



Telangana's Growth Analysis

Telangana's economy has been on a growth trajectory since its formation. Is one of the state with an open data policy.

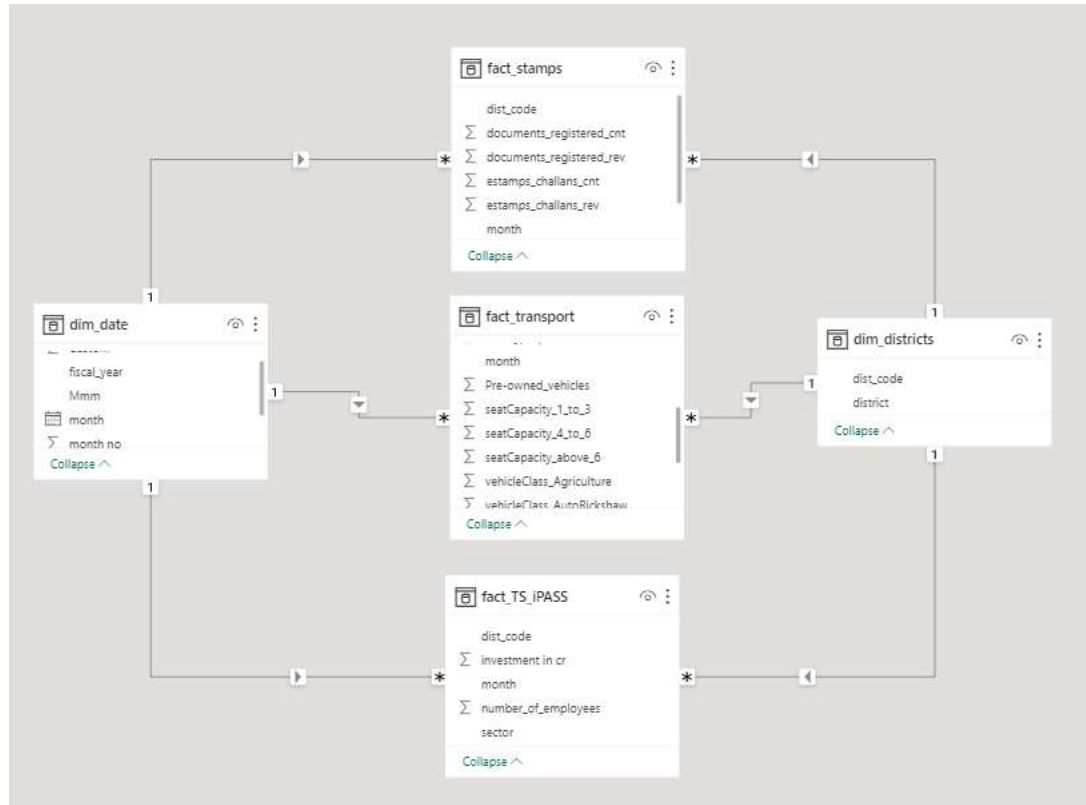
**The state is known for its information technology (IT),
The state government has introduced policies to
attract investments and promote industrial
development.**



Objective :

- **Analyze the volume and value of document registrations, e-stamp registration across all 33 districts.**
- **Explore seasonal or cyclical patterns in registration revenues.**
- **Provide insights into vehicle sales trends by fuel types, vehicle class accounting for district-level preferences and variations.**
- **Analyze sectors with high investment and their economic contributions, effectiveness of district-specific investment.**

The dataset is available with us from FY 2019-2022 .
Questions/Requests to fulfil
Tools Used for analysis



Telangana Growth Analysis

Objective:

- Explore Stamp Registration, Transportation and Ts-Ipass Datasets. Understand their attributes, categories and time period.
- Analyze trends and patterns within each department.
- Identify growth opportunities and areas needing attention.
- Find correlation among these departments and report the overall growth of the state through insights and relevant visuals such as shape maps.

Primary Questions:

Stamp Registration

1. How does the revenue generated from document registration vary across districts in Telangana? List down the top 5 districts that showed the highest document registration revenue growth between FY 2019 and 2022.
2. How does the revenue generated from document registration compare to the revenue generated from e-stamp challans across districts? List down the top 5 districts where e-stamps revenue contributes significantly more to the revenue than the documents in FY 2022?
3. Is there any alteration of e-Stamp challan count and document registration count pattern since the implementation of e-Stamp challan? If so, what suggestions would you propose to the government?
4. Categorize districts into three segments based on their stamp registration revenue generation during the fiscal year 2021 to 2022.

Transportation

5. Investigate whether there is any correlation between vehicle sales and specific months or seasons in different districts. Are there any months or seasons that consistently show higher or lower sales rate, and if yes, what could be the driving factors? (Consider Fuel-Type category only)
6. How does the distribution of vehicles vary by vehicle class (MotorCycle, MotorCar, AutoRickshaw, Agriculture) across different districts? Are there any districts with a predominant preference for a specific vehicle class? Consider FY 2022 for analysis.
7. List down the top 3 and bottom 3 districts that have shown the highest and lowest vehicle sales growth during FY 2022 compared to FY 2021? (Consider and compare categories: Petrol, Diesel and Electric)

Ts-Ipass (Telangana State Industrial Project Approval and Self Certification System)

8. List down the top 5 sectors that have witnessed the most significant investments in FY 2022.
9. List down the top 3 districts that have attracted the most significant sector investments during FY 2019 to 2022? What factors could have led to the substantial investments in these particular districts?
10. Is there any relationship between district investments, vehicles sales and stamps revenue within the same district between FY 2021 and 2022?
11. Are there any particular sectors that have shown substantial investment in multiple districts between FY 2021 and 2022?
12. Can we identify any seasonal patterns or cyclicity in the investment trends for specific sectors? Do certain sectors experience higher investments during particular months?



Stamp Registration :



Stamp registration is a legal process of recording a document in the government records. It is mandatory for certain types of documents, such as property transfer deeds, leases, and mortgages.

E-Stamp is a digital alternative to traditional paper stamps used for legal and financial documents. It provides transparent financial and legal environment.

The dataset is available with us from FY 2019-2022.

Stamp Registration



33

Total Districts

₹ 51,591.10 Cr.

Total Revenue

₹ 29,522.93 Cr.

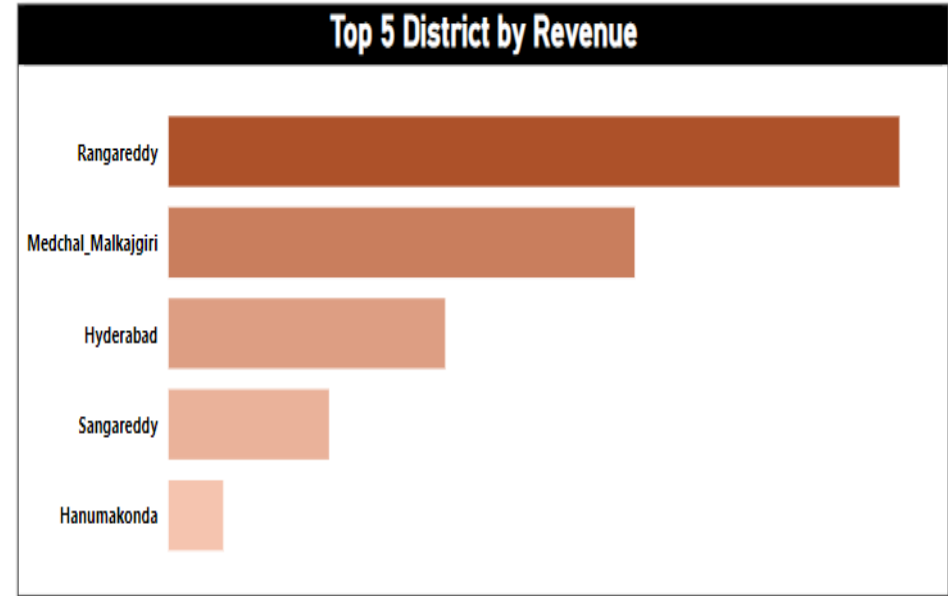
Total Document Revenue

₹ 22,068.18 Cr.

Total E-stamp Revenue

Date

01-04-2019 01-03-2023



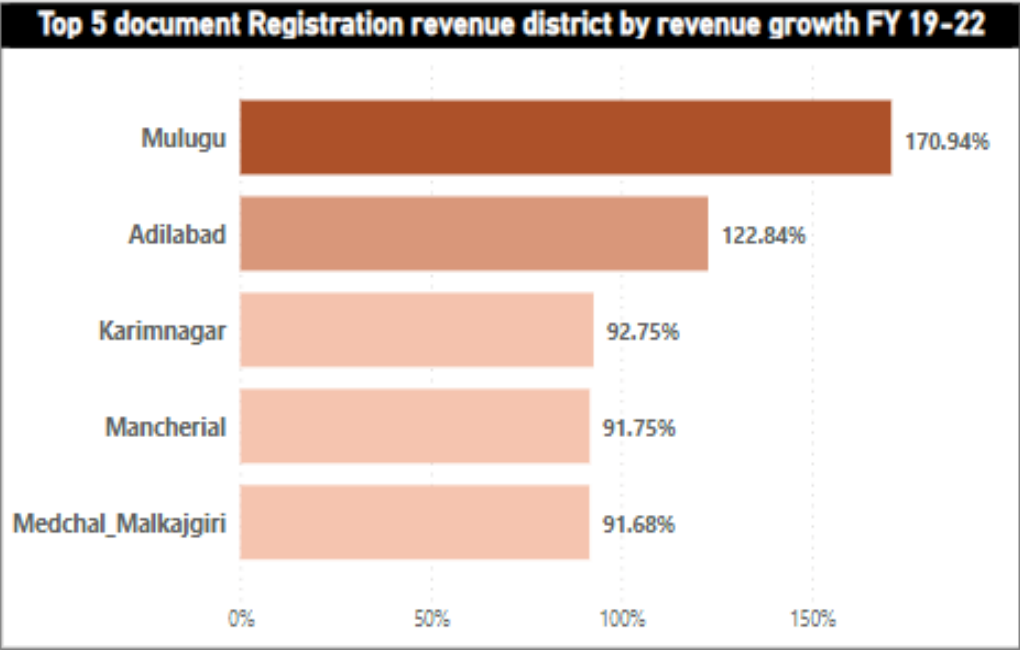
From the financial year 2019-2022 total revenue generated by **document registration** is about ₹ **29,522.93 Cr.**

The Top 5 districts Collectively accounts **81.34 %** of the total revenue generation.

Revenue Generated by **e-stamp Challan** from Nov 2020 – FY 2022 is around ₹**22,068.18 Cr .**

In similar fashion to document registration revenue the top districts collectively accounts around **82.46 %** of the total revenue generation.

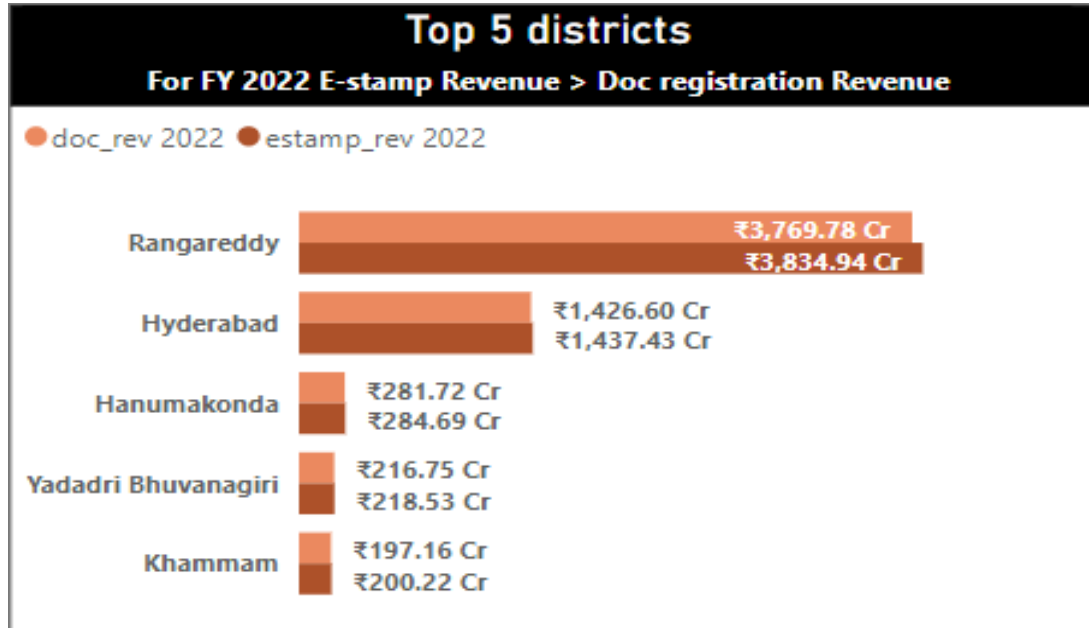
How does the revenue generated from document registration vary across districts in Telangana? List down the top 5 districts that showed the highest document registration revenue growth between FY 2019 and 2022



1. Mulugu
2. Adilabad
3. Karimnagar
4. Mancherial
5. Medchal Malkajgiri

This Top 5 Districts shown highest Growth in document registration revenue from FY 19-22. It suggests that the districts are experiencing economic vitality, attracting investments, and fostering a conducive environment for business.

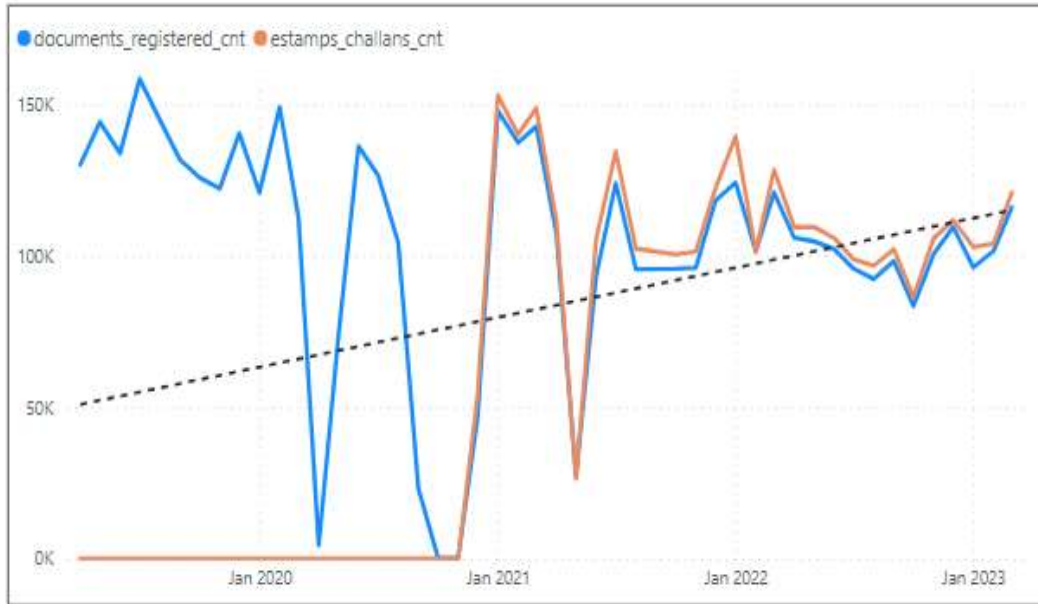
How does the revenue generated from document registration compare to the revenue generated from e-stamp challans across districts? List down the top 5 districts where e-stamps revenue contributes significantly more to the revenue than the documents in FY 2022?



Top 5 districts where e-stamps revenue contributes significantly more to the revenue than the documents registration in FY 2022.

Mostly because **Urbanization and Population Density, Economic Activity , Digital Literacy.**

Is there any alteration of e-Stamp challan count and document registration count pattern since the implementation of e-Stamp challan? If so, what suggestions would you propose to the government?

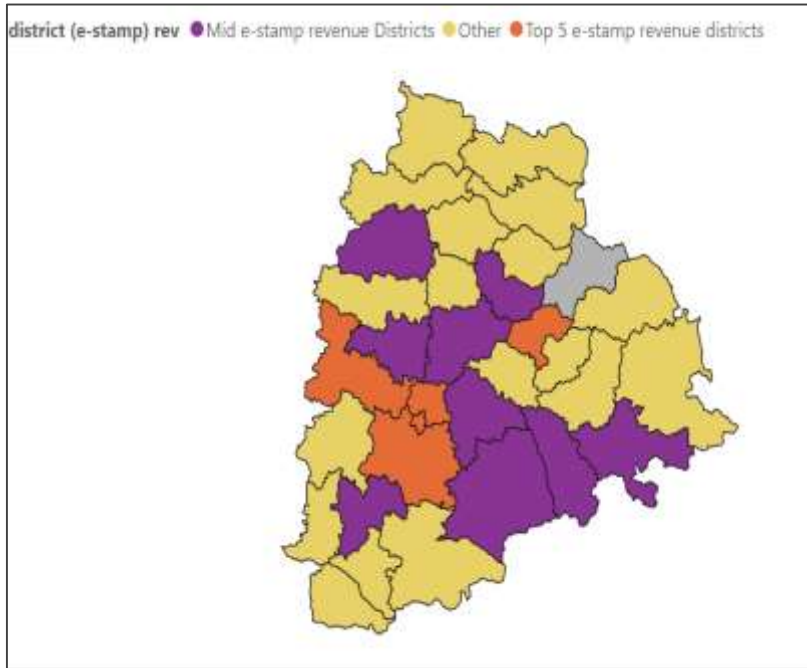


Since the implementation of E-Stamp challan in year 2020, it has been steadily growing alongside traditional document registration methods.

The trend indicates that E-Stamp challan usage is slightly higher, suggesting people are embracing it.

Categorize districts into three segments based on their stamp registration revenue generation during the fiscal year 2021 to 2022.

Categorize the District based on their revenue generation in 3 categories



Top 5 revenue districts

- Sangareddy
- Rangareddy
- Medchal_Malkajgiri
- Hyderabad
- Hanumakonda

Mid revenue districts

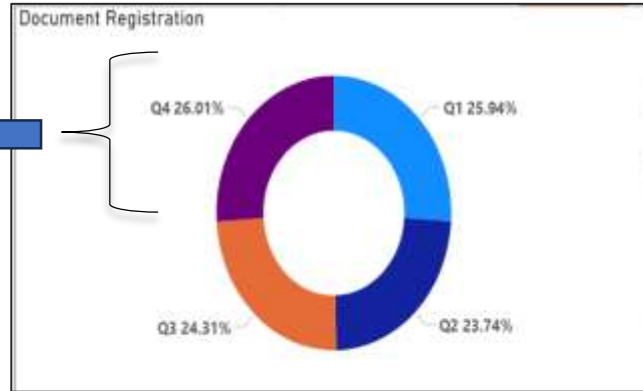
- Yadadri Bhuvanagiri
- Suryapet
- Siddipet
- Nizamabad
- Nalgonda
- Mahabubnagar
- Khammam
- Karimnagar

Low revenue districts

- Warangal
- Wanaparthy
- Vikarabad
- Rajanna Sircilla
- Peddapalli
- Nirmal
- Narayanpet
- Nagarkurnool
- Mulugu
- Medak
- Mancherial
- Mahabubabad
- Kumurambheem Asifabad
- Kamareddy
- Jogulamba Gadwal
- Jayashankar Bhupalpally
- Jangoan
- Jagtial
- Bhadradi Kothagudem
- Adilabad

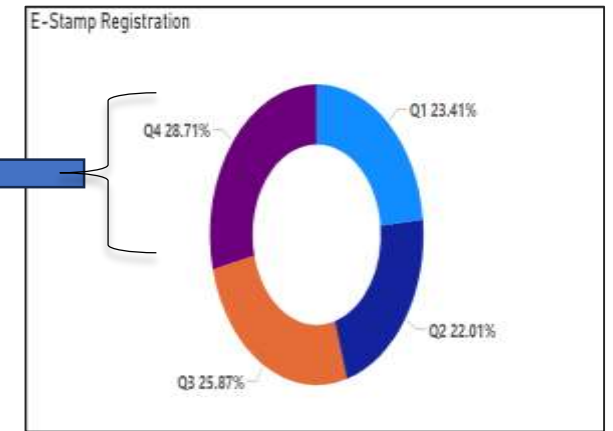
- The top 5 districts contributes around **81-82 %** in total documents registered revenue & in e-Stamp revenue, amounting to approximately ₹ 7,000 to ₹ 8,700 Crores FY 21 & 22.
- Mid Revenue districts contributes **10-11 %**
- Low revenue districts contributes **6-8 %**

January,
February &
March
i.e Quarter 4
Accounts Maximum
26.01% registration.

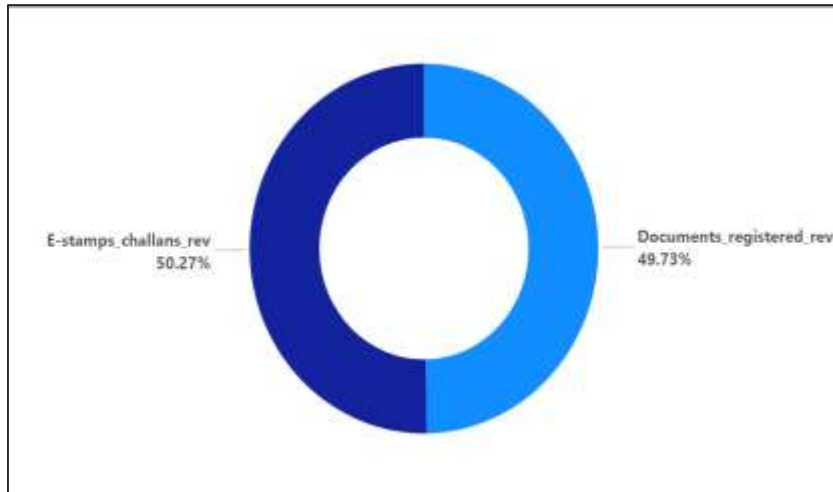


Document Registration FY 19-22

January,
February &
March
i.e Quarter 4
Accounts Maximum
28.71% registration.



E-stamp Registration FY 21-22



Revenue Distribution of FY 21-22

For FY 2021 & 2022 the Revenue generated Document registration account **49.73 %** & by E-stamp challan Registration is **50.72% .**

Suggestions :

- **Awareness Campaigns** : awareness campaign about the benefits of e-stamps, focusing on cost savings, convenience, and security.
- E- stamp use minimizes the risks associated with paper-based stamping and contributes to a more secure and transparent financial and legal environment.
- **Demonstrate Savings** : Show users the potential cost savings by using e-stamps compared to traditional paper **stamps**. Provide a cost calculator tool to estimate savings on stamp duties.
- **User Support**: Establish a dedicated customer support team to assist users with any issues or questions related to e-stamps.
- Provide comprehensive online guides and FAQs(frequently asked questions).

Transportation

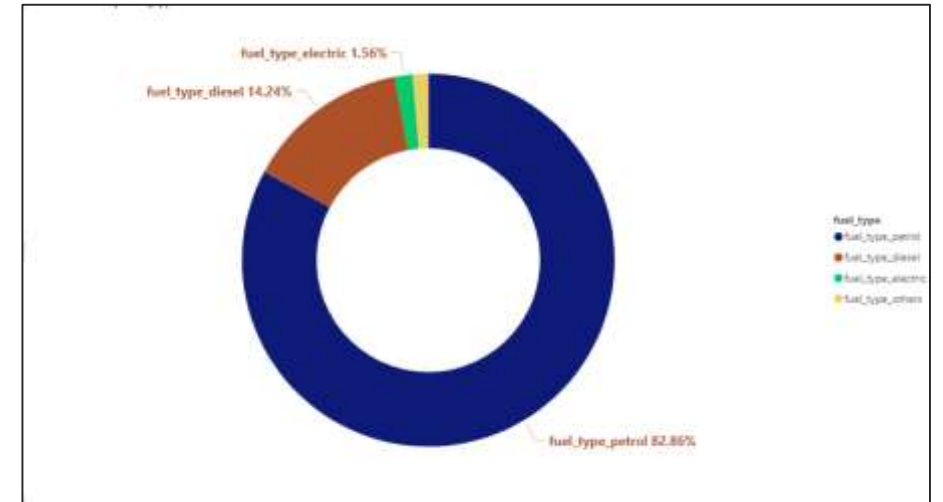
The RTA (Regional Transport Authority) of Telangana transportation data for vehicle sales in a specific region provides insights into the regional automotive market trends.

It includes information on the volume of vehicles sold, their types (e.g., cars, motorcycles), and potentially their fuel types.

Analyzing this data can help assess consumer preferences, economic conditions, and environmental concerns influencing the local vehicle sales landscape.

Fuel type analysis

- **Petrol Type** : **82.86%** indicating a widespread reliance on traditional internal combustion engines.
- **Diesel Type**: **14.24%** commonly used in various applications such as trucks and commercial vehicles.
- **Electric Type**: **1.56%** - The adoption of electric vehicles (EVs) is slowly increasing. This suggests a growing interest in eco-friendly and sustainable transportation options.
- **Other Types**: **1.34%** - A small percentage of vehicles in this category utilize alternative or less common fuel types, highlighting the diversity of options available in the market.



5. Investigate whether there is any correlation between vehicle sales and specific months or seasons in different districts. Are there any months or seasons that consistently show higher or lower sales rate, and if yes, what could be the driving factors? (Consider Fuel-Type category only)

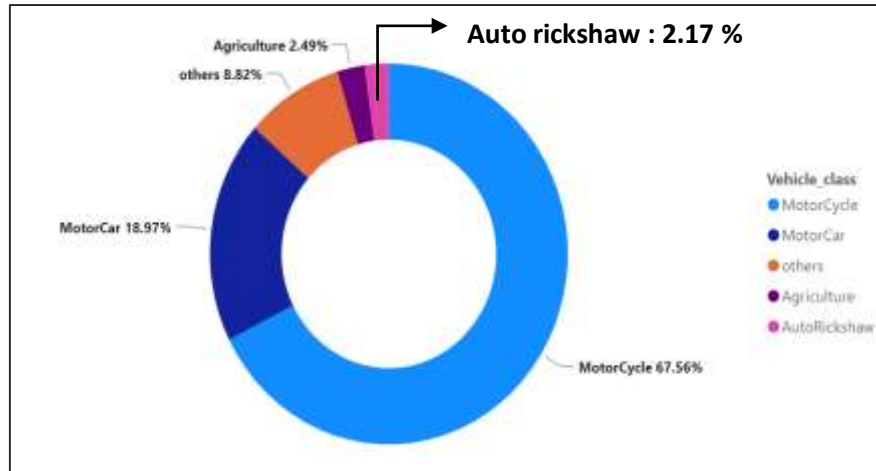
In the context of fuel types, it's noteworthy that the month of **October** had the highest purchase rate, accounting for **11.23%** of total purchases, which translates to a significant **748 K units** sales. This is mainly because The festival of **Diwali**.

End of the financial year in **March** can see higher purchase rate (**9.01%**) total purchases as individuals and businesses rush to make purchases to avail of tax benefits.

Month of **June** also seen higher purchase rate (**9.20%**) of total purchases .



How does the distribution of vehicles vary by vehicle class (MotorCycle, MotorCar, AutoRickshaw, Agriculture) across different districts? Are there any districts with a predominant preference for a specific vehicle class? Consider FY 2022 for analysis.



Distribution of vehicle class: for **FY 2022**
Notably, **motorcycles** constituted the majority, accounting for **67.56 %** of the total vehicle sales. Followed by **motorcar** accounts **18.97 %**.

Hyderabad

(Auto rickshaw , Motor Cycle)

Rangareddy

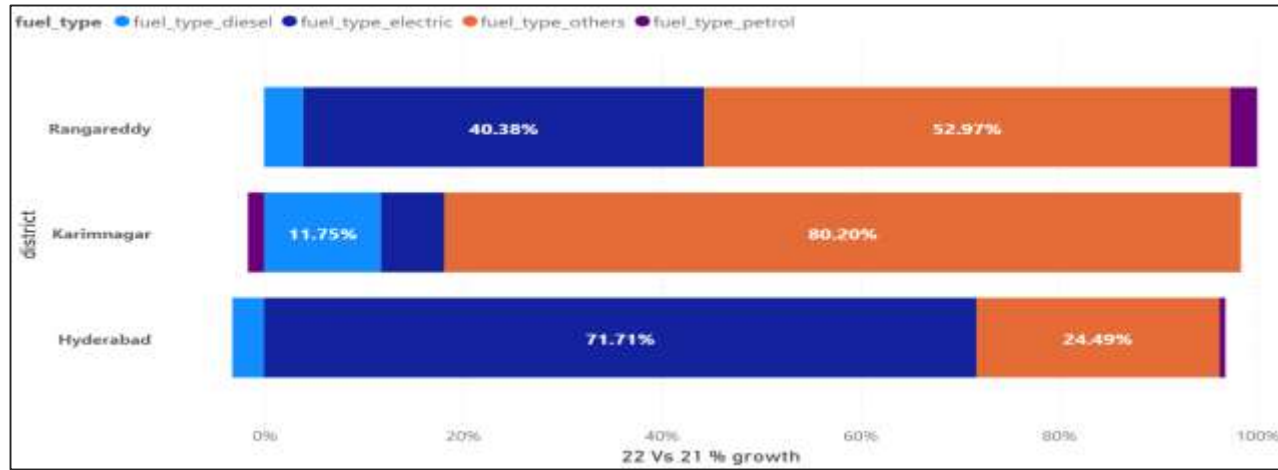
(Motor Car, Other)



Nalgonda

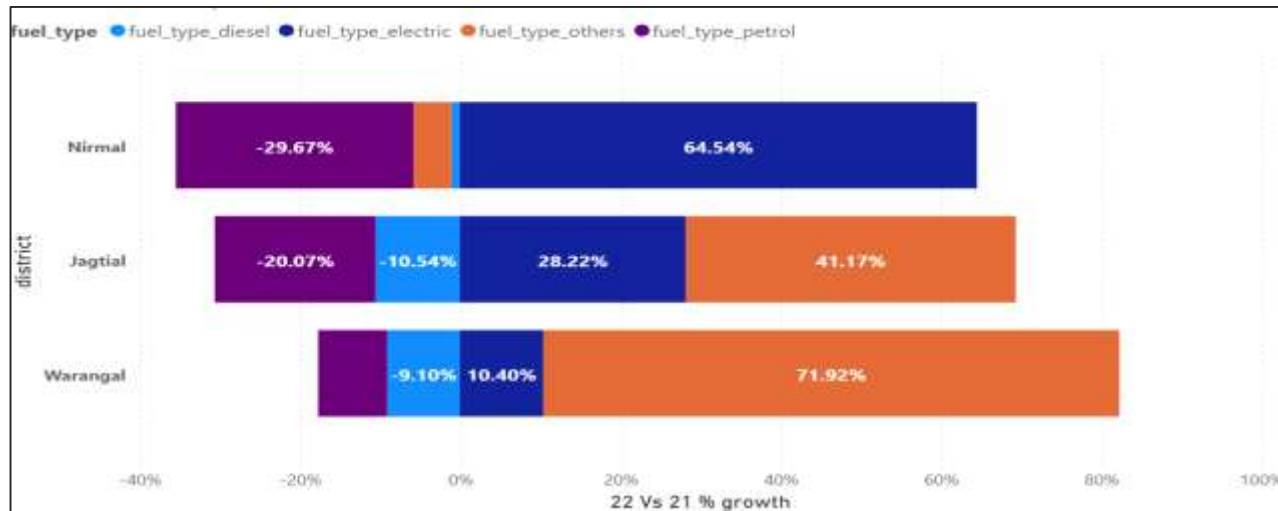
(Agriculture)

List down the top 3 and bottom 3 districts that have shown the highest and lowest vehicle sales growth during FY 2022 compared to FY 2021? (Consider and compare categories: Petrol, Diesel and Electric)



Top 3 Districts & the fuel type contribution

Rangareddy, Karimnagar, and Hyderabad districts showed impressive growth, driven primarily by the **other** fuel type, followed by **electric** fuel type in FY 2022. This highlights a noteworthy trend worth noting for stakeholders, **emphasizing the shift towards alternative fuels and sustainable mobility solutions in the region.**



Bottom 3 Districts & the fuel type contribution

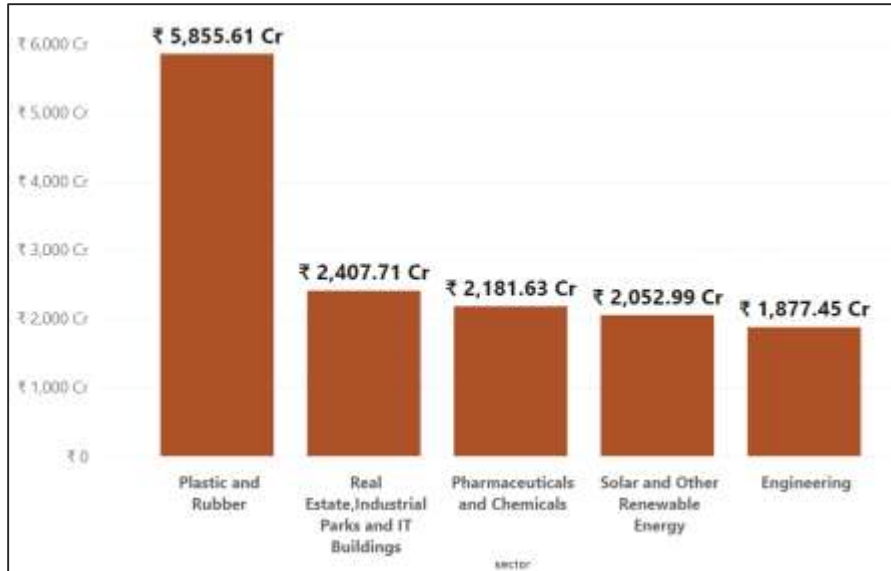
Warangal, Jagtial, and Nirmal districts showing the *lowest overall growth rates in 2022*, but it's important to note that they exhibited **positive growth** in **electric** and **other fuel type** sales.

This suggests potential opportunities in the adoption of alternative fuels in these districts, warranting further exploration.

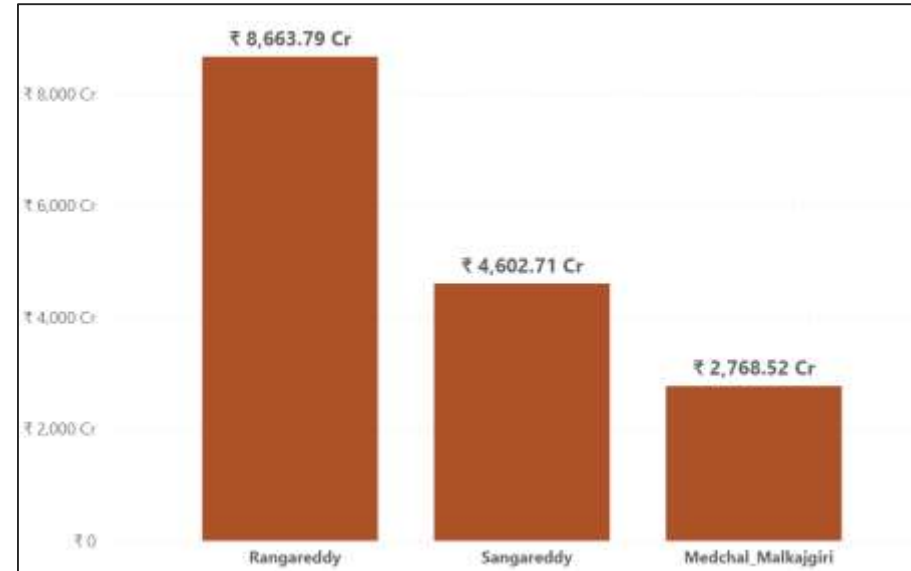
Ts-Ipass

- **TS iPass, also known as Telangana State Industrial Project Approval and Self-Certification System (TS iPass), is an online platform implemented by the Government of Telangana, India.**
- **It is designed to streamline and expedite the approval process for setting up industries and businesses in the state.**
- **TS iPass allows applicants to submit their proposals, track the status of applications, and receive necessary approvals and clearances in a transparent and efficient manner, promoting ease of doing business in Telangana.**

List down the top 5 sectors that have witnessed the most significant investments in FY 2022



Top 5 sectors in FY 2022



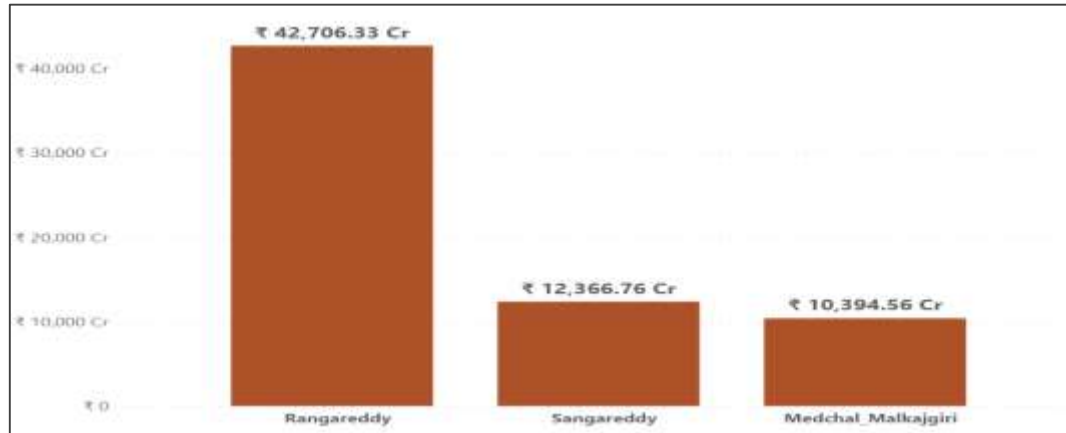
Top 3 districts in FY 2022

In Fiscal Year 2022, the top 3 districts that attracted the highest investments across various sectors were

Rangareddy, Sangareddy, & Medchal_Malkajgiri.

These investments were primarily directed towards sectors such as ***Plastic and rubber, Real Estate- Industrial parks & IT buildings, Pharmaceuticals & Chemicals, Solar – Other renewable energy & engineering*** .

List down the top 3 districts that have attracted the most significant sector investments during FY 2019 to 2022? What factors could have led to the substantial investments in these particular districts?



Top 3 districts in FY 2019-2022

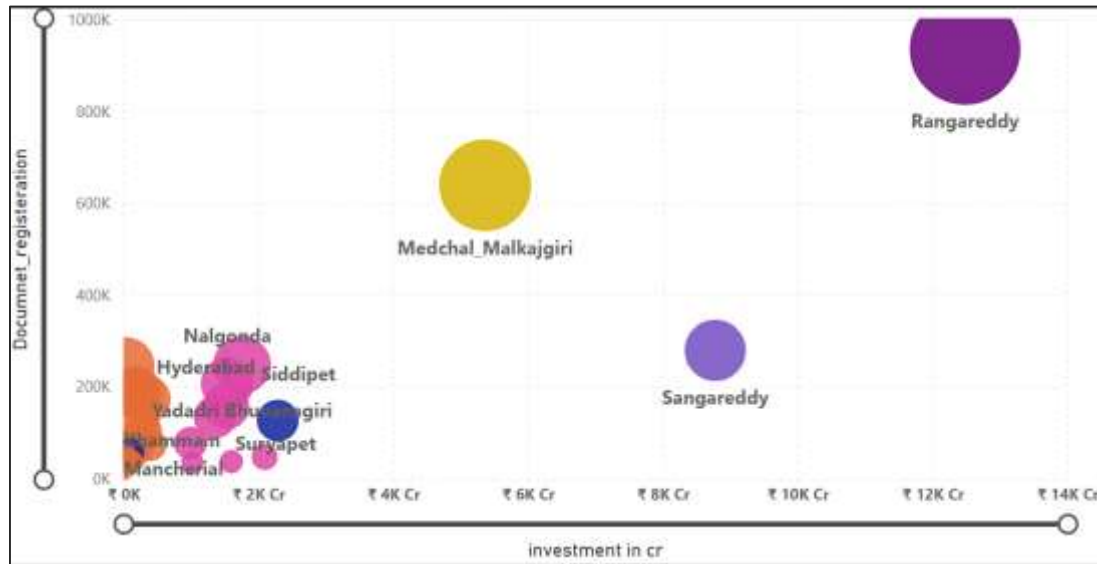


districts investments FY 2019-2022

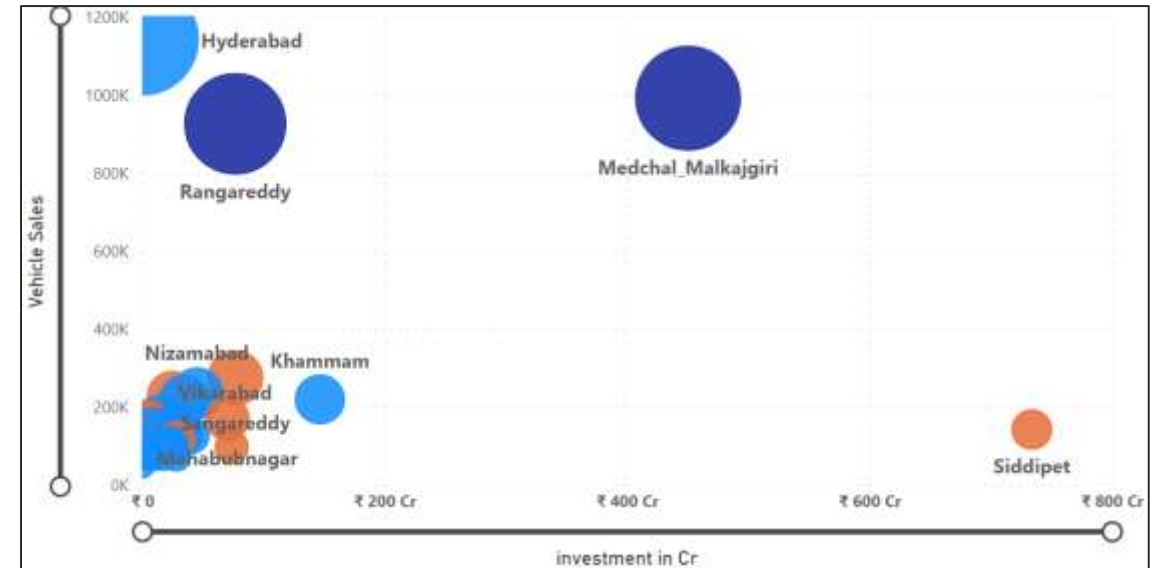
From **FY 2019 to 2022**, **Rangareddy**, **Sangareddy**, and **Medchal-Malkajgiri** consistently accounted an average of **64%** of the **total investments** made across all sectors.

- One of the main factor is **Proximity to Hyderabad** the state capital and a major economic hub.
- infrastructure development, including road networks, transportation, and connectivity improvements
- Proactive government policies, incentives, and initiatives to promote industrial growth and investment.
- Availability of land for development at competitive prices.
- Availability of a skilled and educated workforce .
- proximity to transportation hubs such as airports and railway stations facilitates the movement of goods and people, making them logistics and distribution hotspots.

Is there any relationship between district investments, vehicles sales and stamps revenue within the same district between FY 2021 and 2022



District Investment Stamp revenue

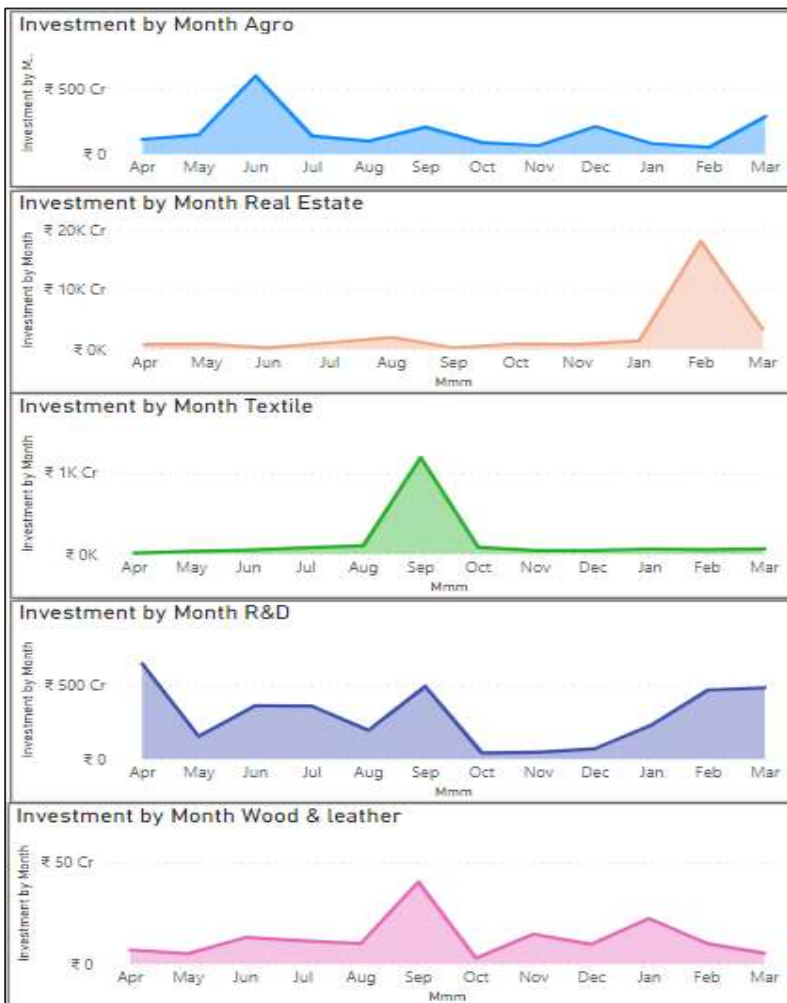


District Investment Vehicle sales

As investments rise, document registrations are increase, influenced by the sectors invested in.

A thriving real estate market can encourage property investments, resulting in higher stamp revenue increased construction activities also contribute to vehicle sales, especially for commercial and construction vehicles.

Can we identify any seasonal patterns or cyclicity in the investment trends for specific sectors? Do certain sectors experience higher investments during particular months



It is observed the **Agricultural sectors** received maximum investment in month of **June** in alteration of 2 month.

It is observed the **Real estate, Industrial Parks sectors** received maximum investment in month of **Feb**

It is observed **Textile sector** received maximum investment in month of **September**

It is observed **Research & development** sector received maximum investment in month of **April and September**

It is observed **Wood and leather** sector received maximum investment in month of **September**

Secondary Research :

What are the top 5 districts to buy commercial properties in Telangana?

Hyderabad

It is a major IT hub and home to many multinational companies.

Rangareddy

The district has excellent connectivity to Hyderabad and other parts of the state.

Medchal-Malkajgiri

It is home to many industrial estates and logistics parks.

Sangareddy

making it a good place to invest in warehouses. Many companies use as a base for their distribution operations

Karimnagar

A major agricultural and industrial center. The city has a well-developed infrastructure and excellent transportation facilities

What significant policies or initiatives were put into effect to enhance economic growth, investments, and employment in Telangana by the current government

Infrastructure Development for Electric Vehicles : The government has to Provide financial incentives, tax breaks, and subsidies to attract EV manufacturers to set up production facilities. This has made it easier for businesses to operate in Telangana.

Agricultural subsidies :Providing subsidies for cold storage , food processing , fertilizers, pesticides, and related agricultural inputs sectors in the agricultural sector can help to improve investment by reducing the upfront cost of investment, increasing the profitability of investment, attracting new investors, and promoting innovation.

T-Hub :It provides a number of support services to startups, such as mentorship, incubation, and funding

Promoting skills development: The government should invest in skills development programs to train the workforce and meet the needs of the growing economy.

Key Insights :

1. Since the implementation of the e-stamp challan system, the government has not only streamlined revenue collection but has also witnessed a substantial increase in revenue generation. This reflects not only the efficiency of the system but also the potential for further financial growth.
2. The analysis reveals a remarkable surge in demand for electric vehicles (EVs) and alternative fuels such as CNG and ethanol. This surge underscores the immense potential for investment and growth in the sustainable transportation sector, signifying a robust shift towards eco-friendly mobility solutions.
3. Sectors such as **Electrical and Electronic Products, Food Processing, Plastic and Rubber** and **Research and Development** have demonstrated consistent and steady growth in investment. These sectors, characterized by their sustained upward trajectory, offer promising opportunities for continued expansion and economic development.
4. The top six sectors—**Real Estate, Industrial Parks and IT Buildings, Pharmaceuticals and Chemicals, Engineering, Food Processing, Plastic and Rubber and R&D**—have not only exhibited remarkable growth but also offer a wealth of promising job opportunities. Their expansion not only fuels economic development but also fosters extensive employment prospects, underlining their pivotal role in shaping a prosperous future.
5. Among the total vehicle sales, a significant 93% comprise brand new vehicles, indicating a strong preference for new and freshly manufactured automobiles in the market.

Recommendation:

1. To maximize the e-stamp challan system's growth potential, recommend offering incentives, extensive awareness campaigns, and step-by-step guides. Implement a robust tracking application and introduce a chatbot for FAQs to provide quick and user-friendly assistance, fostering wider adoption.
2. In response to the surging electric vehicle (EV) sales, it is imperative to proactively implement a robust network of charging stations and develop the necessary infrastructure to meet the escalating demand for electric vehicles. This strategic infrastructure investment is essential to ensure the seamless integration and widespread adoption of EVs, fostering a sustainable and eco-friendly transportation ecosystem.
3. Create a business-friendly regulatory environment with streamlined processes for permits, licenses, and approvals.
4. Prioritize STEM education to meet the demands of evolving industries, and promote digital literacy to bridge the digital skills gap.

THANK YOU

- Vishal Bankar
- Bankar.vu@gmail.com
- <https://www.linkedin.com/in/vishal-bankar-91866a26b/>