The Experience of Using Spatial Data in Policy & Programs in Punjab, Pakistan

The Case of Punjab Spatial Strategy

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Commonwealth Sustainable Cities Initiative
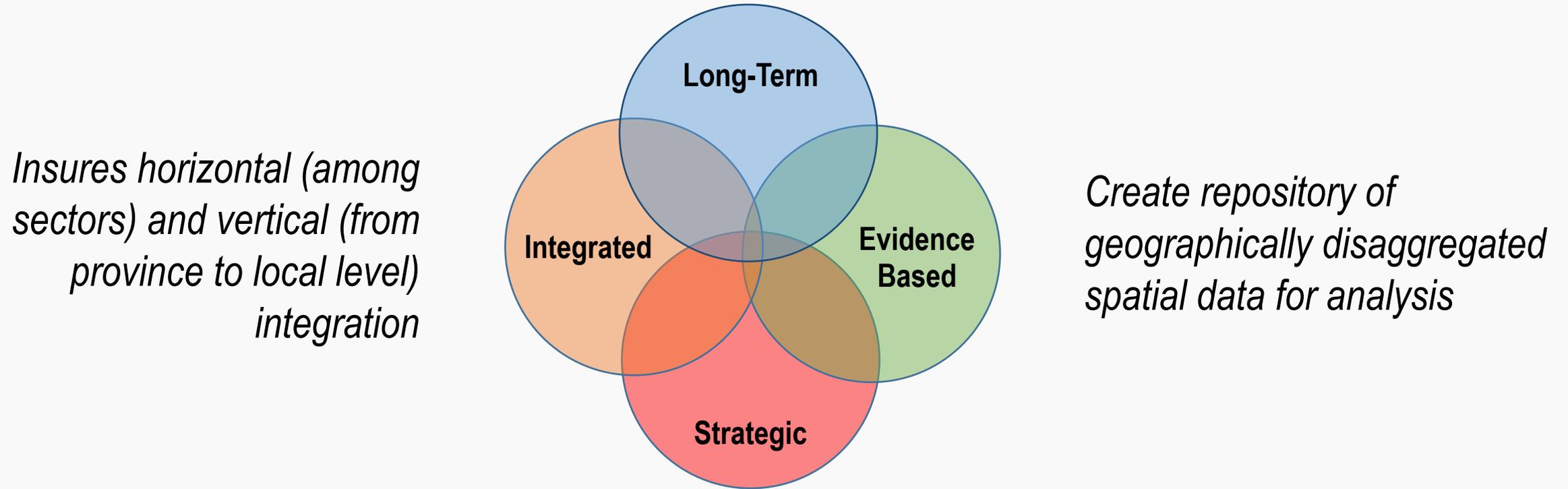July 05, 2021

The Urban Unit
Urban Sector Planning & Management Services Unit (Pvt.) Ltd.

Need to Augment Planning & Development Regime

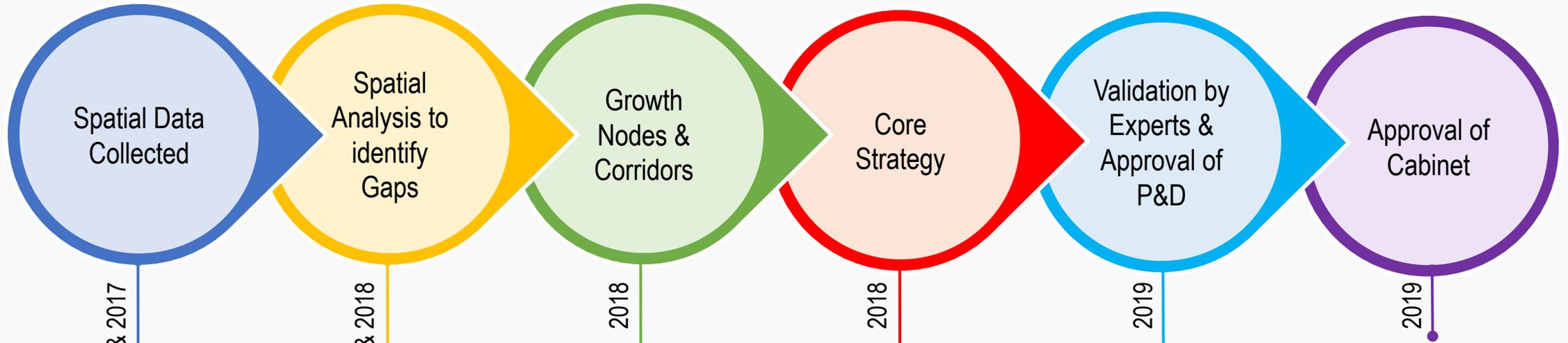*Set a long-term direction for development for the Province of Punjab*

Insures horizontal (among sectors) and vertical (from province to local level) integration

Create repository of geographically disaggregated spatial data for analysis

Long-Term

Integrated

Evidence Based

Strategic

Look at comparative advantage of regions by enhancing competitiveness of growth corridors

Program Components – Completed

Spatial Data Collected
2016 & 2017

Spatial Analysis to identify Gaps
2017 & 2018

Growth Nodes & Corridors
2018

Core Strategy
2018

Validation by Experts & Approval of P&D
2019

Approval of Cabinet
2019

Geographically disaggregated data was collected and over 140 layers were populated in GIS database of Urban Unit

Nearly 50 different multi-sectoral analysis done with international and national researchers for identification of gaps and determine future spatial priorities

System of cities & future growth nodes with assessment of Proposed New City Plan Guiding framework for industrial estates & local development framework

Core Strategy with spatial, vision, objectives, policies and targets developed with implementation mechanism & 14 technical annexures

Two international and two national experts endorsed the strategy with nearly other 10 sector specific experts

50+
Stakeholder sessions with departments and divisions during data, analysis and strategy development

# Evidence-based Planning for Development – Punjab Spatial Strategy

Spatial Portrait

- Administrative Boundaries
- (Mauza & Ward Level)
- Land Cover
- Soil Fertility & Texture
- Mines & Minerals
- Air & Water Quality
- Forest & Protected Areas
- Topography & DEM
- Land Use
- Utilities Network
- Roads, Railways & Airports
- Water & Irrigation Network
- Public Facilities & Spaces
- Health & Education Facilities
- Urban Extent & Density
- Industries Census
- Potential Tourist Sites

Core Strategy

- Vision for Punjab 2047
- Strategic Objectives
  1. Global positioning & competitiveness
  2. Regional development
  3. Cities transformation
  4. Resource allocation & management
  5. Quality of life
  6. Sustainability & environment
  7. Integrated spatial planning
- Policy Statements
- Actions & Targets
- Stakeholders Mobilization
  - Departments & Agencies
  - Private Sector

- **Validation by Panel of Experts**
- **Endorsement by Steering Committee**
- **Approval by the Cabinet**

Implementation

Economic Development for Job Creation
- Regional Economic & Spatial Development Plans
  - District and Divisional
  - Integrated Economic and Master Planning of Cities

Productivity and Competitiveness Enhancement

Efficient & Effective Public Service Delivery
- Capacity Building of Departments and Agencies
- 80 % of Infrastructure Projects PC-1s in line with PSS
- PSS Decision Support Systems

Integrated Planning System

1 — Punjab Growth Strategy, Punjab Spatial Strategy → Provincial Planning Framework

9+36 — Regional Spatial Development Plans (Division & District) → Regional Development Framework

1+16 — Integrated Economic Planning for Economic Hubs → Local Development Framework

194+ — Master Planning & Zoning for Urban Areas → Integrated City Development Framework
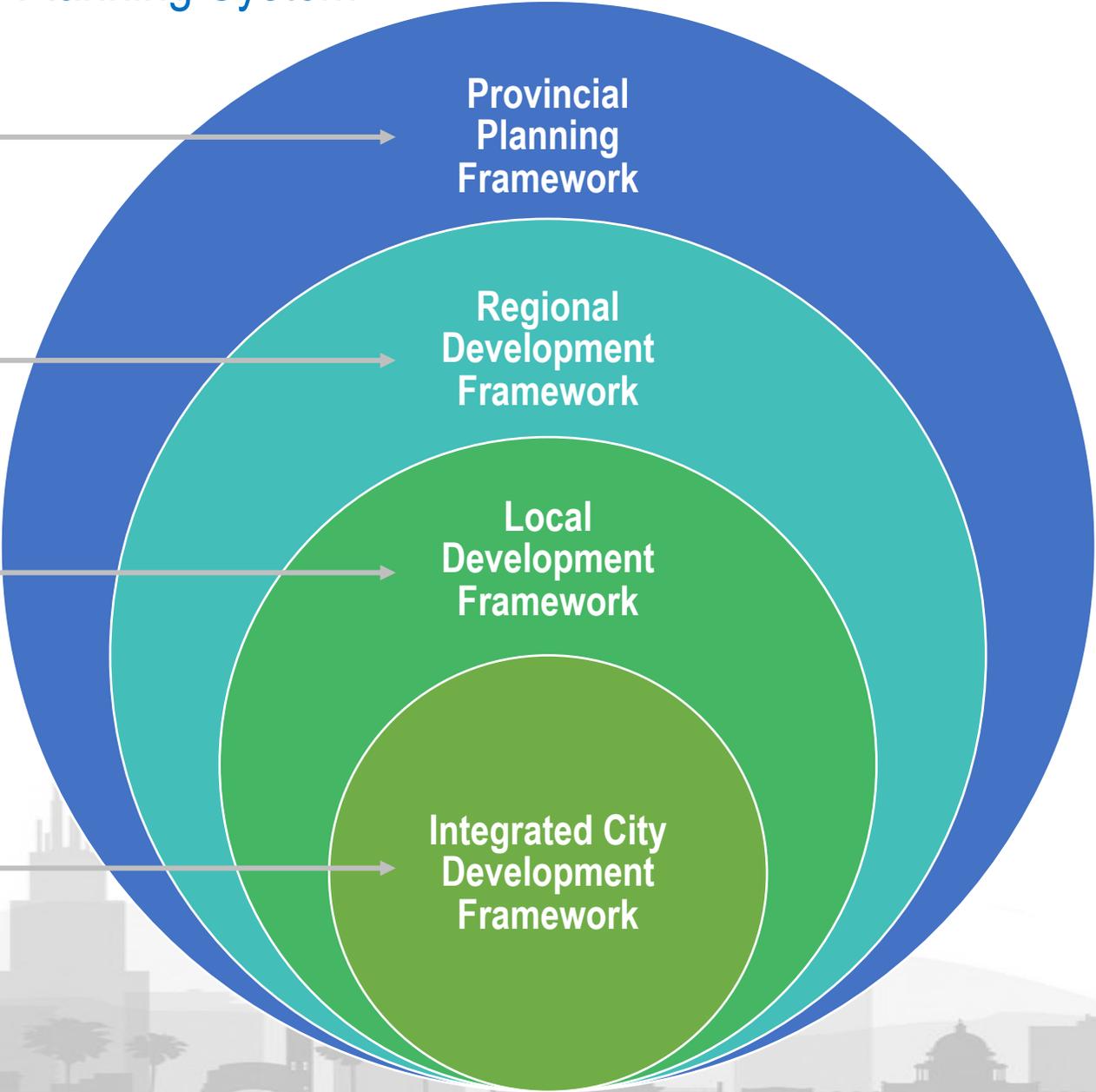
Industrial Development: Issues

95% of the industries in Punjab are located within 2 km of the major roads and highways
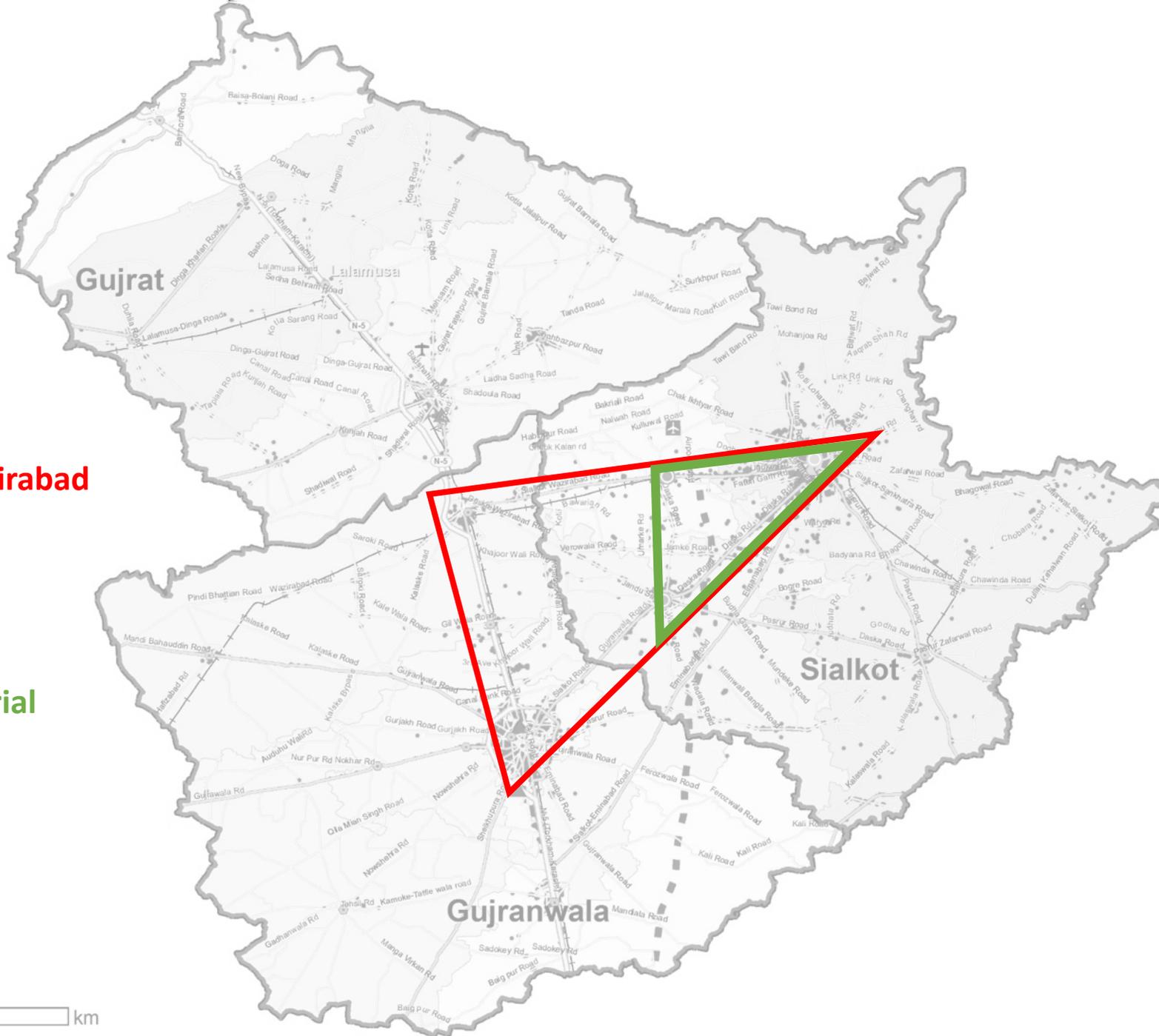
Only 3.5% of industries are within 9 Industrial zones

Only 5% (2,399) of industries are large & medium with little backward linkages to 95% small industries

Industrial Density in Punjab
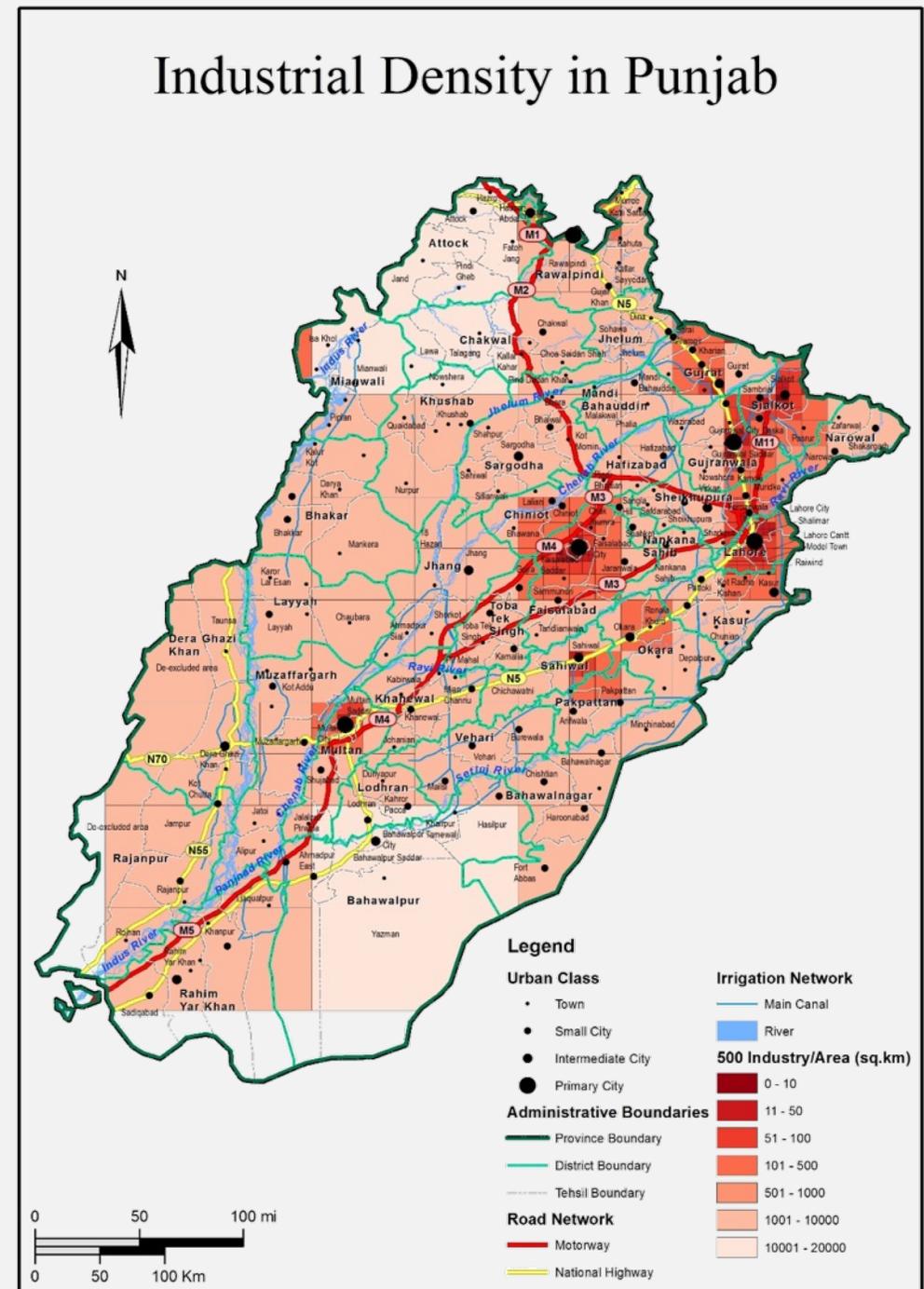
Golden Triangle
Gujranwala-Sialkot-Wazirabad

Mini-Triangle
Sialkot-Daska-Sambrial

Legend

- ⊙ Daska
- ⊙ Sambarial
- ⊙ Sialkot
- ⊙ Other Cities
- · Industrial Locations
- ▲ S.I.E (self)
- ▲ S.I.E

Airports

- ✈ International
- ✝ Airfield

Transportation Network

- ▬ National Highway
- ▬ Highway
- ▬ Primary Road
- ▬ Secondary Road
- ▬ Motorway Under Construction
- ┼ Railway Track
- ▭ District Boundary

Existing Spatial Lay Out of Industrial Units

|	
Area in Acres	69,400
Population	417,500
Industries	2,600
Villages & Towns	80+

**Sialkot-Sambrial Section
18.7km**
Wearing Apparel (307)
Leather Product (99)
Fabricated Metal Product (134)
Medical & Dental Equipment (542)
Sports Goods (136)

**Sambrial - Daska Section
14.8km**

Fabricated Metal Products
(126 Units)
Medical & Dental Instruments
(68 Units)
Special Purpose Machinery
(57 Units)
Auto Parts
(30 Units)

**Daska-Sialkot Section
19.9km**
Wearing Apparel
(229 Units)
Sports Goods
(102 units)
Leather Products
(41 Units)
Medical & Dental Equipment
(81 Units)
Other Non-Metallic
(40 Units)
Fabricated Metal Products
(41 Units)

A New Spatial Development Plan

Area in Acres	69,400
Population	417,500
Industries	2,600
Villages & Towns	80+
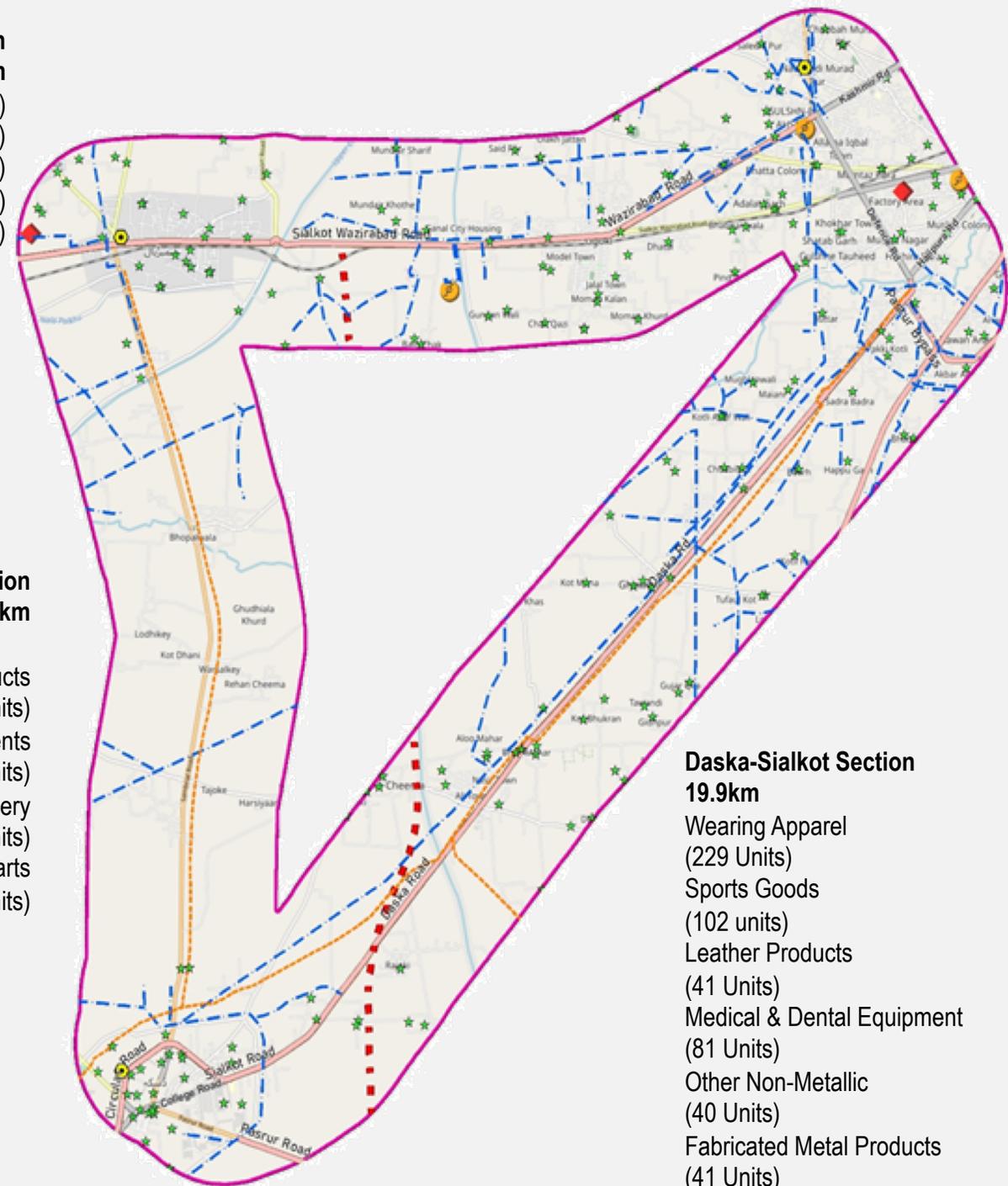
Lessons Learned in Using Spatial Data in State Govt.

- Creating interface between domain expertise & spatial data
- Creating interface between law, rules & spatial data
- Creating data sharing mechanisms
- The challenges of scaling up and scaling across
- Finding data and analytical expertise
- How to successfully run a data-oriented project?
- Choice between centralization & decentralization?
- Specialized data organizations?

Thank You