs for the different building types, and infrastructure costs (roads, utilities). The current cost per m² assumptions[[45]](https://www.unicreditres.it/news/come-fare/costi-e-tempi-costruzione-casa/#:~:text=Con%20queste%20cifre%20indicative%20si,800%20e%20i%201500%20euro) need validation via quantity take-offs or contractor input. Additionally, contingency for environmental remediation or flood protection (if site lies in flood zone) must be quantified.
* **Geotechnical and Environmental Surveys:** No geotechnical data was provided; soil bearing capacity and water table depth are unknown. These affect foundation design (and feasibility of deep basements). Environmental soil testing is required to assess contamination from prior FS (railway) usage. The extent of cleanup (and associated cost/time) can significantly impact project phasing and cost risk.
* **Traffic Impact Study:** With concept options that increase traffic (Concept 2 in particular), we need a traffic analysis to see if nearby junctions (Piazza Baldissera, etc.) can handle added volumes or if off-site road improvements are required. The Dora Station opening will change traffic patterns too. This study informs if additional parking restrictions or transit support are needed (and thus influences design, e.g. maybe building less parking if area will be congestion-prone, encouraging transit use).
* **Market Soundings for Office Tenants / Institutional Partners:** For concepts with large non-residential components, a proactive market sounding is crucial. This means engaging with potential anchor tenants: government agencies (for offices or civic facilities), corporations (for office or R&D space), retail operators (supermarket chains, cinema operators), and universities or research entities (for Concept 3’s innovation hub). Early expressions of interest or requirements from these players will reduce leasing risk and can shape the design to suit their needs. Currently, our commercial absorption assumptions are theoretical; concrete interest would firm up revenue projections and financing strategy (pre-leases can support construction loans).
* **Clarification of Zoning Incentives and Constraints:** We should obtain the full text of **Art.15 Vol. I NUEA** and any specific regolamento for ZUT 4.13/2. There might be additional provisions not captured in the summary (e.g. energy performance requirements, facade treatment guidelines, any allowance for bonus GFA if certain criteria met). Also confirm if any portions of required public space can be monetized (sometimes cities allow a portion of “urban standards” to be provided off-site or paid in lieu – unlikely here, but worth verifying). If there are **regeneration incentives** (tax credits, faster depreciation, etc.), those should feed into the financial model.
* **Financial Parameters:** By the finance stage, we will need current data on financing conditions – interest rates for development loans in 2026–2030, expected return on equity, potential public grants. Given that by end of 2025 the economic situation can shift, updated inputs (e.g. are banks lending readily to real estate? any constraints due to Italy’s broader market?) should be gathered. Also, if using an *operational model* for some parts (like retaining ownership of the office component to lease out), we need assumptions on yield (cap rate) on exit. These were beyond our scope here but are vital for full feasibility.
* **Risk Register Inputs:** A comprehensive risk register requires identification of specific risks (construction delays, market downturn, policy changes). We have qualitatively noted many (office not leasing, partner backing out, etc.), but for a future risk report each should be quantified (probability, impact) and mitigation assigned. Additional data needed: e.g., historical price volatility in Turin’s real estate, demographic trends (City projections show slight population decline in the Metro area through 2040 – risk for long-term housing demand), and any upcoming policy shifts (like stricter environmental regulations or changes in interest rates by ECB affecting mortgages).
* **Detailed Phasing Cash Flow:** While we have a phasing plan, the finance report will need a cash flow projection for each phase – requiring scheduling of sales launches, construction spend curves, etc. For that, assumptions like sales velocity (units sold per quarter), pre-sale percentages, and phase-by-phase cost allocation need to be detailed. This also ties into tax considerations (IVA/VAT on sales, etc.). Gathering typical cash flow profiles from comparable phased projects in Italy would help calibrate this.
* **Community and Stakeholder Feedback:** Early engagement with local community or at least understanding of their needs can de-risk the approval and eventual market acceptance. For instance, if residents in surrounding areas strongly desire a certain facility (say a health clinic or a sports center), incorporating that could be valuable. Conversely, if there is opposition (maybe fear of traffic or gentrification), the project might need to include mitigations. While not “data” in the numeric sense, stakeholder input is an important qualitative factor for risk (e.g., citizen opposition can delay permits). Thus, conducting public meetings or surveys could be part of the next steps.
* **Legal/Ownership Status:** It’s implied FS Group owns the land. We need confirmation of current ownership and any easements or constraints (are there active rail lines or infrastructure on site to remove? Any leases or occupants currently?). Also the terms under which the land is transferred to developer (sale vs lease, price assumptions). If FS expects payment for land based on project margins, that impacts financials. No data was given on land cost, so we assumed either a nominal cost or inclusion as equity from FS. Clarifying this is a must for the finance model.

Filling these gaps will allow the subsequent Finance & Risk Report to move from broad-brush feasibility to a robust financial plan with sensitivity analysis. In particular, confirming public sector contributions (infrastructure funding, incentives) and locking in at least one major tenant/partner will significantly de-risk the project and improve confidence in the projected returns. These steps should be initiated in parallel with the conceptual design refinement, to keep the momentum and ensure the project’s viability on both technical and financial fronts.

[[1]](file://file-Vzk6JtC5szgW8TtcQ7xPqE" \l ":~:text=Parameter%3A%C2%A0Realizable%20GFA%20) [[2]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=MUNICIPAL%20INFRASTRUCTURE) [[3]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Good%20quality) [[4]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Vocation%20as%20a%20technology%20park) [[6]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=7) [[7]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit) [[8]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Residential) [[9]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=6) [[10]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=IMPLEMENTATION%20METHODS) [[11]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Zone%3A%C2%A0Urban%20Transformation%20Zone) [[12]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0ST%20) [[13]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Destination%3A%C2%A0Tertiary%20and%20Eurotorino) [[14]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=6) [[15]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index) [[16]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Ample%20territorial%20surface%20and%20strategic,position) [[17]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Parameter%3A%C2%A0Territorial%20Index) [[18]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=URBAN%20STANDARDS%20%28Art,56%2F77) [[19]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=In%20case%20of%20implementation%20with,a%20covenanted%20building%20permit) [[20]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=7%20floors%20above%20ground%20for,the%20remaining%20fronts) [[22]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Presence%20of%20specialized%20attractor%20poles) [[23]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=2) [[25]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040) [[26]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Maximum%2040) [[27]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=1) [[28]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Developed%20cycle%20path%20network%20along,Corso%20Principe%20Oddone) [[29]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Technological%20Innovation%20Hub%20with%20Environment,Park) [[32]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=4) [[34]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=5) [[38]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Exceptional%20growth%20in%20affordable%20housing) [[48]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=5%20floors%20above%20ground%20for,axis%2C%20and%20on%20via%20Savigliano) [[49]](file://file-Vzk6JtC5szgW8TtcQ7xPqE#:~:text=Percentage%3A%C2%A0Minimum%2040) SPINA 3 CORSO ODDONE.docx

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[[5]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=nuovo%20spazio%20culturale) [[24]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=TECNOLOGIA) [[30]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Percorso%20ciclopedonale%20%E2%80%9CTorino%20Citt%C3%A0%20delle,Acque%E2%80%9D) [[31]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Lotti%20Spina%203%2C%20O) [[33]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Reddito%20Media%20CAP%20entro%201,km) [[36]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Valore%20massimo%20di%20mercato%20,2%C2%B0%20Semestre%202024) [[37]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Valore%20medio%20di%20mercato%20,2%C2%B0%20Semestre%202024) [[39]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Realizzazione%20nuova%20Linea%20tramviaria%2012,ripristino%20ex%20linea) [[40]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Attrattivit%C3%A0%20per%20capitali%20istituzionali%2Fattrattivit%C3%A0) [[41]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Spina%203%20Corso%20Oddone%20MINACCE) [[42]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Sfruttamento%20dl%20Fiume%20Dora%20per,la%20produzione) [[44]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=crescente%20per%20investimenti%20privati%20e,fondi%20immobiliari) [[46]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=Riqualificazione%20ex%20Stazione%20Dora%3A) [[47]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=AMBIENTE) [[50]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=parte%20del%20DoraLab) [[51]](file://file-H727pJXUgH78uUz1Ly6gpG#:~:text=crescente%20per%20investimenti%20privati%20e,fondi%20immobiliari) REPORT FASE 1\_SECONDA BOZZA\_vers\_def\_con\_tavole\_SWOT\_compress (trascinato).pdf

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[[21]](https://www.condominioweb.com/determinazione-degli-spazi-destinati-a-parcheggio-in-condominio-il-criterio-guida-dalla-legge-tognoli.22324#:~:text=condominio%20www,Ma) Determinazione degli spazi destinati a parcheggio in condominio

<https://www.condominioweb.com/determinazione-degli-spazi-destinati-a-parcheggio-in-condominio-il-criterio-guida-dalla-legge-tognoli.22324>

[[35]](file://file-VFuZ5pct2YvabhtMgj6UBy#:~:text=Si%20osserva%20che%20alla%20fase,del%20valore%20posseduto%20nel%202011) Piemonte and Torino Residential Price and Index 2016-2024 (compressed).pdf

<file://file-VFuZ5pct2YvabhtMgj6UBy>

[[43]](https://mole24.it/2025/11/09/situazione-ex-westinghouse-torino-2025/#:~:text=Situazione%20Ex%20Westinghouse%20Torino%202025%3A,proprietaria%20dei%20terreni) Situazione Ex Westinghouse Torino 2025: lavori, tempi, progetti

<https://mole24.it/2025/11/09/situazione-ex-westinghouse-torino-2025/>

[[45]](https://www.unicreditres.it/news/come-fare/costi-e-tempi-costruzione-casa/#:~:text=Con%20queste%20cifre%20indicative%20si,800%20e%20i%201500%20euro) Costi e tempi costruzione casa - UniCredit RE Services

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