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CRITERIA FOR CITY NEIGHBOURHOODS' PLANNING AND DESIGNING IN THE CONTEXT OF THE SMART CITY PLATFORM

KRITERIJI ZA PLANIRANJE I PROJEKTIRANJE GRADSKIH SUSJEDSTVA U KONTEKSTU SMART CITY PLATFORME

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This research examines the smart city concept and explains how rapid advances in digital technology are reshaping urban planning worldwide. It recognises benefits such as better resource management, sustainability, greater energy efficiency, and reduced congestion, while noting unresolved risks to ecological viability, public inclusion, and personal privacy. The central claim is for human centred design that balances technology with resident wellbeing and place identity.

The research pursues four connected aims. First, it identifies gaps and biases in existing planning and design standards used in smart city contexts, many of which elevate technical metrics over social, psychological, and cultural needs. Second, it evaluates smart neighbourhood practice from inclusive and sustainable standpoints, documenting where privacy, accessibility, and cultural or psychological wellbeing are neglected. Third, it formulates revised criteria that reconcile innovation with human values, embedding mental health, community engagement, and equity into planning. Fourth, it insists on equitable access to municipal resources and services across income, age, ability, and location.

Methodologically, the research uses a purposive, multi stage case selection. From about two hundred European neighbourhoods, twenty were analysed in depth; five were then chosen through two step criteria and maximum variation sampling. Selection prioritised data sufficiency, maturity, scope, geographic spread, scale, governance models, and thematic focus. Cases with limited documentation or very narrow pilots were excluded, and close duplicates removed. Evaluation applies a six-domain smart city lens. Three primary dimensions frame the analysis: Smart Environment, Smart Living, and Smart People. Mobility, Governance, and Economy are treated as contextual facilitators. Objectives, interventions, outputs, outcomes, and evidence were coded to trace pathways from technology to lived effects. A critical review of global frameworks, including ISO 37122 and guidance from the European Union, the European Investment Bank, and the World Bank, finds strong attention to

governance, administrative efficiency, technical readiness, environmental indicators, productivity, and innovation, but weaker coverage of inclusion, equity, mental health, cultural continuity, and rights. Many schemes overprivilege instrumentation while underspecifying co-creation, stewardship, and long-term social resilience.

The research is organised in eight chapters. Chapter 1 situates the inquiry within debates on intelligent urbanism. Chapter 2 reviews trajectories, technologies, and challenges, using examples such as Barcelona, Singapore, and Copenhagen to show both promise and risk. Chapter 3 clarifies concepts, stakeholders, and models, noting concerns about surveillance and exclusion. Chapter 4 critiques top-down strategies and argues for hybrid, participatory planning. Chapter 5 assesses existing criteria and standards, highlighting blind spots around social experience and unequal access. Chapter 6 examines neighbourhood scale projects as laboratories that combine digital systems with green infrastructure and resident participation. Chapter 7 proposes revised planning and design criteria centred on inclusion, sustainability, governance, ethics, and privacy, with applications in Aspern, and Nordhavn. Chapter 8 sets out contributions and implementation pathways in scientific, professional, and educational domains, and redefines success in terms of people and environment.

Findings show recurring implementation gaps. Safeguards for privacy and data security are uneven; accessibility for underrepresented groups is inconsistent; and cultural or psychological wellbeing is rarely designed from the start. Where programmes succeed, they integrate green infrastructure, renewable energy, circular resource use, and inclusive mobility with local stewardship. Where they falter, technology advances faster than institutional capacity, and benefits skew toward advantaged districts. The research therefore proposes criteria that redefine what counts as smart: resident centred planning that pairs interoperable digital systems with place specific social programs; transparent data governance and clear opt-in consent;

metrics for equity, mental health, and cultural vitality; open standards and accountable procurement; robust participation and co-design; climate adaptation and nature-based solutions; and mobility and housing strategies that widen access without displacement. Mobility, governance, and economy are treated as cross cutting enablers rather than deterministic drivers. Policy and practice recommendations follow. Cities should establish participation baselines, require social impact and privacy assessments alongside technical business cases, and budget for ongoing stewardship rather than one-off deployment. Evaluation dashboards must include distributional indicators as well as averages. Procurement should reward modularity, re-use, and ethical data practices. Universities and professional bodies should integrate human centred smart urbanism into curricula so that planners, architects, and technologists can embed ethics and inclusion in projects.

The research contributes threefold. Theoretically, it reframes smart urbanism around human wellbeing and ecological integrity, clarifying trade-offs and offering shared language and structure for future studies. Methodologically, it demonstrates a comparative, mixed methods approach that links standards criticism with case outcomes through transparent selection and coding. Practically, it delivers criteria and guidance that city authorities, planners, and architects can use to design neighbourhoods that are technologically capable, socially inclusive, environmentally sustainable, and culturally responsive. Finally, the research argues for a shift from tech centric performance to people centred, equity aware, climate responsible urban intelligence. By aligning digital innovation with participation, ethics, and cultural context, smart neighbourhoods can move beyond pilots to durable value for residents, while universities help train the next generation to carry this approach into policy, practice, and education. The work also outlines a practical monitoring framework with clear indicators and responsibilities encouraging learning, transparent reporting and adaptive governance so that smart programmes stay accountable and resilient in time.