



# Planning Times

PEOPLE, PLACES AND POLICIES

• Issue 01 • April 2022



Keep up with the changing world of planning and shape the future of cities!

Planning Times is a magazine for students, professionals and researchers to open up unique and extensive knowledge and information about urban and rural areas.

**Your feedback is extremely valuable to us.** Please take some time to give us your honest comments about the magazine in the QR code link given on our Table of Contents page.

Thank you, and we hope you have a wonderful reading experience!



# OUR TEAM



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Founder & Manager

Urban planner turned commercial pilot and a tech enthusiast. When not in the cockpit, he likes to read books and explore the intricacies of search engines.



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An urban planner who is a strong believer in the power of quality research and enjoys working at the grassroots. She loves exploring new places, cultures, and landscapes.



**Nancy Grover**  
Associate Editor

She is an ambitious environment planner aiming to be more efficient and innovative by learning every new form of knowledge that comes by. She is sensitive to ethics and endorses team work.

The background of the page is a stylized map of a city. It features a dense network of grey lines representing streets and roads. Interspersed among the streets are various green shapes of different sizes, representing parks, green spaces, and possibly sports fields. There are also blue lines and shapes representing water bodies, such as rivers and lakes. The overall color palette is muted, with greys, greens, and blues on a light beige background.

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# About Planning Tank



Timeline



## Our Aim

Planning Tank aims to serve as a unified platform to meet all the requirements of the planning community. Our work and initiatives have a global impact and empower our users worldwide. There is a dire need to create, collect, organize and market information. We act as a centralized platform working tirelessly to achieve this. We provide one place for students, academicians, practitioners, professionals and urban enthusiasts. We bring the best of technology and educational resources, promote networking and increase awareness for Happy, Healthy & Sustainable Human Settlements. We witnessed a lack of information and materials on planning, resulting in difficulties faced by planners in finding the desired information. Planning Tank was therefore started with the vision of providing quality information on the multidisciplinary field of planning. We are committed to keeping the readers engaged. We follow the standards of research articles of adequate length (neither too brief, nor too detailed) and are driven by data and facts, which is perfect for planners.

## What makes us unique

Planning Tank is India's largest and globally one of the most visited Urban, Regional & Rural Planning platforms. Founded in 2013 to provide easy and immediate access to good quality information for students of planning and other similar fields, we realized that the problem was not specific to a city/ region/ country - it was a global issue. We are therefore aiming and working to provide quality resources and knowledge products on planning for people across the world. We cover the following aspects by various means:

- Information Resources for Urban Planners
- Urban Journalism
- Data Sources, analysis & presentation
- Geographic Information System (GIS)
- Academic Writing
- Environment & sustainable development

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Launched Planning  
Tank Training Portal



Mar 2021  
Planning Tank &  
NOSPlan MoU

# Urban Planning

## A largely unknown profession

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Urban planning is a lesser-known profession in the modern world. Yes, it is indeed a profession which remains largely unknown to the public and even to the concerned agencies. This is a major setback for the profession, and the gravity of the problem might not be reflected in mere words.

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While the terms “urban planner” or “urbanist” were never heard of in the past, it is a job that is getting more and more in demand these days. That probably has a lot to do with the fact that societies are realizing the importance of planning their cities before actually spending a lot of money building or rebuilding them. That is the reason why, even though old cities have their charm, there is something about the new ones that screams for efficiency and practicality. The roads are wider, there is more space for homes, the locations are well thought of, and the list goes on. Well, if you have been to one of those very organized cities, you have the urban planner to thank for it. Without them, the city would not be half as organized as it is right now.

### **The problem is the awareness gap!**

The well-known professions include doctors, lawyers, pilots, engineers, chefs, architects but not urban planners. This can be attributed to the less publicized profession and the absence of information about it from the textbooks provided to school kids. Neither do movies ever focused on this profession, nor any significant attempt was made to increase awareness about the same. Some have a vague idea about the professions and often confuse it with “Architecture.” Those who have a slightly better understanding of planning define it in their simplest words as professionals who put the right things in the right places by making master plans and policies.

There exists another group of people who think that the profession is similar to a wedding planner, event planner or just anything with which they can associate planning. People realize that planning is important, but not because of their knowledge about the profession, but because of common sense, as everything requires planning. Very few individuals (about a millionth fraction of billions of humans) outside the profession are aware of urban planners. Those pursuing planning have a hard time explaining what planners do because of the complete lack of idea about planning in the minds of people. Even after decades of the existence of this profession, it remains largely unknown.

**“My profession is still largely unknown to the general public & concerned agencies.”**

The tricky part is that it’s almost impossible to put Urban Planning in simple words or 2-3 sentences. Squeezing an enormously broad profession into a few sentences isn’t an easy task. When asked about what Urban Planners do, they tend to start with phrases like master plans, land use plans, zoning, policies & use other jargon. The listener becomes clueless about what is being discussed and loses interest. It’s important to be on the same level as to make others understand the countless things which planners do and are capable of doing. If a person is interested, then it’s a remarkable moment, and it makes you feel proud to explain your work. Planners do diverse work including data analysis & presentation, data mining, preparing good questionnaires for conducting various surveys, policy making, preparing different kinds of master plans and city development plans, land use planning, heritage & urban conservation.

Pete Sullivan, AICP, Senior Associate with Clarion Associates in North Carolina says “urban planning means making places better by putting the right things in the right place. It is an urban planner’s job to decide which things—like buildings, roads, and parks—should go in which places.” Planetizen provides an alternate but short & straightforward description of planning as “a professional practice and an academic study focused on the future of built environments and connected natural environments—from the smallest towns to the largest cities and everything in between.”

Planners can also be regarded as knowledge workers. A good number of planners work in academia, or balance academic work with work in the public and private sectors. As teachers and researchers, they have influence over students, practitioners and policymakers, and will often conduct the original research that influences planning policy and practice. It’s time that people know about the profession and the crucial role planners play.

# Urban Planning in India

## Lack of Planners & Educational Institutions

With a fabric measuring 3,287 million km<sup>2</sup> and 5,000 qualified town planners, India faces a cognitive deficit in the field of town planning. According to the Institute of Town Planning, India (ITPI) the country has around 600 districts, 8,000 cities and 4,00,000 villages against 5,000 qualified town planners. Despite urban planning being a pressing priority, the field is not given enough heed. The government's inattentiveness is not providing the field the attention it needs.

India, due to the ongoing urbanization and rapid growth of its population, demands expansion of its city borders. Millions of job opportunities created due to industrial growth have led the population of cities to protrude to an incongruous extent. The country's capital, Delhi, has witnessed an outburst in its population intensifying as high as 26 times than it was after independence. Mumbai over 6 times, Kolkata over 3. Bengaluru, being a newbie on the list, has experienced an outbreak 10-fold in its population; statistics put forth by News18 in 2019. The numbers are not expected to drop anytime soon.

Familiar with the actuality, by nine in the morning, thousands of vehicles line up on insufficiently broader roads, pacing towards their respective offices. A local train assembled of nine cars having a total of 876 seats carries more than 4000 passengers during peak hours. Calamities like floods approaching every monsoon, pollution making irreversible lung damage have been accepted as new normalcy.

The difficulty of finding a place to live in a metropolitan city is complained about and ignored. As a matter of fact, we run a struggling race for employment because there are significantly more people than jobs available. In accordance with an article formulated by Business Standard, we have 1.3 million students graduating each year with an employability rate of 47%. Sectors of pollution, infrastructure, overcrowding, disasters, housing deficiency, unemployment, economics, all root down to one issue that our cities are not planned well.

**About 34% of the country's population resides in urban cities, increasing exponentially by 3% since 2011.**

It is expected to expand even further by 4.1% until 2030, outlined by The Hindu news. With little resemblance of urban planning, our cities have ruptured with poverty, poor infrastructure and are oppressed by people in power. Basic utilities such as housing, clean water, transportation, sanitation are inadequate compared to the catapult of the urban population.

With a fabric measuring 3.287 million km<sup>2</sup> and 5,000 qualified town planners, India faces a cognitive deficit in the field of town planning. According to the Institute of Town Planning, India (ITPI) the country has around 600 districts, 8,000 cities and 4,00,000 villages against 5,000 qualified town planners. Despite urban planning being a pressing priority, the field is not given enough heed. The government's inattentiveness does not provide the field, the attention it needs.

Town Planning, also referred to as Urban Planning, City Planning, Spatial Planning, entails steering both existing and proposed development built with well thought planning. It is an interdisciplinary field whose roots lie in the fields of architecture, engineering, management, economics, geography and sociology. Cities are planned with high standards of living and working, sustaining economic growth, social development, environmental sustainability, better connectivity, fulfilling the core cause of physical and mental health and well-being. This inadequacy of urban planners in the country demands emphasis on the education of urban planning.

**"Education is not the answer to the question, education is the means to answer all questions." -William Allin.**

According to a report generated by All India Survey on Higher Education (AISHE) in 2019, out of 3,73,99,388 students enrolling for graduation, barely 0.01% students are enrolled in urban planning. The majority of candidates are clutched in the fields of arts, science, commerce and engineering being fourth on the list. The data manifests awareness to be spread about the field.

Nevertheless, a substantial increase of students enrolling in the planning programmes has been observed. The Ministry of Higher Education in the country has taken a prudent step by introducing Bachelor of Planning.

Both the programmes, Bachelor of Planning (B. Planning) and Masters in Planning (M. Planning) have been formulated to offer students specialization in a wide range of subjects, policies, analytics relating to human settlements. The curriculum necessitates intensive study, terminating with the completion of a research-based dissertation.

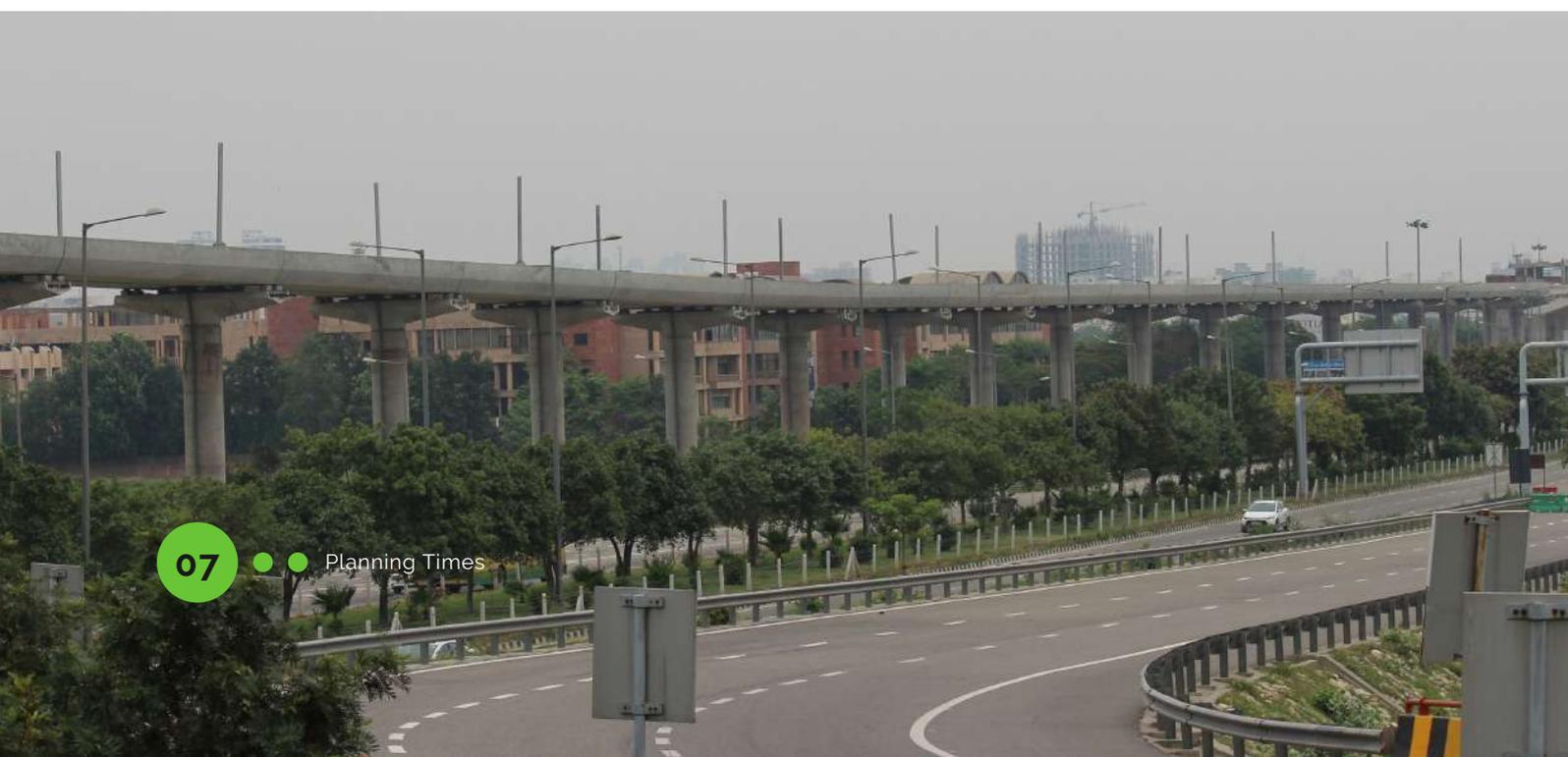
The initiative of starting B. Planning Exam proves to be a boon for the current imbalance of demand and supply of town planners. A 4-year full-time undergraduate degree to become an urban planner appears to be more preferable than having a master's degree after having a bachelor's degree in architecture or civil engineering.

The enrollment of students in B. Planning has grown from 169 in 2015 to 938 in 2019, whereas for M. Planning the numbers have climbed from 307 in 2015 to 1028 in 2019. The increment draws a positive yet deliberate image of producing sufficient urban planners for the future. The upgrade in the number of colleges offering degrees in the department of planning is inching. The current setup of both the courses helps the candidates to have critical thinking, collaborative, analytical skills with practical knowledge gained through on-site data collection and sound communication skills, which is boosted by presenting the collected data. The system calls for a supplement in the number of teachers with an increase in the number of colleges and candidates.

The Pupil Teacher Ratio (PTR) presented by AISHE has topped up from 21 in 2014 to 29 in 2019. A demand for faculty can be perceived from the report. To cater for the lack, some institutions have made pedagogy inclusive in their curriculum. The same strategy would have an obvious additional benefit if adopted by all the institutions.

While the country is steadily progressing in bringing the department of planning into the picture, the Massachusetts School of Architecture and Planning has introduced entrepreneurship in their curriculum. The program was launched to provide its students with a structured set of classes, mentorship, seed funding, research and links to the global network of the school's alumni entrepreneurs. The current system can acquire a similar programme for its students to bring in diversity in the planning syllabus.

It can be concluded that the education in the planning department is at a seed stage. The unawareness of the abandoned issues that our cities face, makes the profession unheard. Letting the youth know at an earlier stage about how the cities they live in have evolved or why they have a park in their neighborhood for them to play, would generate curiosity in young minds. One day, the seed will germinate, will turn into a plant and then into a tree for future generations to come.





# NOSPlan

NOSPlan, (an acronym for National Organization of Students of Planning) is a student-body organization, initially established in 1971 by SPA Delhi and IIT Kharagpur. Then later registered under the Societies Act, 1860 in 2008. It is a national-level organization, dedicated to developing the community of planning students all over India, to become better planning professionals of tomorrow. It acts as a platform for interaction between the planning students and the entire planning fraternity at large. NOSPlan Organization, to achieve its objectives, conducts different activities and events for students studying in any stream related to Planning.

## Aims and Vision

NOSPlan as an organization has broader goals for the development of the planning field in India, starting its work from the grassroots itself.

1. Driving improvements in the state of planning education in India.
2. To promote planning as a discipline and a field of higher education in 10+2 students.
3. To provide a platform for networking for all students of planning.
4. Creating better prospects for planning students after their academic term.

## What we do



Publications



Seminars



Collaborations



Annual Convention



National Council Meeting,  
2021-2022 at NITTE  
University, Bangalore

# Connecting the unconnected

## Urban Planner's Guide to Civil Aviation

You might think that the two fields have nothing in common, but both fields have a lot of linkages and practices to learn and adopt from one another.

Urban Planning, or more specifically, spatial planning, deals with two-dimensional spaces and activities on the ground, whereas aviation with an added dimension involves utilizing the airspace above the ground. While urban planners work to maximize the use of land resources by formulating plans and regulating the “development”, aviation is all about utilizing the airspace in the most efficient manner. In simplest terms, both sectors deal with efficient utilization of space. The utilization in planning is about all the activities and the further development of land, while aviation is about the transport aspect and its own future planning of air traffic above the ground. The efficient use of available resources for sustainable growth can be considered as a need of the hour for both sectors. The way both fields function remains very different. There are a few fundamental aspects which are very well worked out in aviation. The difference can be attributed to the limited focus area. However, things get complicated once we look into details. Urban planning, being a multi-disciplinary field, has its unique set of problems, but aviation, not being equally multi-disciplinary, has its own unique requirements which makes it dependent on a lot of other aspects. Thus, one being multi-disciplinary and the other being dependent, has a lot to teach and learn.

Optimum utilization of space remains the focus area in both fields. They struggle with space crunch, which might be a bit confusing as you may have come across vast parcels of land which are undeveloped. You will see an endless portion of unserviced land, however the real estate prices keep on hitting new highs. At the same time, you notice the endless sky, which gives the impression that the airspace is endless, however this is not true. The “usable” airspace still remains very restricted and while the human eye is looking at the open sky, we are often limited by height restrictions at which passenger aircrafts operate. While the land and sky are limitless, it's the “usable” part which is scarce. Serviced land requires heavy investment. Similarly, making airspace usable and accessible has its own set of challenges.

Both sectors need a high level of sophistication and need to make use of the best available resources. The best possible coordination and data sharing is crucial.

## Coordination & dependency

While each industry requires coordination, a much higher level is needed in planning & aviation. Irrespective of the scale of work (layout plan, master plan, regional plan, economic plan) the data requirements are huge in planning. On the other hand, aviation requires both static and real time data, such as information about airports and weather reports. Both the fields cut across various other markets, such as real estate, technology, business administration, environment etc. and thus, require a greater level of coordination with inherent dependencies. This problem of working and coordinating with different sectors is often met with additional bureaucratic and administrative challenges.

## Data collection and availability

Both domains require population data, policy papers, environmental data, weather, land pricing, and land requirements. But how that data is utilized varies. Planning data is heavily reliant on secondary sources. Plans are produced using information obtained indirectly from other departments. This is unfortunate, but true. However, the required data is not readily accessible and or it might not exist. In such circumstances, data gathering and creation is expensive and time-consuming.

Absence of data can stall the project and have a detrimental impact on the overall functioning. However, the specifics and usage of acquired data varies. Urban planning will look at the data as a whole and, from a larger perspective, however aviation requires a more business-oriented approach, thus identifying the potential customers. Also, aviation data requirements are very specific, such as the distance between origin and destination, fuel needs and availability, proximity to medical and emergency services, real-time traffic information, etc. Without data, an airplane can't take off.

## Data quality and freshness

It's rare to find a data collection agency. The data is updated at the discretion of the "other" fields. This causes delays or erroneous data for planning. But in certain circumstances, this is the only alternative.

The update frequency varies from days, weeks, months, years, and even decades. For example, traffic volume data is gathered monthly/annually based on the requirements and location. This collection is less tiresome. However, census data is updated every 5 years in certain nations, 10 years in most, and even more in others. If utilized carelessly, this fundamental demographic data becomes obsolete. The data gathered is also very questionable.

In aviation, acquiring critical operational data cannot be delayed. Most data collection occurs prior to a flight's departure. Operation success requires data collection and dissemination in near real-time. This collecting and sharing occurs both inside and beyond a region's borders.

Some data is updated regularly and must be verified prior to departure. There is a system of "NOTAMs" that are examined before every flight in case of abrupt changes. This ensures maximum safety. The data collection is costly due to the high accuracy level and the obligation of the data supplier.

## Land and Property Prices

Both urban planning and aviation are well known for creating disturbances in real estate. While aviation is a subset of the larger plans under urban planning, it remains one of the most influential factors in determining land prices. The different land use allocated by urban planners changes the value of land and thus consequential development. While the location of airports is strategically decided because of the need to have good accessibility and the future growth around the airports. This, too, has a direct impact on the land value.

## Administration & Bureaucracy

A powerful umbrella organization is essential for all companies and professions to function. They represent, legislate, and strive for the members' good! Nation-to-nation and even within-nation requirements and roles vary. To learn a new system, one needs practice. Various levels of regulation exist in certain countries, with varying degrees of effectiveness.

Some founding and old bodies include the American Planning Association (APA), Royal Town Planning Institute (RTPI), Indian Institute of Town Planners (ITPI), Nigerian Institute of Town Planners (NITP) etc. The governing bodies' powers differ. ISOCARP & Commonwealth Association of Planners can be considered as pseudo international organizations, but they fail to fulfill the criteria required to qualify itself as a true international umbrella body.

The International Civil Aviation Organization (ICAO) is the apex umbrella body for civil aviation. It is a UN specialized agency, established by the States in 1944 to manage the administration and governance of the Convention on International Civil Aviation (Chicago Convention). The rules framed by ICAO are binding for all members, although there exists the provision to adopt rules completely or partially, but in the case of partial adoption, the change from international practice needs to be informed so that all the countries have complete information about the standards and procedures being followed in other countries. Apart from a single governing body, all countries have their own organizations and concerned authorities dealing with civil aviation. Unlike planning, it is mandatory to have a competent authority which will represent the country at the conventions of ICAO and pass on the required information from time to time. These include the Federal Aviation Administration (FAA), Ghana Civil Aviation Authority, Director General of Civil Aviation etc. These further have their subdivisions and coordinate among a number of other bodies to make sure all the civil aviation operations go smoothly.



The absence of norms and reference in urban planning sometimes results in undesirable outcomes. Identifying the individual or an entity responsible for it is futile without a thorough evaluation. Most of the time, acceptable error levels and overall margins are lacking. This is exacerbated by the fact that the result takes years to manifest and the planning itself is subject to external influences. As such, it hinders issue identification and solution.

In aviation, reporting regulations are well specified. There is a clear categorization of reportable situations that guarantees clarity on what has to be reported and how. Upon receiving the information, the responsible agency goes to work and takes action. The regulations are well-defined, allowing for quick resolution of any reported problem.

Guidelines reign over acts and regulations in urban planning. There exists a lack of penalty, overlapping roles, administrative work and boundary issues. Further, many agencies are involved, making it impossible to identify the real accountable person/department. If the relevant individual is identified, the responsible authorities will decide what to do next based on the overlapping tasks or lack of a clear process. People become victims of faulty or ill-defined procedures and part of experiments since the process is open-ended.

Both sectors have their own feedback mechanisms for repairs or changes. This allows to cater for unforeseen circumstances and in cases when it is evident that the desired result is not achievable or continuing the ongoing work will have negative or catastrophic results. The rational planning model incorporates feedback and monitoring into the planning process.

This gave flexibility to a rigorous planning procedure whose consequences were only obvious when things went awry. These effects were often tragic, as millions of people suffered due to poor planning. This enhanced and quick correction was made possible by the advent and usage of technology.

### **So, what did we learn?**

Though you might find that some points being highlighted remain common to every industry, the underlying idea is to provide a basic start for the budding planners & professionals to connect & relate.

Various aviation and urban planning terminologies have been avoided for ease of understanding. To cover details, the sector needs to be divided into parts/ focus areas so that required comparisons can be drawn.

These include information about carbon emissions since aviation is one of the biggest contributors to GHGs, goals being set by aircraft manufacturers to reduce their carbon footprints, making more airspace available as the available airspace for commercial aviation is restricted by the air force due to various safety and security reasons which results in longer routes, fuel being used and the possibility of turning to hydrogen or organic fuel. Additional aspects are the navigational aspects which make use of GPS, GIS aided maps and location augmentation, terrain model as per WGS 84.

# Aerotropolis

## Airport Centric Cities

BY AAKRITI  
CEPT University

The initial idea of Aerotropolis was presented in the November 1939 issue of Popular Science by Nicholas DeSantis. The airport-driven economic development of airport cities was further taken forward by an air commerce researcher John D. Kasarda in 2000. According to him, airports have influenced urban development in the 21st century. This influence is in the same way as seaports in the 18th century, railroads in the 19th century and highways did in the 20th century. It is not how far, but how fast distant places can connect.

“Cities used to be almost exclusively destinations and airports solely places of departure. Now airports are becoming destinations, and cities places of departure as their residents and workers increasingly travel to emerging airport cities around the world. John D. Kasarda”

Cities in the past have grown around major transport hubs. The development in the 21st century is paving the way for cities to grow around airports. This trend of airport-centric development is not only increasing employment, but also shaping numerous metropolitan features.

**An aerotropolis can be understood as airport-centric development.**

This dispersed airport related development is giving rise to a new urban form called Aerotropolis. These are no different from traditional cities in the abstract sense (central city commercial core and commuter-linked suburbs), but the difference is just that the city core is the airport. The layout, infrastructure, and economy are centered on an airport which serves as a multi-modal “airport city” commercial core.



The airport is a multi-modal commercial core of an aerotropolis. It has accommodation, corporate suites, flex offices, business meetings, support services, retail and airline services. The terminal nexus consists of airline, shopping, dining, leisure and office accommodation. There is mixed use inside the airport fence. The connectivity in an aerotropolis is through airport expressway links (aeroplanes) and airport express trains (aerotrains).

The aerotropolis highway corridors and airport express trains effectively and efficiently connect the airport to downtown and major regional business and residential concentrations. Cluster rather than strip development is the key feature of development.

Major cities largely grew around seaports. Then urban development took place along rivers that formed the backbone of the industrial revolution in the UK and US. Railroads opened up the landlocked interiors of nations. Then, the expansion of suburban roadway systems created a fourth wave of urban development. Cities are now well into a fifth wave of transit-oriented development, where large commercial airports have become significant drivers of business location and urban economic growth. Four of the Fortune 500 and eight of the Fortune 1,000 world headquarters are located in Las Colinas, Texas, a suburb near Dallas airport.

Also, Hong Kong International Airport sustains Hong Kong Disneyland and Memphis International sustains New Songdo International Business District, both of which are sizable airport cities built from scratch over the last ten years.

Additionally, in 2010, recognizing the reality and potential, efforts were led to develop feasibility assessments for an Aerotropolis concept around Brown Field Municipal Airport in San Diego County, California. Then in 2011, the Ekurhuleni Metropolitan Municipality in South Africa officially announced its intention to transform the municipality into a functioning Aerotropolis.

Smart Infrastructure



Free trade Zones



E-commerce and distribution



Flex Tech



## Key elements of an Aerotropolis

Inter modal Freight Hub



Exhibitions and conference centers



Office parks and corridors



Residential mix-use



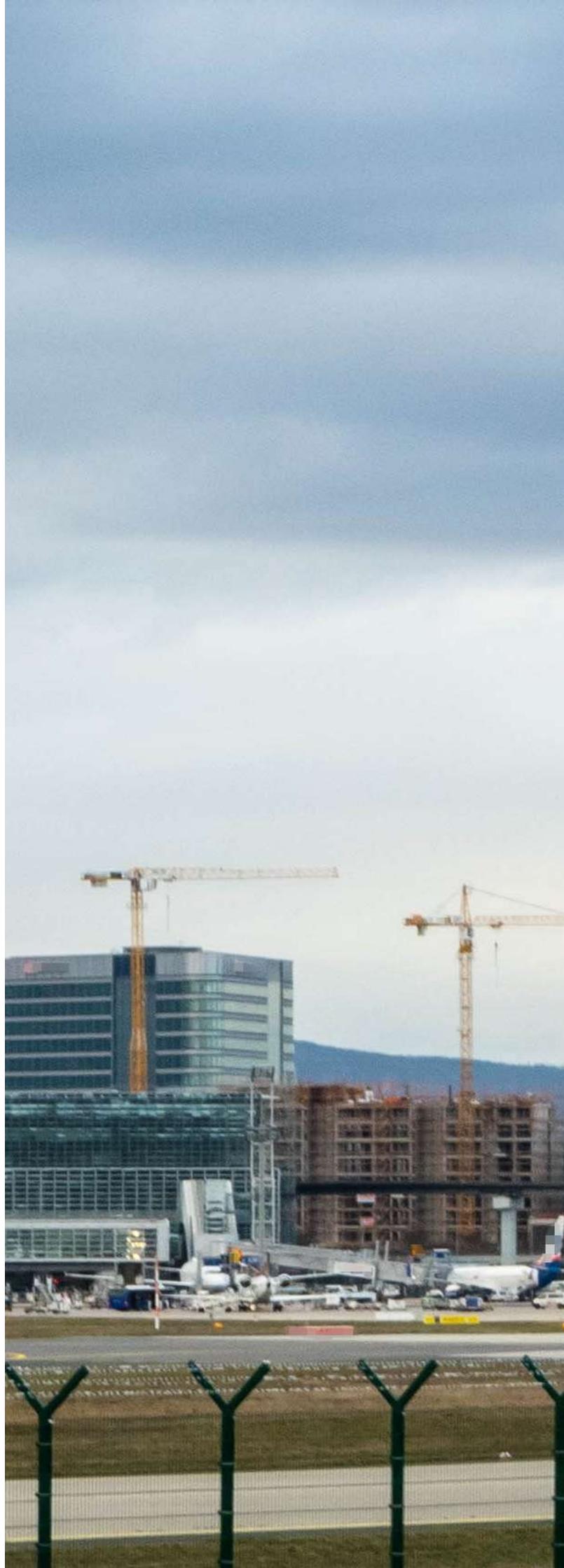
## Principles of Aerotropolis planning

- Businesses should be located in proximity to the airport based on the frequency of their use of the airport, to reduce highway travel and congestion.
- Establish design standards for airport area structures, travel lanes, and public spaces.
- Mixed-use residential communities housing the airport area workers should be located outside aircraft noise zones but offer short commutes and be designed to provide a sense of community along with basic institutional and consumer services.
- Airport areas with goods-processing activities (manufacturing, warehousing, trucking) should be spatially segregated from white-collar service facilities and airport passenger flows.
- Time-cost accessibility (airport city to be maximum 15 minutes from airport) between key nodes should be the primary aerotropolis planning metric rather than distance.

## Drawbacks of an Aerotropolis

While the aerotropolis concept has ushered in a new era of urban development, various realities surround it. The biggest downside of an aerotropolis is that it represents elitism. But it's not as if the other classes aren't expected to gain from the cities. Because an aerotropolis naturally segregates the poorest classes.

There is one more thing to consider while developing an aerotropolis. The fifth phase of transit-oriented development involves creating and sustaining communities around airports (after seaports, rivers, railroads and roads). So the idea is limited globally. This breakthrough will surely change the way cities are developed, but there are many other aspects to consider. There are many such arguments as to what should be done. But without a proper itinerary, a new experiment is bound to do more bad than good.



# Planning Tank

## Our verticals



### Planning Tank

<https://planningtank.com>

Our main website houses all the articles, and remains an entry point for all our verticals. We host a variety of educational and information content along with survey templates, quizzes and other types of content on our main website.



### Planning Tank

#### Job Portal

<https://jobs.planningtank.com>

Job Portal for Urban Planners. Our team looks for the most relevant and latest work opportunities from multiple sources, while providing information with proper links and sources for everyone's convenience.



### Planning Tank

#### Academy

<https://academy.planningtank.com>

To provide a much better learning experience and resources in a more structured manner, we are working with multiple professionals, organisations and students to bring home the best & refined learning resources for the community.



### Planning Tank

#### Discussion Forum

<https://forum.planningtank.com>

A platform with multiple use cases while fulfilling the need of a discussion forum. It acts as a forum, repository, reference document and a link amongst multiple other uses.





# The top 8 tools for better urban planning

BY NANCY GROVER  
Environment Planner

Planning is essential for urban development. It is the process of making long-term decisions about how a city should grow, in order to balance the needs of the city's current residents with its long-term goals. The process has many phases, which together make up an urban planning toolkit.

These tools are needed to support this process. They provide planners with information about population growth, pollution levels, traffic density, and much more. Such tools are helpful in producing spatial plans that work towards achieving broader goals for sustainability or reducing congestion.

Digital tools, like Spatial Databases, 3D Modeling, Remote Sensing, Virtual Reality are used extensively. We have tried to cover the top eight tools for our readers.



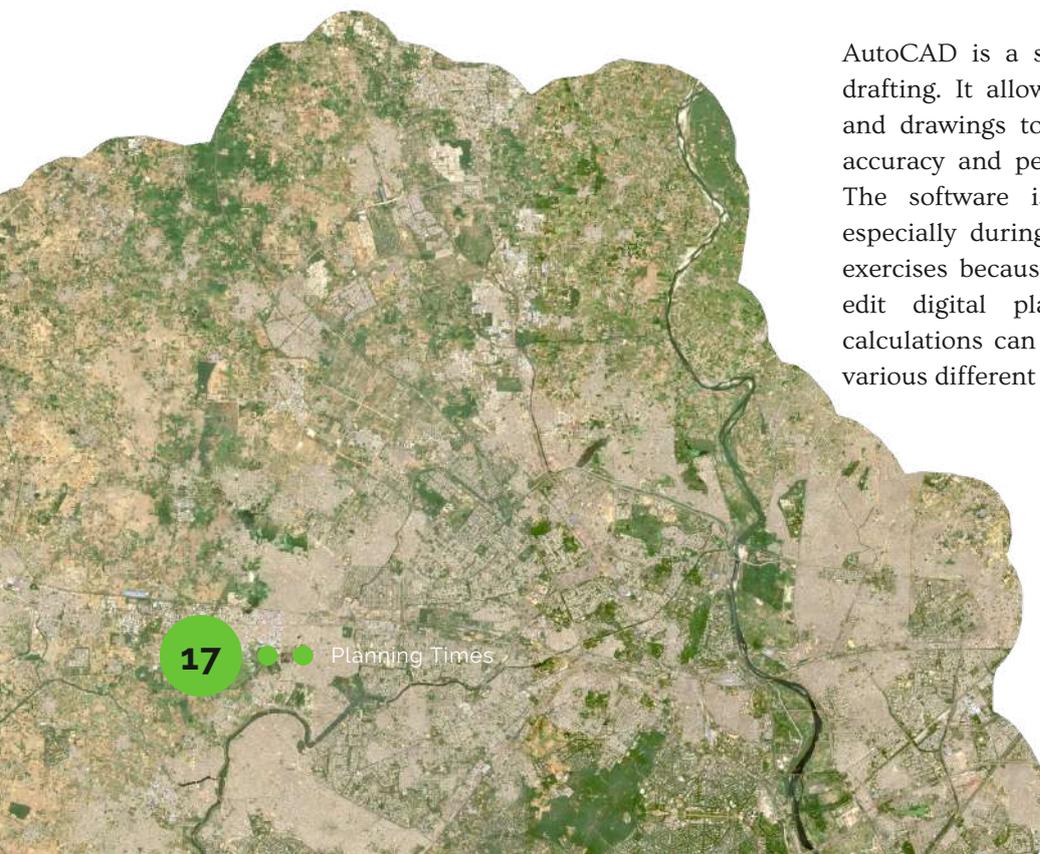
## 1 Geographic Information Systems (GIS)

It is a geospatial analysis system that integrates, stores, analyzes and presents all types of geographical information. GIS provides an operational framework for making decisions and taking actions. It is the perfect tool for any organization that is looking to make better decisions with data. Geospatial technology has now become the future of mapping, navigation, geography and geology.



## 2 AutoCAD

AutoCAD is a software used for designing and drafting. It allows a user to conceptualize ideas and drawings to the required level of technical accuracy and perform rapid design calculations. The software is of great help for planners, especially during site planning & transportation exercises because it allows the user to draw and edit digital plans quickly and easily. Easy calculations can be done for calculating land for various different land uses within the site.





### 3 SPSS or Stata

SPSS is a popular statistics program that helps with recording and analyzing data. It is a customizable software that allows planners to enter the exact data. While it has an interface that looks like MS Excel, SPSS has better data management capabilities and user-friendly interface, which makes SPSS an important tool in the field of urban planning because urban planners need to deal with large data at every stage of planning.

### 4 Google Maps

Google Maps is a free map service developed by Google. It offers satellite imagery, street maps, 360-degree panoramic views of streets, real-time traffic conditions and route planning for pedestrians and cyclists. It has been used in urban planning to help with various tasks such as identifying the location of the school based on the school's coordinates and seeing what is at a given intersection.

### 5 SketchUp

It works as an urban planning tool that allows planners to create 3D models of their city. This tool is used to create virtual environments where planners can work on city plans, buildings, streets, parks or any other area in their project. It typically runs on Microsoft Windows and Mac OS X operating systems to generate 3D graphics from a 3D model or from other kinds of input such as photos and videos.

### 6 Microsoft Excel

Microsoft Excel and Open Office Calc spreadsheets are powerful tools that urban planners use to assist with city development decisions. The software can be used to analyze data from a city's census, create an estimate of the future population, and project the demographics of a city. These tools can help planners determine where they should allocate resources, such as hospitals, parks, schools and more.

### 7 Tableau or Power BI

Data representation is one of the most important skills that every planner needs to master and Tableau is one such software which makes this job done easily. It is a data visualization tool used for reporting and analyzing vast volumes of data. It helps planners create different charts, graphs, maps, dashboards, and stories for visualizing and analyzing data, to help with decision making.

### 8 Reference Management software

Planners are involved in taking up research work, whether it is in academia or the professional field. This research is always incomplete without inserting proper references or bibliographies in the research document. Due to a large number of documents being referred to, the process of manually generating a reference list can be time consuming, but this can be easily done using Mendeley which is a reference management software.

# Case of Land Pooling Policy

## Changing land development and planning models in Peri-Urban areas

BY VIPUL KUMAR  
TISS Mumbai

Much of the urban transformation in major metropolitan cities of India is taking place on the peripheral/peri-urban boundaries of the city. The urbanization of agricultural lands has been identified as a key state strategy to undertake planned development in metropolitan cities and there has been a considerable shift in land development and planning models adopted for urbanization of these agricultural lands. Shifting from a state-led comprehensive land acquisition and top-down master planning model towards a more market-led and private sector led models such as land pooling, land re-adjustment, and town planning schemes, the state has minimized its role especially in land development. In this context, the article discusses the land pooling policy introduced by the Delhi Development Authority, by undertaking a case study of a peri-urban village called 'Neelwal Village' in Delhi.

Villages located in peri-urban areas provide a unique interaction of social, spatial, economic, and environmental mechanisms of a place. These villages, located on the periphery of a city, are engulfed within the urban boundary by declaring them as urban or development areas, even though there exists a rural character within the village. Due to poor implementation of Master Plan provisions and lack of foresight planning, the villages located in peripheral areas of Delhi saw unauthorized colonies and slums spiralling up.

As a result of the continuous rise in housing demand, influx of global capital, shift in agricultural patterns and a mismatch between housing supply and demand, agricultural lands surrounding these villages located on the outskirts of the cities are being urbanized.

DDA has come up with a market-oriented Land Pooling Policy as a planning tool to undertake development in 110 urban villages of Delhi. This marks a tremendous shift in the approach of DDA in land development from the earlier state led land acquisition policy. After 4 years of enactment of the revised policy in 2018, the development in the proposed sectors is yet to take place.

Village landowners are still apprehensive about giving their land under the land pooling policy for multiple reasons. The landownership pattern in these villages provides interesting insight to analyze the current roll-out of the policy.

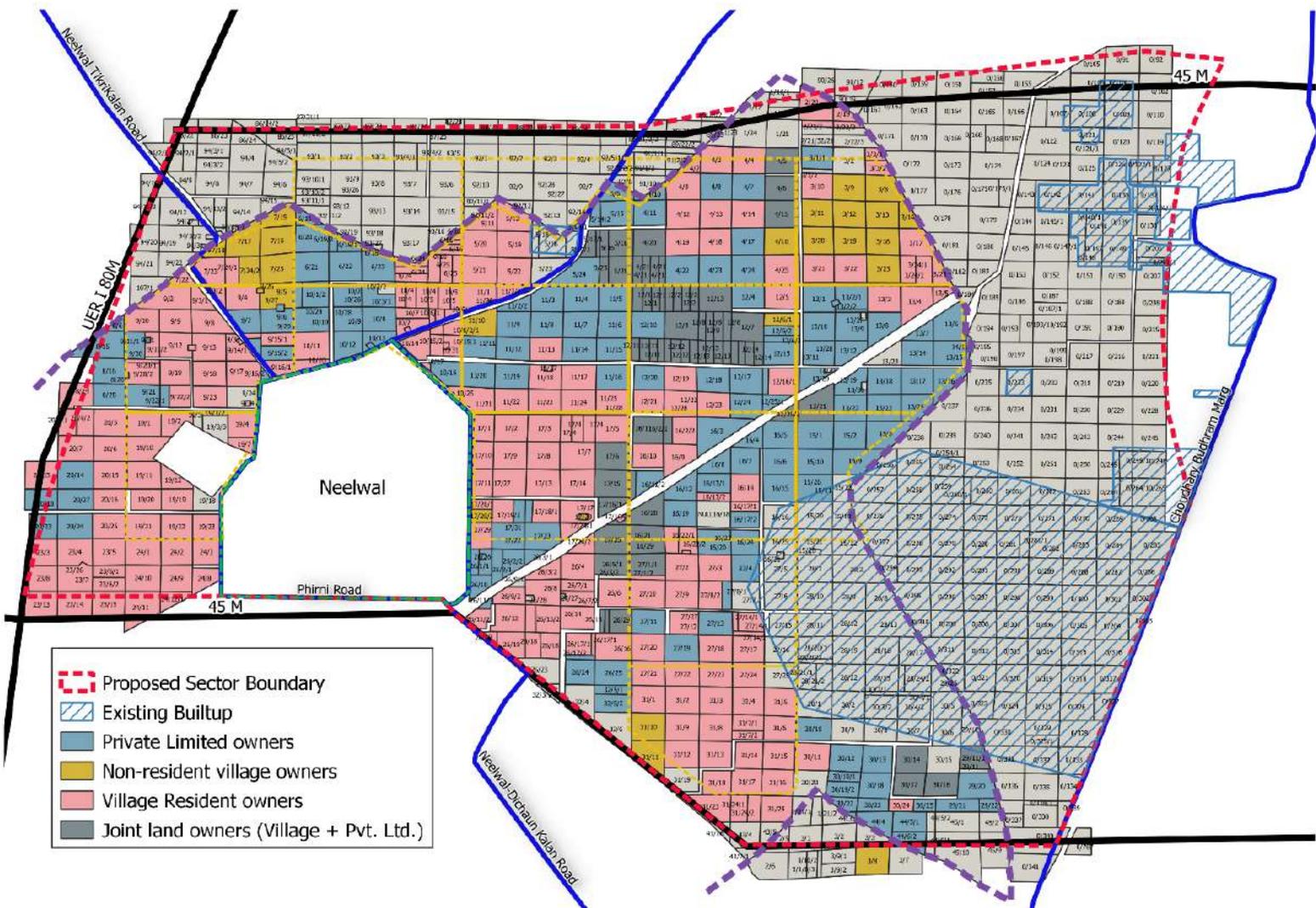
For instance, in one of the peri-urban village, i.e., Neelwal, a significant amount of land parcels are already been bought by private builders and developers ever since the land pooling policy was first rolled out in 2013. With the participation of private players in the land pooling policy, the village landowners constantly referred to the competition between them and developers and how the latter will benefit in the long run.

Village landowners talked about the same issues in detail and said, 'a landowner who owns land between 1-2 acres will either have to collude with a developer or form a group with other small landowners to be part of the consortium.

Developers will first develop their land rather than ours.' Further, the ambiguity over the implementation of the policy remains a cause of concern for landowners to register their land under the policy. The issue was highlighted by villagers in Neelwal. They reported that, 'there is an apprehension within villagers that, if it is directly registered under DDA, we never know when would the development take place and for how long the land would remain like this. How will we feed our children, what will we eat?.' Some of the village landowners have decided to not register their land under the policy because they are unclear about the policy provisions.

With a poor response from villagers in giving their land for land pooling policy in most of the proposed sectors, DDA is now considering amending the policy and necessary acts to speed up implementation of the policy.

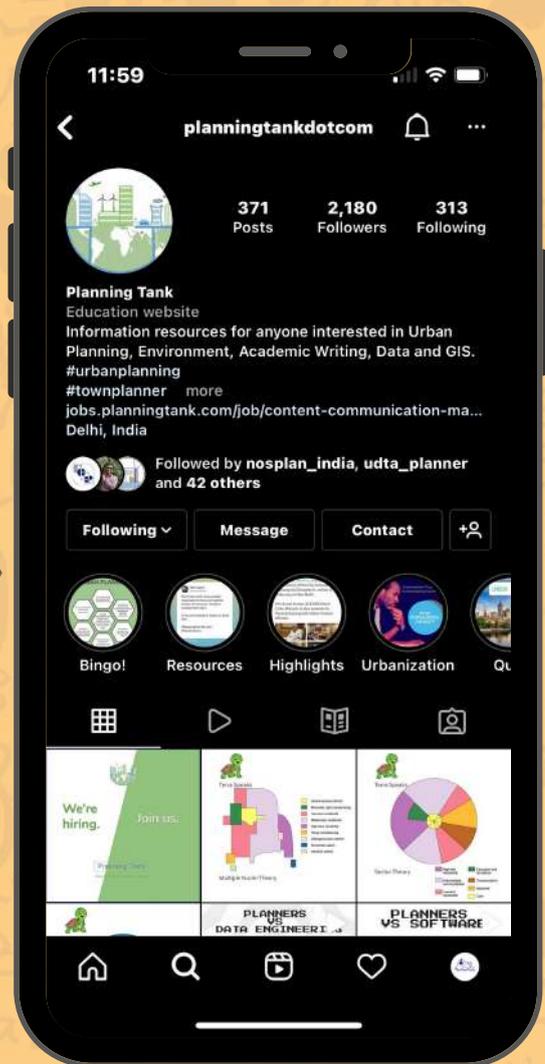
The villagers too, want to reap the benefits of future development in these areas, but not at the cost of their ancestral and agricultural lands. While speculation around land continue, and is further expected to increase, with each stakeholder expecting to benefit and make profit in the longer run, it is important to focus on providing inclusive, affordable and accessible housing for poor income groups, and even the small land owners inside the village. The State has to play a pro-active role in transparency, availability, accessibility, and delivering of information to all the stakeholders in order to achieve an equitable form of development.



# PLANNING TOONS

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At the beginning of thesis semester, a city be like...



What have you done to my hair?!  
I came to you for an urban look

Yes ma'am it is an urban look...  
I call it "The Urban Sprawl"

If planners  
became  
hairstylists

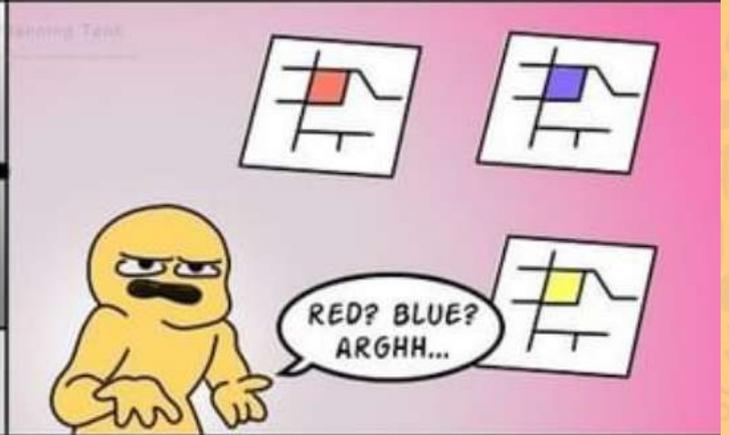


Primary data collection be like...

RECONNAISSANCE SURVEY



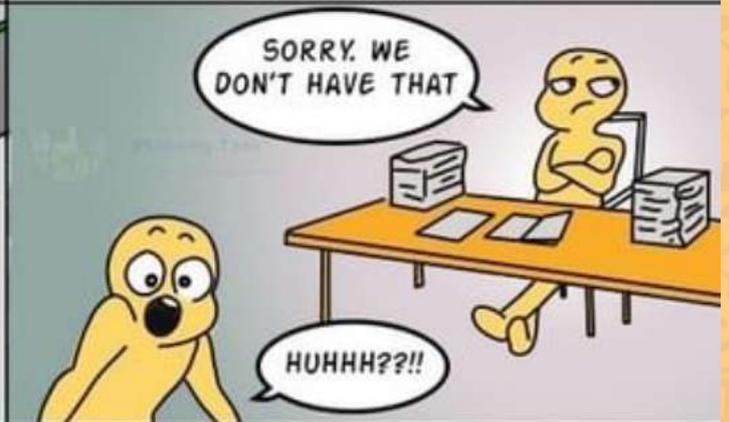
LANDUSE MAPPING SURVEY



TRAFFIC VOLUME COUNT SURVEY



COLLECTING DATA FROM OFFICES



HOUSEHOLD SURVEY



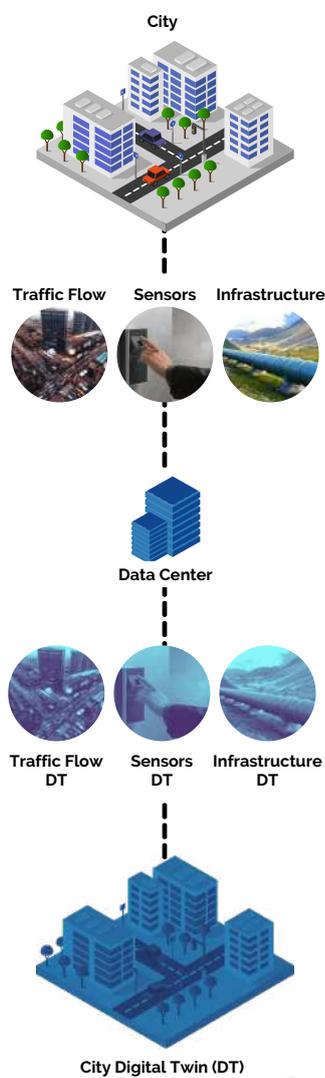
DATA FUDGING ENGINEERING



# Digital Twins

## The Digital Future of Cities

BY KARTHIK GIRISH  
Urban Innovation Lab



A Digital Twin (DT) is an integrated multi-physical, multi-scale probabilistic simulation of a complex object based on data from sensor networks and other sources.

A city's digital twin is a network of interconnected digital twins that represent various aspects of urban life. These digital twins can be synchronized with real-time data from various sources. A steady stream of data from various sources in a smart city's digital infrastructure is required for the digital twin to work properly. The digital twin of the city is a complex, integrated solution that can and should be developed in stages, by integrating specific solutions aimed at solving the most urgent problems. These solutions are now being implemented globally, not just in advanced metropolitan areas, but also in large and medium-sized cities. Using such systems and "Internet of Things" technologies allows for a new level of problem solving.

The image shown here depicts the flow of a digital city being prepared based on the different available data sources.

## Application for Indian cities



Pollution control through impact analysis



Microclimatic weather forecasts with sensors



Analyze energy consumption patterns



Smart systems for irrigation



Waste removal and recycling scheduling



Improving road and traffic scenarios



Surveillance and sensors for crime-tracking



Monitoring wear and tear of infrastructure

## Layers Required to Develop a Digital Twin City

**LAYER 5**  
Simulation of all layers

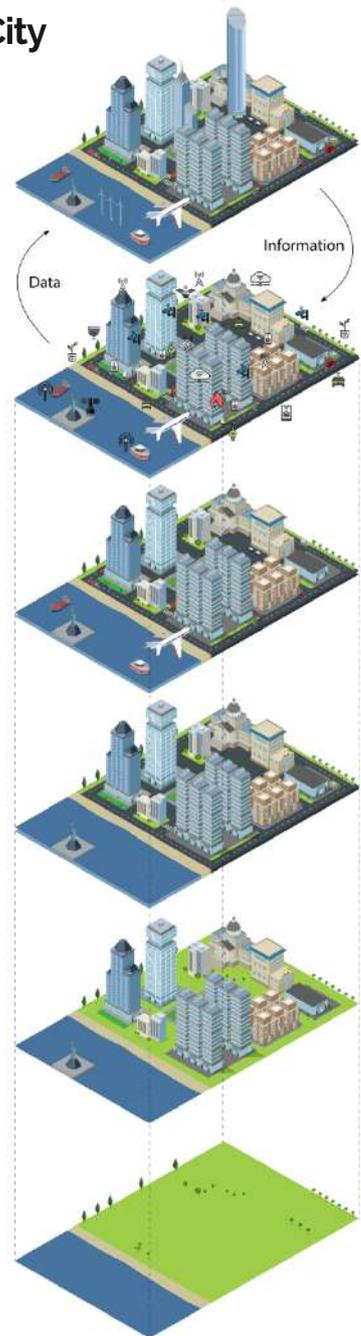
**LAYER 4**  
Digital layer for data collection and monitoring

**LAYER 3**  
Movement of goods and people

**LAYER 2**  
Basic structures and facilities

**LAYER 1**  
Existing Buildings

**LAYER 0**  
Terrain and basic information



SOURCE: White, G., Zink, A., Codecá, L., & Clarke, S. (2021). A digital twin smart city for citizen feedback. *Cities*, 110, 103064.

# The Planning Market

## What is the market value of a planner?

### BY THE PLANNING TANK TEAM

"Urban Planning" - a widely neglected and unknown profession, yet the one that shapes our cities and everything beyond. We may often talk about government policies affecting the poor and the plans to expand the scope of infrastructure in Indian cities, but we forget the driving factors. Urban Planners suffer the most ignorance. When it comes to the market, there is a lack of awareness and job opportunities. To add to the misery, the constant efforts of urban planners are backlashed by the masses due to the "time" that entails bringing about a change. All of these puts a question mark on the real value of Urban Planning.

Are you an Urban Planner? Do you practice in India? Which government authority are you associated with? How long have you been practicing? What are the projects that you have been associated with? - These are some of the major questions that set the stage in determining an urban planner's market value in India. The longevity, the works, the organizations bring about the demand of particular people in the profession. And everyone else (like any fresh graduate or any entrepreneur) gets pushed into the hindsight. A job requires experience, and experience is only possible with a job. How to sell urban planning as a product? So, the questions linger on, and remain unanswered (and probably, unanswerable).

## The Professional Viewpoint

In an attempt to explore more about this topic, we talked to various professionals and students within the discipline. We first approached certain practicing professionals and posed this question to them. We tried to understand how the market changed the initial expectations of those in the market right now, and how the professional life in our discipline portrayed various challenges and opportunities to them. The insight provided by these professionals will help to get a lot of clarity on this topic.

### Arathy Gopal

Assistant Professor of Architecture  
School of Planning and Architecture, New Delhi

Being an Architect who has done her PG in Planning, I had always thought that, other than the very few courses that we study, there is no real awareness of planning as a discipline in our UG course curriculum. Despite that, many of the job openings in the planning profession still mandate a B. Arch/B. Tech (CE) along with PG in Planning to get hired as a working professional. Having taught B.Planning to students, I have had an opportunity to be amazed by the level of exposure these students get regarding the discipline at the UG level. It is a pity that the undergraduate degree of B.Planning is grossly undermined in the market. Working in the field, I feel that it is time, students, faculty, and bodies like ITPI to work together towards letting Planning organizations realize the worth of this UG degree. And as with any other course, the course curriculum should be strengthened with more activities to improve entrepreneurial and leadership skills, which eventually will make the students good working professionals.

### Harpal Dave

Asst. Town and Country Planner in TCPO  
MoHUA, Government of India

Market value is a bit subjective to determine as value changes with time, place, and the urgency of the requirement. Further, where the graduates work for organizations ranging from NGOs to the Big Four, the compensation variation is immense.

A fresh graduate with the right skills and the willingness to adapt, learn, and work in teams, should expect anywhere between 28 to 40 K per month. Compensation generally depends on the type of projects that an organization is handling; purely commercial, research, not-for-profit consultancies, etc. So, the above figure should be looked at from that perspective. Further, along with the compensation, one should also see how an organization would help him/her grow professionally by enriching professional experience and expanding their network amongst the right kind of people. This leads to bountiful growth in the medium to long term; then, the initial compensations are well forgotten. So, a medium paying job with rich potential for growth in the long term may prove more beneficial that way.

### Riya Gupta

Department of Town and Country Planning  
Government of Punjab

Here are some tips for students preparing themselves to come into the world of practice.

- A greater interest in infrastructural know-how in conjunction with the theoretical planning concepts that come in handy while making decisions. This is not because of the profession being hijacked by civil engineers, but also due to the inter-organizational practices, that keep things moving.
- More attentive towards the real estate aspect of urban landholdings, for the anticipated “change” that is romanticized in much of planning education, is reified only upon a manifestation of a handsome remittance for various stakeholders.
- Shown more curiosity in the workings of Planning Offices, especially in terms of tasks involving more of public dealing for once, other than those akin to the laborious studio exercises of Plan Making – for in aggrandizing the latter, howsoever necessary, the former gets noticeably undermined.

## Vidushi Bhatt

Urban Planner

There are various fields of expertise for a planner. Planning might not be identified as an individual trade, but its various facets fit well with several others. Each of these has a unique market narrative, limitations, and progress curve. Fields like transportation and real estate are deemed to be more paying than those related to the social sector but have limited scope for exploration. Policy, for example, has a static curve until one establishes themselves and breaks through.

Method of practice refers to how you choose to manifest your field of expertise. It may include consultancy, research, academia, or practice. These modes may coexist and also change for an individual over time. A healthy and rounded professional can tactfully switch from one to another, feeding the learnings from research into practice, or consultancy.

## Expectations of Planning Students

We asked the students to give us their expectations/ ideas/ views about the B.Planning course; what made them choose the course, what were their expectations, and how well were they met.

### Adarsh Ajikumar, SPA Delhi

As a science student, I was expected to do Engineering. But then, while applying for JEE, I saw this course (Bachelor in Planning). I looked it up on Google out of curiosity and found it quite interesting. The course is so broad that it touches many parts of the academic.



### Aman Kumar, SPA Delhi

My interest in this field started when a special exam for B.Planning started in JEE. I researched it and learned that it is widely a study of urban and rural planning. In my opinion, what this means is that we decide the very place where the architects and engineers work, and this is why I entered this field because I will have the satisfaction of helping people.

### Gaibul Singh Bhullar, SPA Delhi

The power of a planner comes from the laws. I want to be an anonymous superhero and prepare cities and countries against disasters.



### Akshita Garg, SPA Delhi

In my view, planning was architecture but on a larger scale and a bit more theoretical. Now that I am studying it, I realize that it is more than just making maps. This course spread across various disciplines that teach you how a region is planned and maintained, and I am honestly finding this very interesting.

### Saksham Mishra, SPA Delhi

I decided to pursue this course with the expectation that I'll have all options open after my bachelor's, including MBA, M.Planning, or UPSC. I've realized that these options will be available to me, and hence I'm satisfied with my decision.





Students who have gone through four years of the B.Planning course have come to realize some things when applying for jobs, and about the marketing of our discipline while pursuing a higher degree.

ISHITA SARASWAT  
URBAN PLANNER

"I must admit that, knowledge-wise, I do not regret studying the course at all. But now, I am worried about what will happen when I step out after my graduation. B.Planning is a multi-disciplinary course in a true sense and has introduced me to so many knowledge domains. The course was never marketed properly enough to create jobs and awareness for B.Plan graduates. The whole notion of planning is still limited to just a post-graduate specialization in India. The industry is yet to consider the potential of B. Planning. I find myself capable enough to do things that planning professionals are expected to do, yet it would be difficult for me to sustain without a master's specialization. Simultaneously, there needs to be some updation of the course curriculum to match the industry needs."

VIPUL KUMAR  
URBAN PLANNER

"Having completed my B. Plan from SPA Delhi, my experience at TISS Mumbai has been enriching. A fresh planning graduate has a lot to offer to society because the skills gained, and the understanding developed during the 4-year course is commendable."

AAKRITI  
URBAN PLANNER

"Being new to the profession after freshly graduating with the degree - I had certain expectations. So stepping down at a concrete platform right after college has not been an option. A Master's course became the only way out for me, as no one in the industry seemed to pay any heed to an inexperienced B.Plan student."

## So, what is the market value of a planner?

Planning is one of the most promising professions in our country. When you call yourself a planner, your role is to tackle some of the biggest challenges in our Indian cities. Challenges range from basic requirements, like inaccessibility to drinking water and proper sanitation facilities, to more complex issues like improper land use distributions, lack of environmental spaces, and inefficient governance, to issues that contribute to global matters like urban poverty and climate change. B. Planners are trained to analyze and propose solutions to such issues. They acquire a lot of technical and professional skills that enable them to handle almost all city-related problems that exist.

But today, B. Planners are not getting the recognition they deserve. The Indian market has not yet noticed the capabilities and skills of a B. Planner. Somewhere along the timeline, the course curriculum was not marketed properly and lacked advertisement. You are still expected to have a postgraduate degree in Planning to prove your worth as a competitive and able professional.

As a student, you can take the lead and prepare yourself better for the market. That is what we encourage you to do! Increase your self-worth as a professional planner.

There is a very good understanding of what the market needs right now. The importance of Urban Planning, Environmental Planning, Regional Planning, and even concerns about privacy and data sharing by the government are highlighted in almost every urban and rural area.

As some professionals above have mentioned, the closer you are to what the market demands, the better your value. And it's not that your value as a planner is determined purely by monetary benefits, but the value of a planner also consists of increased exposure, experience, and growth potential.

**As aspiring planners, we believe that the spotlight that we deserve is near. It is only a matter of time, where we, the B. Planners, will be recognized for our true value.**



# Hey There Readers!

**Do you have something that you would like to contribute to our magazine?**

Be it articles, illustrations, puzzles or even photographs, our magazine is always accepting content from our beloved readers! If you would like to showcase your content in our magazine, you can email it to us at [content@planningtimes.com](mailto:content@planningtimes.com)

## Articles



We feature around 8 - 12 articles in our magazine. If you have an interesting piece you would like to share with other readers, you can send them along our way!

You've seen our stock photos right? They're alright, but not great. And we know a lot of you have galleries of good pictures. Our magazine would love to showcase some of your amazing clicks.



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We love to make our readers enjoy reading articles, while also hacking their brains to solve interesting puzzles. Don't hesitate to send your brain twisting ideas!

Are you an organization willing to step into the development sphere? Well, worry not! Contact us to brand and advertise your product/organization to our readers.



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## Illustrations & Toons



We want to put some of the readers' illustrations and drawings throughout the magazine (front and back cover included!). Send them and let us know where you would like it to be placed.

# Planning Overseas

## Guide to Masters Programmes

BY ISHITA SARASWAT  
HBSS Connect Corp.

Planning Overseas is focused on generating awareness of Masters courses offered by non-Indian countries for urban planning and allied fields. The information that you see here has been collected from official university websites, and the calculations are based on approximations and rounding-off of values sourced from the respective college/university websites. We hope this brings clarity to your choice of opting for planning and allied courses outside India.



### National University of Singapore

**Location:** Queenstown, Singapore

**Course:** Master of Urban Planning (M.Plan)

**QS World University Ranking:** 11

**Duration:** 2 years

**Total expense\*:** ₹ 70 lakhs

The programme is a two-year, full-time, multidisciplinary programme, and is a joint initiative of the Department of Architecture and the Department of Real Estate, with additional contributions from the Departments of Geography and Sociology, and the Lee Kuan Yew School of Public Policy.



### Cornell University

**Location:** Ithaca, USA

**Course:** Master of Regional Planning (M.R.P.)

**QS World University Ranking:** 21

**Duration:** 2 years

**Total expense\*:** ₹ 1.3 crores

Cornell University has been offering coursework in city and regional planning since 1935, and offering degrees in planning since the 1940s. The Department of City and Regional Planning (CRP) offers several options for graduate work in city and regional planning, historic preservation planning, regional science, and studies in real estate.



### **Massachusetts Institute of Technology**

**Location:** Cambridge, MA USA

**Course:** Master in City Planning (MCP)

**QS World University Ranking:** 1

**Duration:** 2 years

**Total expense\*:** ₹ 68 lakhs

The Master of City Planning (MCP) degree is a two-year accredited degree program, offered by the Department of Urban Studies and Planning within the School of Architecture and Planning. The two-year MCP program emphasizes the mastery of the tools necessary for effective practice, and is therefore distinct from liberal arts programs in urban affairs.



### **University of British Columbia**

**Location:** Vancouver, Canada

**Course:** Master of Community and Regional Planning (MCRP)

**QS World University Ranking:** 46

**Duration:** 2 years

**Total expense\*:** ₹ 63 lakhs

Founded by Dr. H.P. Oberlander in 1951, the School of Community and Regional Planning (SCARP) is one of the oldest planning schools in Canada. The MCRP program offers an innovative curriculum that draws upon the expertise of SCARP faculty as well as practicing planners.



### **Columbia University**

**Location:** New York, USA

**Course:** Master of Science in Urban Planning (MS)

**QS World University Ranking:** 19

**Duration:** 2 years

**Total expense\*:** ₹ 1.5 crores

The Master of Science in Urban Planning is a two-year accredited professional degree. Our program takes a comparative, global perspective to urban planning, centering social justice and critical practice, and connects the built environment with analysis of socioeconomic and political conditions to inform planning practice and praxis toward social, racial, and climate justice.

\*Tuition and application fees + Average living expense + Average travel cost

# Info-graphic Guides

BY PRABHAT YADAV

Meinhardt Singapore Pte Ltd

Hey there readers! My name is Prabhat, and I have some interesting info-graphics to share with you to guide you through your planning thesis. The two timelines have been prepared based on "my" experience during the Bachelor of Planning tenure in School of Planning and Architecture, Delhi. It may or may not guarantee a good GPA, but it will definitely contribute towards building an outstanding portfolio and preparing budding planners for the competitive market after graduation.

It is not necessary to follow the same as mentioned in the timeline, changes can be made as per person's interest and opinion. I've tried to condense my knowledge, experience and, most importantly, mistakes committed during the course.

Bachelor of Planning is a four-year curriculum that educates pupils social science and computer skills. It is a relatively new degree compared to Architecture and Civil Engineering. Professional planners with significant software experience are in great demand (AMRUT, Development Authorities, Consultancies, CSR, Education Sector). The Bachelor of Planning programme comprises studies and studio projects, as well as market needs and skills.

Info-graphics that indicate how to maximize college tenure have been designed, taking into account market demand and the considerable initial investment necessary. Working on studio projects involves a lot of time, money, and effort, as well as learning new technologies that may be utilized in competitions, events, forums, and other initiatives that help build relationships and monetize.

## Info-graphic: Thesis Tenure

Before the beginning of Thesis (including dissertation) tenure, one may explore the following aspects for a clarity of thought regarding selection of topic. The tasks mentioned below may help in zeroing down to the spectrum of aspects, from which the Thesis topic may be chosen.

- **Alumni Opinion:** Exploration of opinions and experiences of Alumnus who are placed in the Market, to get an understanding of aspects that are relevant in contemporary scenario. The pros and Cons of Subject Arena should be well known before beginning the work.
- **Market Scenario:** Understanding of Market Scenario is a critical task. One needs to make note of relevant demands and needs in the profession after graduation. One can streamline their work with the relevant aspects and think of career prospects in the particular field.
- **Future Prospect:** As a year is spent in preparing of a full-fledged Thesis, it is important to explore the future prospects from the work. For example, publication, preparation of project, for post-graduation, use in any competition, etc.
- **Aspect Spectrum:** Not necessarily zeroing down to the thesis topic, but at least a spectrum or arena in which one is planning to work should be finalized.

Main objective of preliminary research should be to identify the niche, in order to get an idea about the value of the proposal.

### ZONE 1

All the respective factors from each aspect have been allotted a unique code that represents the same. For E.g.: Code for the factor "Formalized Approach" is "F", Code for In Midst is "I", etc. The idea is to differentiate all the students based on their respective approach and factor selection.

There is a possibility of outliers too. Each person takes up/should take up working on their thesis at their own capacity, pace and way of implementation.

Aspect 1: Approach Selection: It defines the motivation and purpose with which a student begins his/her thesis tenure. Factors for this aspect are Formalized, In Midst, and Casual)

Factor 1: Formalized: represents the approach wherein the decided thesis topic or arena is market inspired, future prospect inspired or back experience inspired.

Factor 2: In Midst: May or may not streamline the arena chosen for thesis in Professional Practice.

Factor 3: Casual: Just for the sake of finishing the work and getting over the task of completion.

Aspect 2: Correlation: It defines whether there has been any correlation between Thesis spectrum/topic chosen and Studio work undertaken. Factors for this aspect are Correlated Studio Aspect and Diversified Studio Aspect.

Factor 1: Correlated Studio: worked on Studio aspects that correlates with Thesis topic/spectrum chosen for research.

Factor 2: Diversified Studio: have never worked on Studio aspects that correlates with Thesis topic/spectrum chosen for research.

Aspect 3: Internship: It defines the correlation between two internships (as part of curriculum) and Thesis spectrum/topic chosen. Factors for this aspect are Both 1 and 2, Any of 1 and 2, and None.

Factor 1: Both 1 and 2 defines both internships were done in correlated thesis topic.

Factor 2: Any of 1 and 2: any one of 1st and 2nd internship was done in correlated thesis topic.

Factor 3: None of the Internships were in correlation to the thesis topic.

Aspect 4: Guide: It defines the permutation between Thesis Guide, and Co-Guide with the Student. The Aspect of Guide plays a major role in structuring the overall work. Factors for the Aspect are Favorable and Unfavorable Guide.

Aspects include Approach Selection, Working on Studio aspects, Internships undertaken, and Permutations with Guide. Every student may select the sample set based on their Idea and Situation. A combination of all the factors mentioned brings out Individual Sample, based on which Preferable timeline can be chosen. Hence, the ideal factors for the students are Formalized Approach, Correlated Studio Aspect, Both 1 and 2, with Favourable Guide. Therefore, the sampling comes out to be F(C)BF.

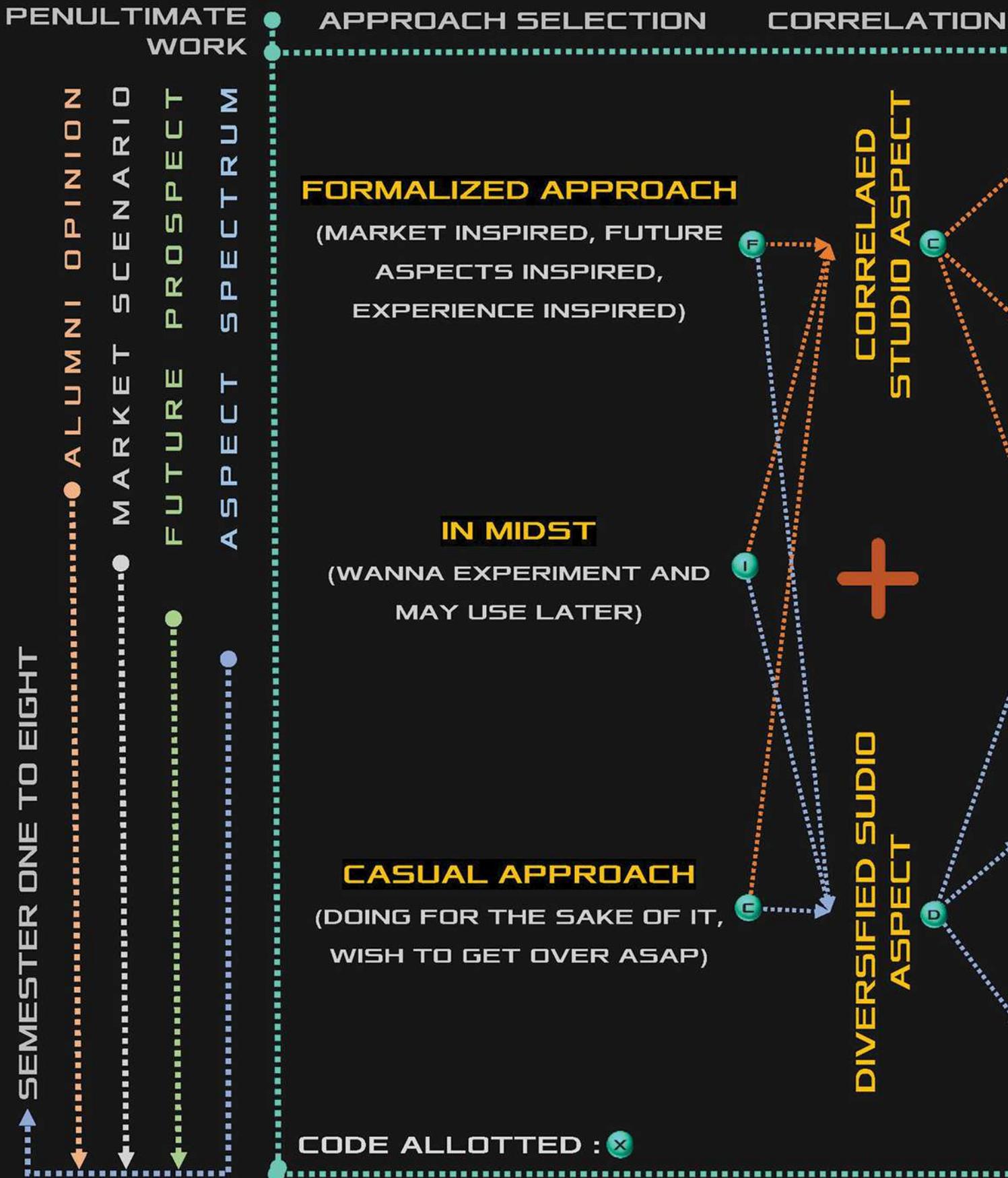
## ZONE 2

Based on the sample one falls in, there's 'Preferable Activity' focus in Zone 2. The graph incorporates major focus in terms of time, work and efficiency in the respective activities mentioned. Activities mentioned in the Y axis of the Timeline are based on Thesis tenure segregation as per college schedule of reviews, which incorporates Literature survey, Data Collection, Analysis, Proposal, Co-Curricular.

For example, a student lying in the sample of F(C)AF lies in Sample 2, hence, he/she should devote maximum time, energy, efficiency, toil of the research tenure in perfection of Literature Study, followed by Data Collection, Analysis, Proposal and finally Co-Curricular. The larger area devotion towards one of the Activities doesn't mean non importance of other activities. Idea is only to emphasize more on a particular activity in order to use the results and learning for future.

A very important aspect of not only the Thesis tenure but the whole of Bachelor of Planning course is the composition of sheets. As per my experience, the preferred composition of sheets wherein content and theoretical dissemination is incorporated can be  $(33 \times 3 + 1)$  that includes 33% Talk about Objectives framed, 33% is the Answering of Questions framed, 33% is to set the game for upcoming content. Finally, 1% goes for Designing. Overall, it's a niche that you have to identify during the Literature study that needs to be fulfilled during the Thesis tenure.

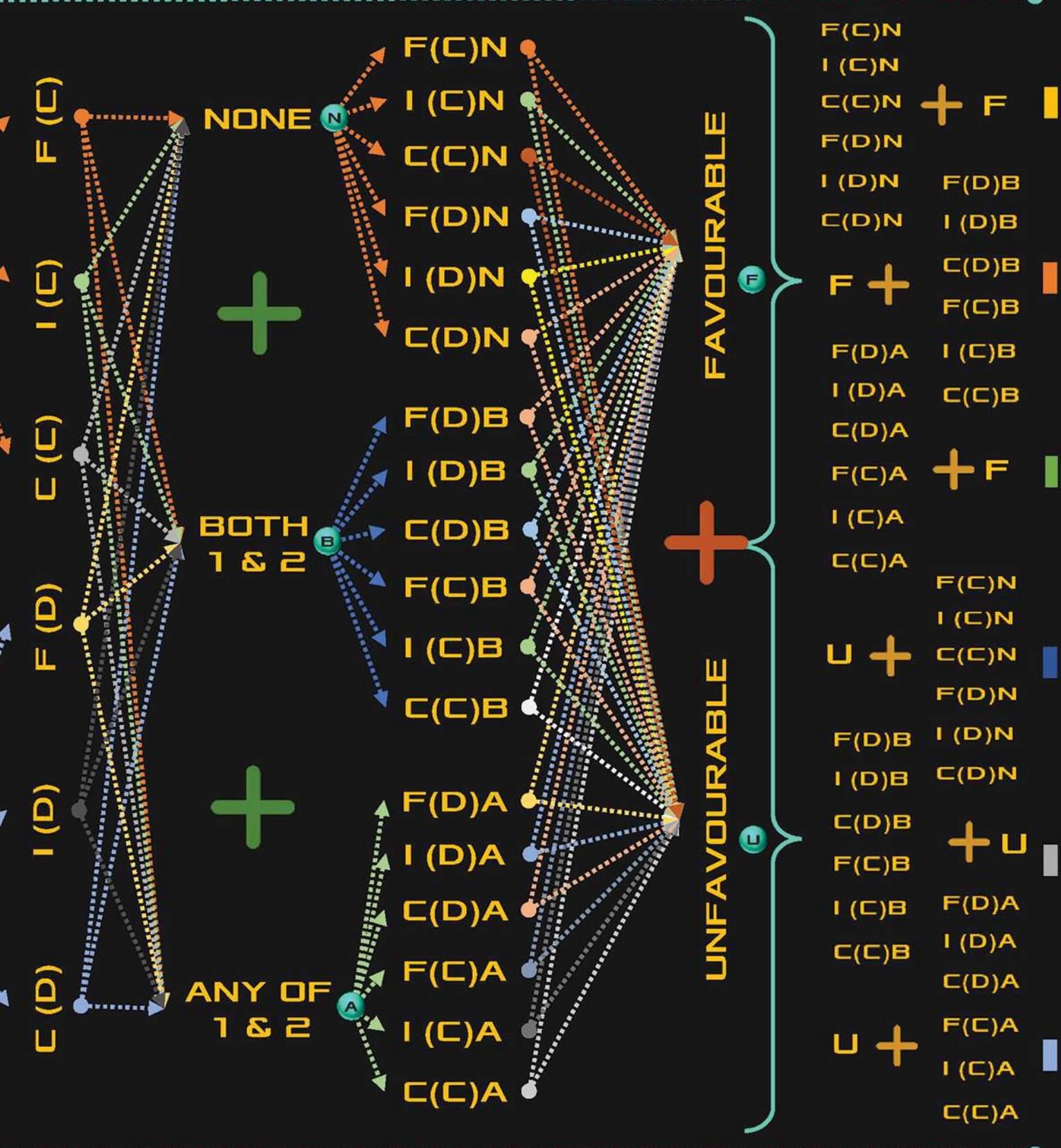
# THESIS TENURE (SAMPLE SELECTION)



INTERNSHIP

GUIDE

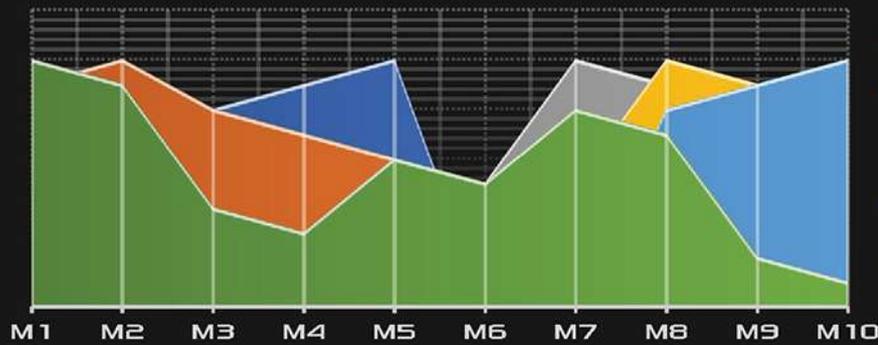
FINAL SAMPLE



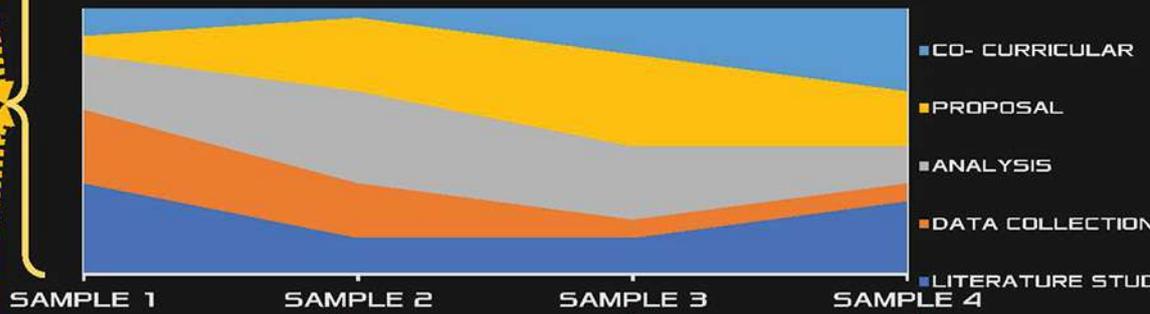
# THESIS TENURE (PREFERABLE TIMELINE AND

SAMPLES TARGETED

## PREFERABLE TIMELINE



## SAMPLE WISE PREFERRED ACTIVITY FOCUS



## LITERATURE STUDY EXCEL

LITERATURE NAME	AUTHOR	YEAR OF PUBLICATION	INFERENCE	RELEVANT QUOTES

EXPLORE  
READ  
EXPLORE  
READ

LITERATURE  
STUDY  
IDENTIFY  
THE  
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LITERATURE  
STUDY  
IDENTIFY  
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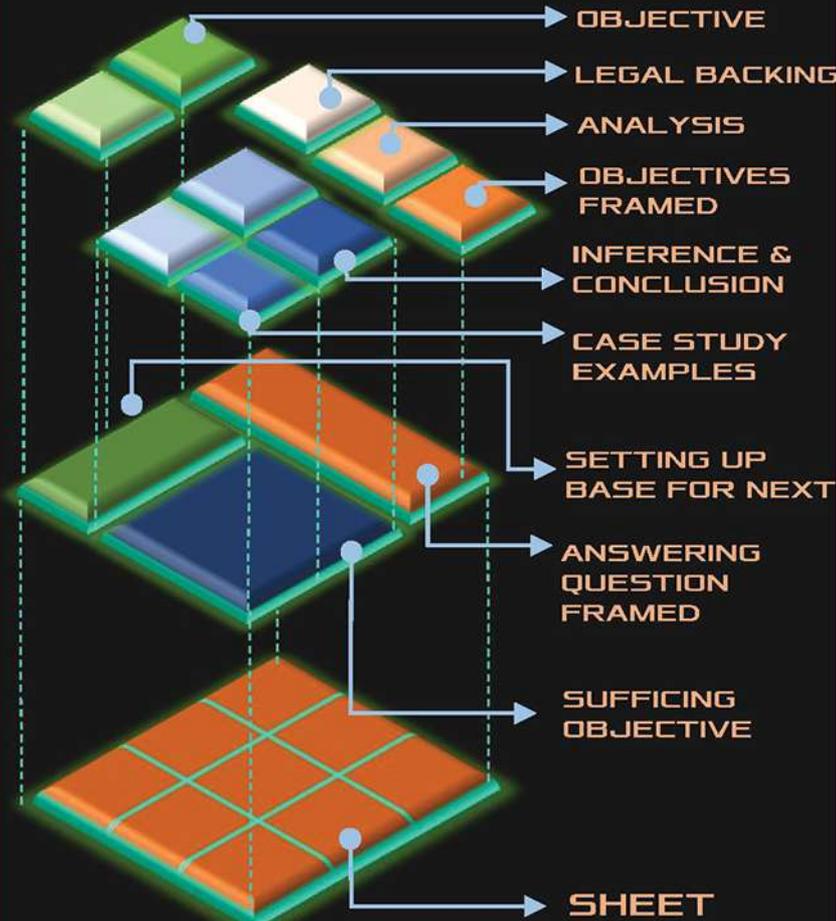
LITERATURE  
STUDY  
CO-  
CURRICULAR  
STREAMLINING  
PURPOSE

FINAL  
SHEETS  
PERCENTAGE  
TO BE FILLED

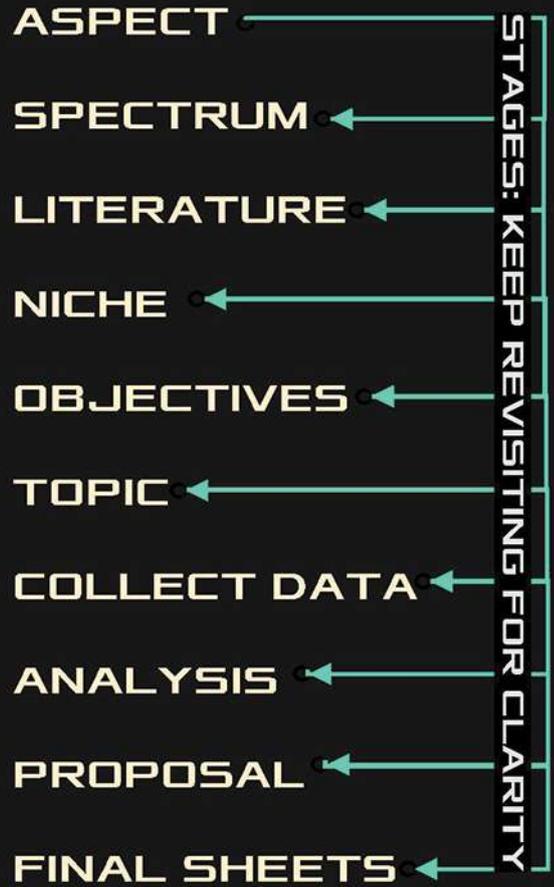


### SHEET COMPOSITION

#### CONTENT AND THEORETICAL SHARE



### TENURE REVISIT



DATA COLLECTION  
STREAMLINE AS PER ANALYSIS

ANALYSIS  
STREAMLINE AS PER PROPOSAL

ANALYSIS  
STREAMLINE AS PER PROPOSAL

ANALYSIS  
COMPLIMENTING OBJECTIVES

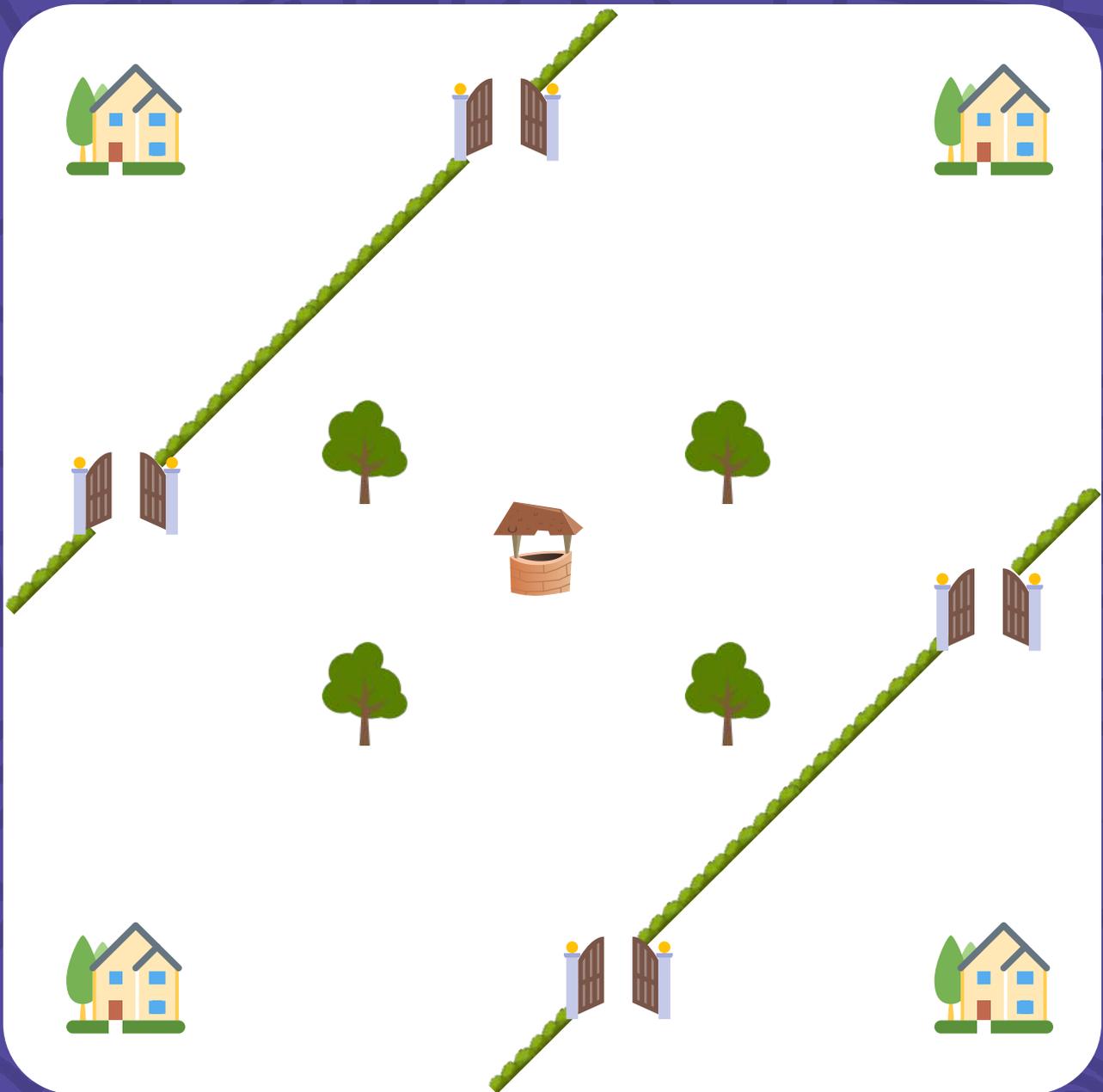
FINALIZE PROPOSALS  
SHEET STRUCTURING  
CHILL



# ACTIVITY CORNER

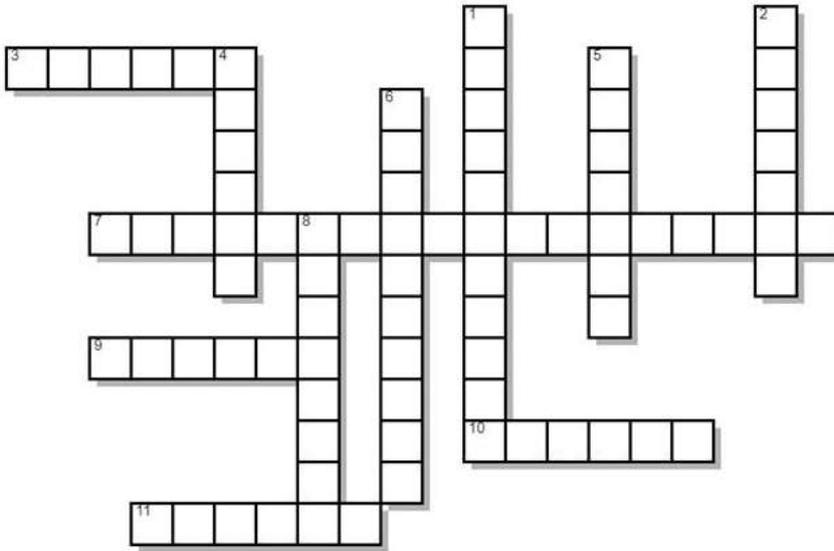
## Cut the Plot

- A square piece of land has four houses, four trees, four gates, one well and hedges.
- Divide the ground into four similar portions of land.
- Each section must contain one house, one gate, one tree and hedges.
- All four plots must have access to the well.



# CROSSWORDS

## Indian Cities



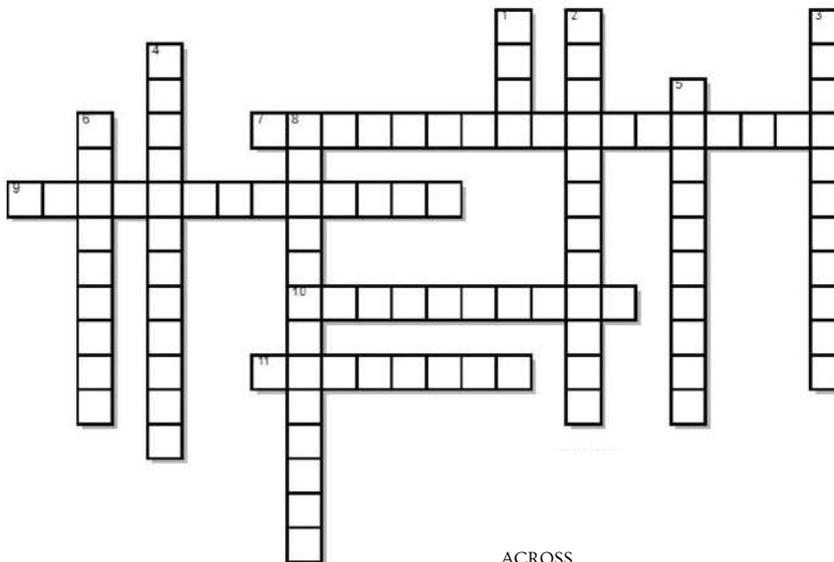
### ACROSS

3. City with highest GDP in India (2011)
7. Southernmost million plus city of INDIA (census 2011)
9. The unfinished private city near PUNE
10. Easternmost million plus city of INDIA (census 2011)
11. City with first PPP airport in India

### DOWN

1. Best ranked city for shortlisting under smart cities mission
2. City with longest beach of India
4. City famous for 'ARANYA' by BV Doshi
5. City with only functional commercial tram
6. City with highest per capita car ownership
8. Located on Ganges said to be longest inhabited city

## Notable contributors in spatial planning



### DOWN

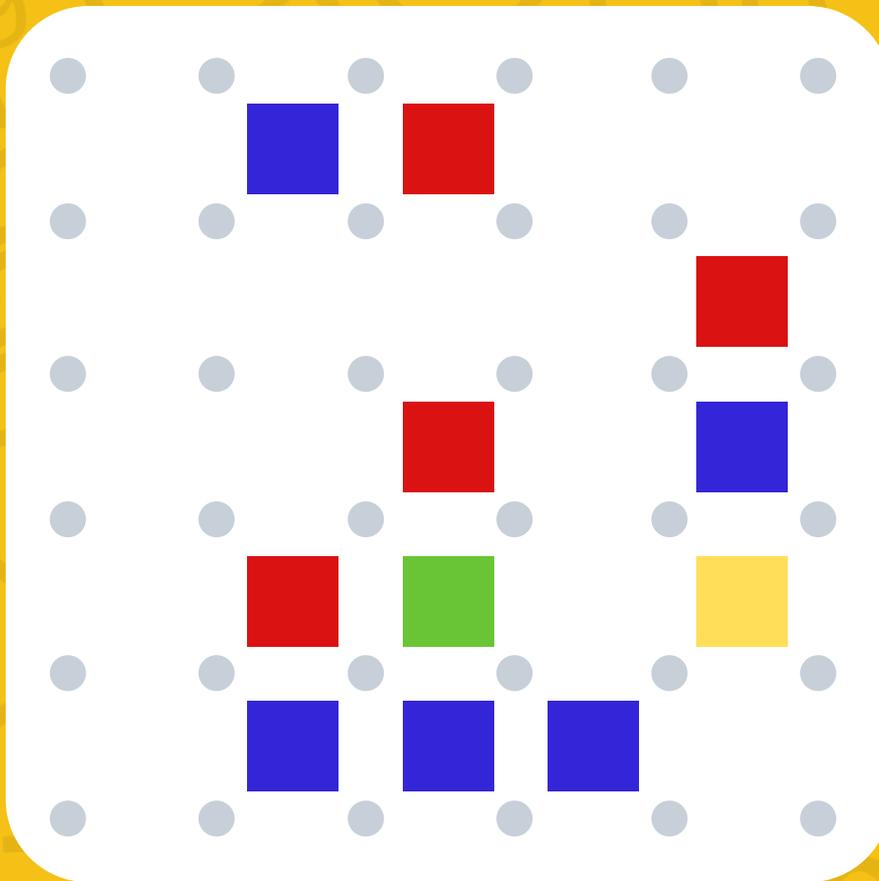
1. Last name of Padma Bhushan awarded bureaucrat who was also vice-chair of National commission on urbanization (India 1988)
2. Last name of the German planner who contributed in developing Bhubaneswar and Jamshedpur
3. Younger brother of Max Weber who proposed the Industrial location theory (least cost)
4. The American critic who classified stages of urban growth based on their social order
5. The Canadian journalist who contributed in urban studies extensively
6. Popular name of German economist who proposed 'Location theory' based on agricultural land use
8. The proposer of 5 tier model of human needs

### ACROSS

7. German geographer who proposed central place theory
9. Who proposed the concentric zone model to define urban social structures
10. Former registrar general of CENSUS of India who classified cities into O3 broad functions
11. Who first attempted the location quotient based functional classification of cities in India

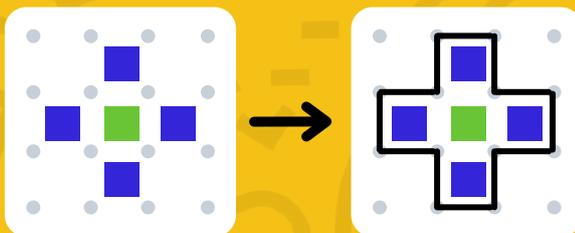
By mayankdubey1990@gmail.com

# LOOP THE LANDUSE



## What are you supposed to do?

- Make a single loop around all the landuse colours. There are no crossings or loose ends. There is only one line which is continuous.



- Each landuse colour indicates exactly how many lines should be drawn around it. Cells which do not have any colour inside can be surrounded by any number of lines.
- Here's a key for the landuse colours
  - Commercial - surrounded by 3
  - Public and Semi-public - surrounded by 2
  - Residential - surrounded by 1
  - Recreational - surrounded by 0

Scan the QR code or stay tuned for the next issue for answers to all puzzles.

# Our Collaborators



Urban Planning | Surveying | Geographical Information System



*Transforming Education Transforming India*



**NITTE SCHOOL OF  
ARCHITECTURE, PLANNING & DESIGN**



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Ph. No. (Call & WhatsApp) +91-9971253773**

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