

PROVA ORALE – CONCORSO N. 2 UFFICIALI TECNICI ISTRUTTORI

TEST DI INGLESE

Prova 1

USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES

“Planning an urban area involves numerous processes, procedures, and analyses. It demands an extensive understanding of problems in both horizontal and vertical dimensions. Currently, a major limitation in urban analysis is the failure to embrace the vertical dimension of a city. Urban growth is increasingly occurring on the vertical scale, particularly in Asian countries where vertical growth is rapid. A two-dimensional (2D) plan of a city centre with skyscrapers limits the appraisal of the provision of (physical) infrastructural facilities.”¹

¹ Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.

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Prova 2

USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES

... “In practice, 2D plans hardly ever reveal the vertical volume of an area, which puts planners under severe imaginative strain when conceptualising a ‘mental map’. A planner’s analytical vision is significantly restricted by conventional 2D plans, the limitations of which become increasingly evident as cities grow larger and more complex. Generally, urban analysis is restricted to two dimensions, which means that it does not consider the growth and development of a city in three dimensions”²

² Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.

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Prova 3

USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES

... “Generally, urban analysis is restricted to two dimensions, which means that it does not consider the growth and development of a city in three dimensions. Urban planners are reluctant to use three-dimensional (3D) tools because of the complexity with regard to data integration and modelling, the cost, and the lack of appropriate skills available for incorporating 3D models into everyday planning processes. This compromises the efficiency and effectiveness of the prepared plans.”³

³ Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.

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Prova 4

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... “3D models have recently been applied to development in urban planning and design. ‘Digital information’ is translated into common graphical information. This graphical information creates an opportunity for urban researchers to visualise and explore urban characteristics in several ways, such as 2D (maps), 3D (built-form), or 4D (temporal) forms. For urban planners, there is an opportunity to become familiar with and integrate these tools into an efficient analysis, planning, and design process for urban spaces.”⁴

⁴ Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.

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Prova 5

USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES

3D Models in the Context of Urban Studies

“The current rate of urbanisation is massive, particularly in developing countries in Asia.

The pace at which Asian cities are developing is phenomenal compared with those in developed countries. Urban planners in these rapidly developing countries face a significant challenge when conceptualising development plans that match the current rate of urban growth. In cities such as Chennai (India), urban development plans are typically prepared and implemented manually, with little use of supportive planning tools such as computer-aided design (CAD) and GIS (Geographic Information Systems).”⁵

⁵ Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.

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Prova 6

USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES

3D Models in the Context of Urban Studies

... “The shortcomings of conventional techniques are evident in many metropolitan cities where the actual development has a temporal and spatial planning overrun. Urban planners are under pressure to integrate new tools and technologies into everyday planning. Any tools developed to assist urban planners must have a spatial context. Applications such as CAD (computer-aided design) and GIS (Geographic Information Systems) are the tools most commonly used by urban planners in these contexts.”⁶

⁶ Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.

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Prova 7

USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES

3D Models in the Context of Urban Studies

... “Recently, metropolitan cities in Asia have had greater vertical than horizontal development. Within this context, it is necessary to search for tools and techniques that could support the assessment of urban growth in the vertical dimension. This becomes inevitable within the context of the provision of physical and social infrastructure facilities. Concentrated vertical developments imply difficult planning characteristics, because voluminous activities must occur within a smaller spatial context.”⁷

⁷ Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.

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Applications of 3D City Models

“There has been a significant increase in the use of 3D city models over the last two decades. Currently, 3D city models are extensively used in various fields of urban studies. For example, in the visualisation of the urban setting, urban land use planning, 3D cadastral mapping, environmental planning and simulation, and when studying transportation, emergency response and the builtenvironment. Although the application of 3D models to urban planning is not new, their application to the analysis of micro-level urban problems is a novel research topic.”⁸

⁸ Chundeli F.A. “USING THREE – DIMENSIONAL VOLUMETRIC ANALYSIS IN EVERYDAY URBAN PLANNING PROCESSES”, *Applied Spatial Analysis and Policy*, 2015.