RAIN
Regional Agro Industrial Network

Planning for the food value chain in Kenya

DASUDA
Dutch Alliance for Sustainable Urban Development in Africa

Remco Rolvink

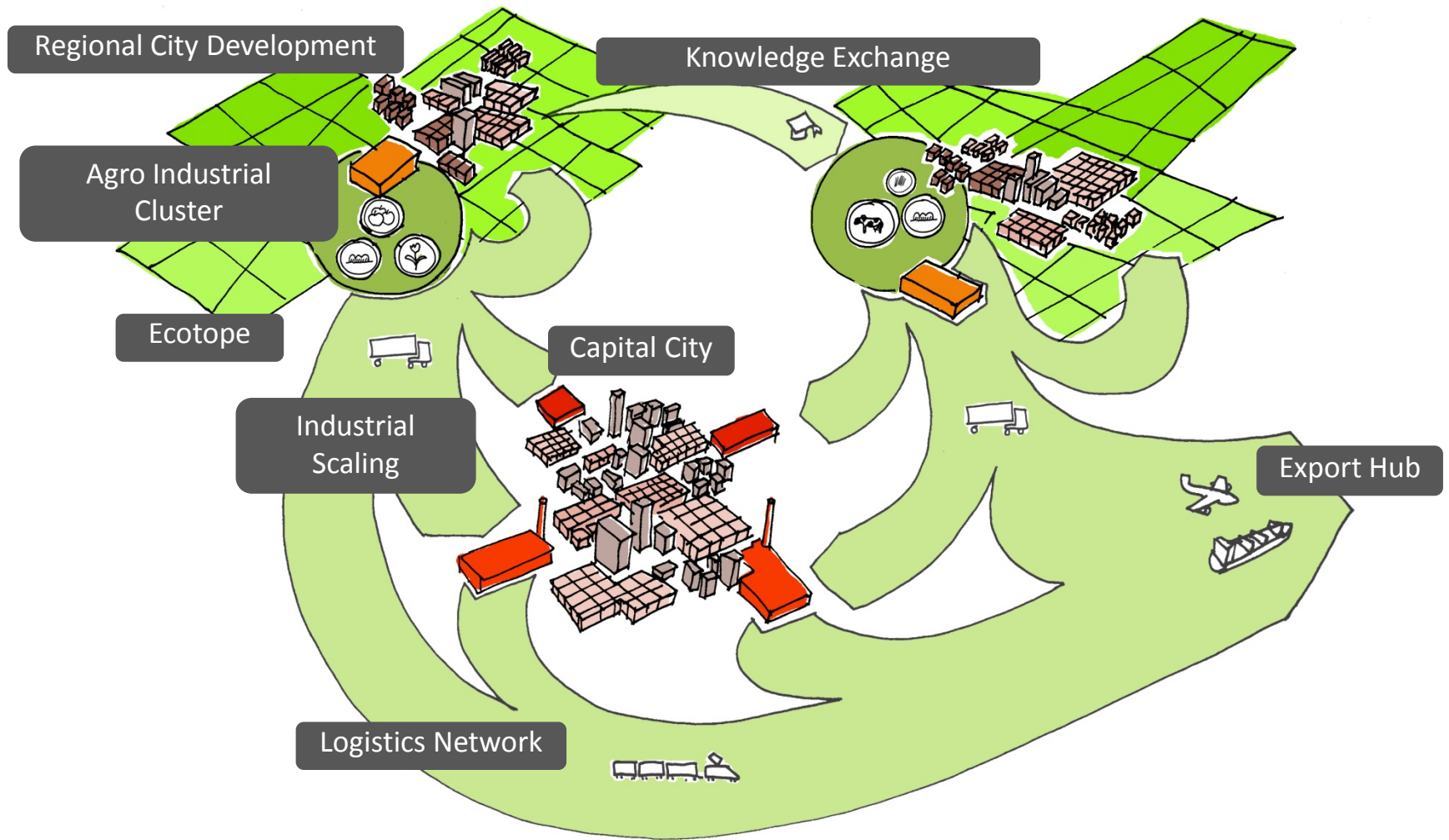RVO REBEL WAGENINGEN UR *For quality of life* THE CHAMPIONS

WHY RAIN

- Planning is a critical issue with current rapid urbanization
  - Traditional farming under pressure by sprawl
  - Insufficient infrastructure and facilities

- Not fully using agricultural potentials

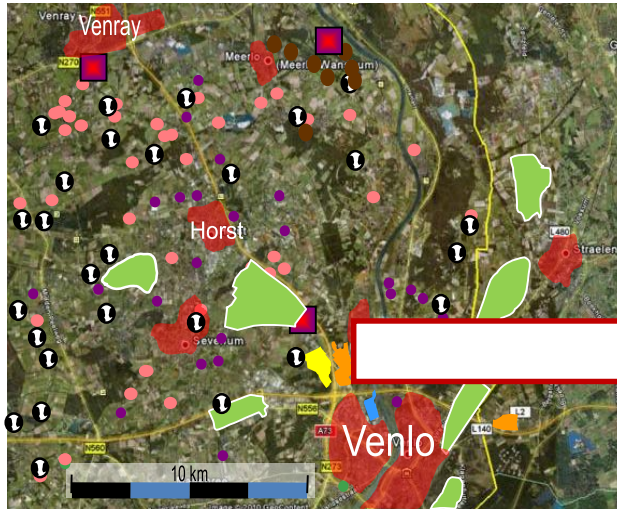- Need for a <u>strengthened urban-rural relationship</u> <u>to enhance economy and liveability</u>

RAIN CONCEPT

Regional City Development

Knowledge Exchange

Agro Industrial Cluster

Ecotope

Capital City

Industrial Scaling

Export Hub

Logistics Network

An Intelligent Network

RAIN PROJECT EXAMPLE

Legend:
- Greenhouse Area
- Consolidation Centre
- (Sub)urban Area
- Isolated Greenhouses
- Large Scale Pig Farm
- Large Scale Chicken Farm
- Large scale Dairy Farm
- Floriade Horticulture Expo
- Harbour
- Industrial Ecology

Consolidation centre Freshpark Venlo

- 130 ha
- 130 companies
- 1500 jobs / 3000 in the season
- 3th largest logistic area of Holland
- Result of 10-15 years of integrated planning and development

Symbiosis and Cooperation | Network Cluster Greenport Venlo

DUTCH APPROACH WITH KENYAN PARTNERS

- Project and mutual process

- <u>Link policies, planning **and** realization</u>

- <u>Participatory process</u> between Counties, Dutch team and businesses

- Integrating disciplines

The concept

MISSING LINK IN SUPPLY CHAIN

Production
- Greenhouses
- Rotation scheme based on market fluctuations
- Consistent quality of produce

Processing
- Storing of bulk
- Structural knowledge training
- Chemical and esthetical control
- Certification

Marketing
- Specific processing on request
- Fixed prices
- Reduce time through DA
- Continuous supply

Regional farmers

Local farmers

RAIN

- Feedback

Direct sales

- Procurement
- Wholesale
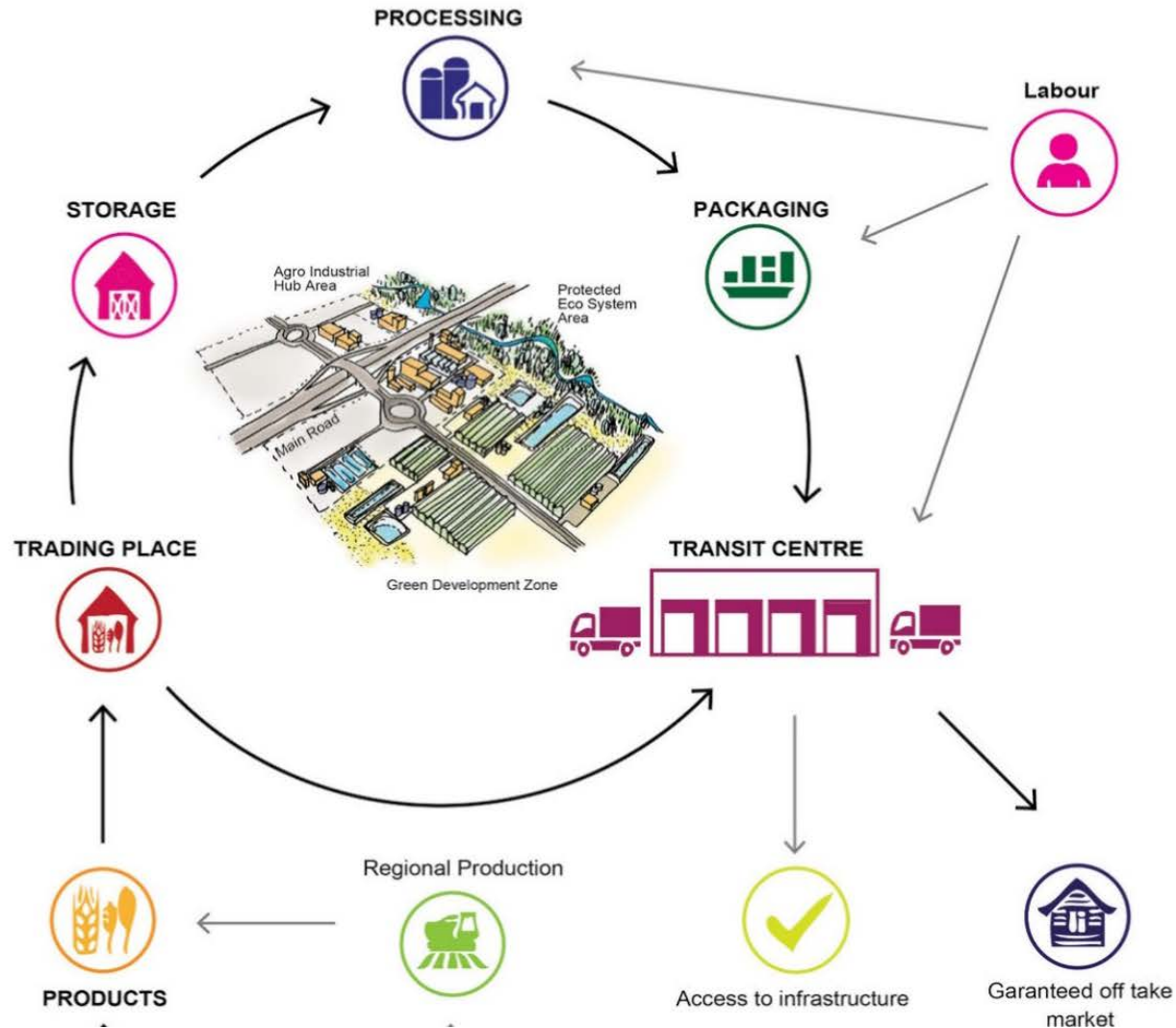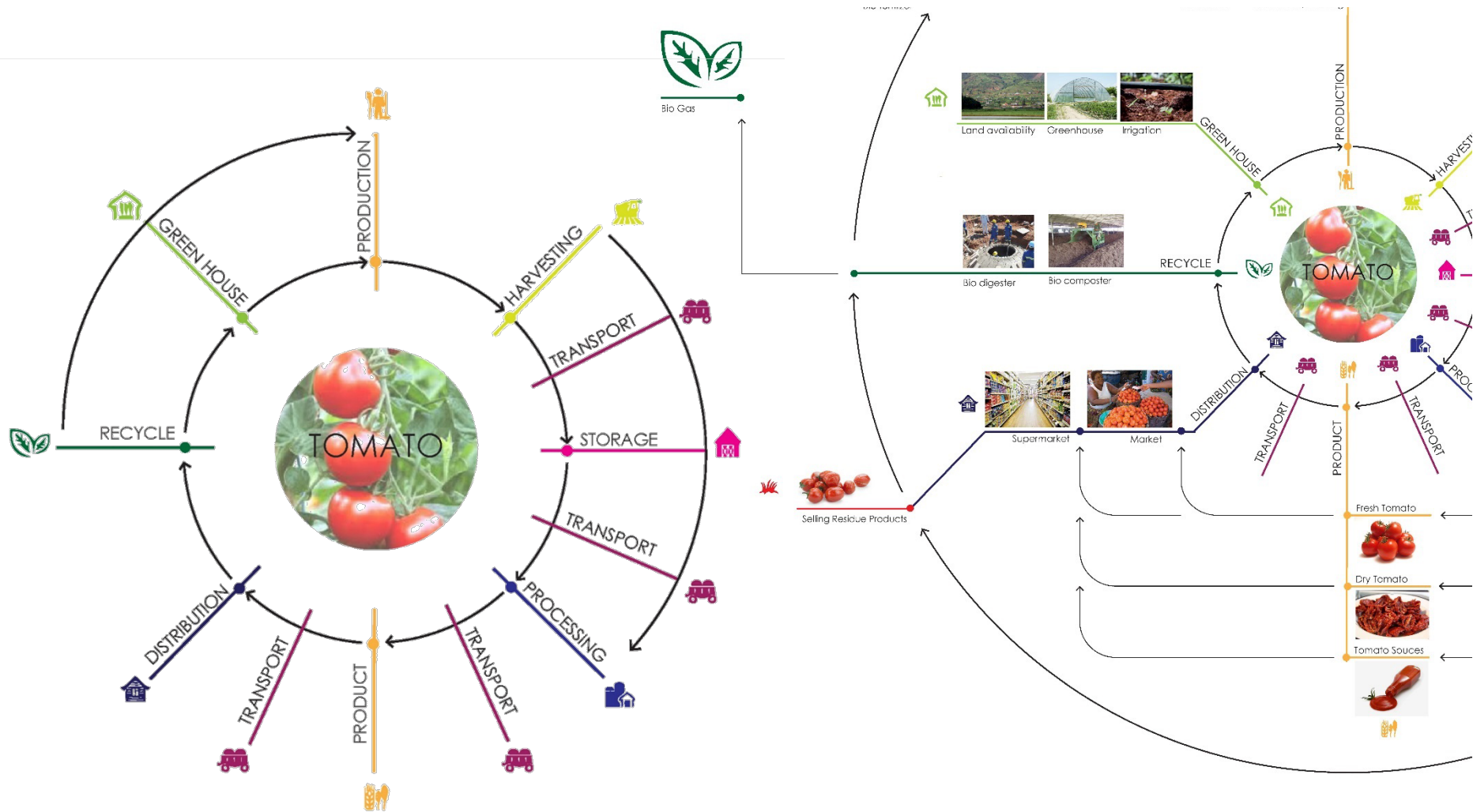- Auctions

Proposed RAIN supply chain

CLUSTER OF AGRO BUSINESSES

RELATED ACTIVITIES IN THE CHAIN

Tomato as indicator crop showcased her in the value chain approach

IDENTITY AND ROLES

- Agro industrial cluster can function as a <u>transit hub</u>, <u>processing and packaging facility</u>, <u>trading place</u> or <u>full greenport</u>

- A <u>business-driven network</u>: trade, retail, growers, etc. with interdepended demands

- A <u>facilitating role for local governments</u>: land availability, water, power and infrastructure

Planning to succeed

CURRENT IDEA OF CITIES

County map of Uasin Gishu in towns and urban centres

Current built up area mapped by satellite data ESRI to GIS
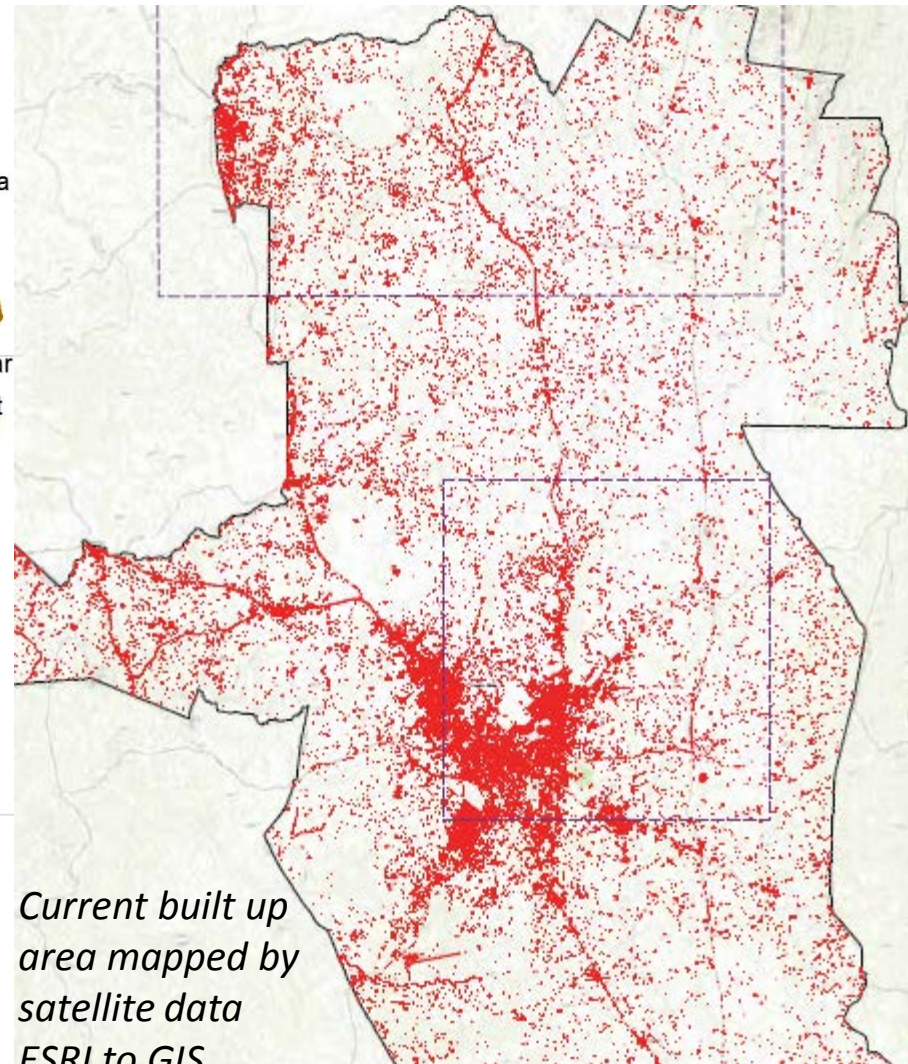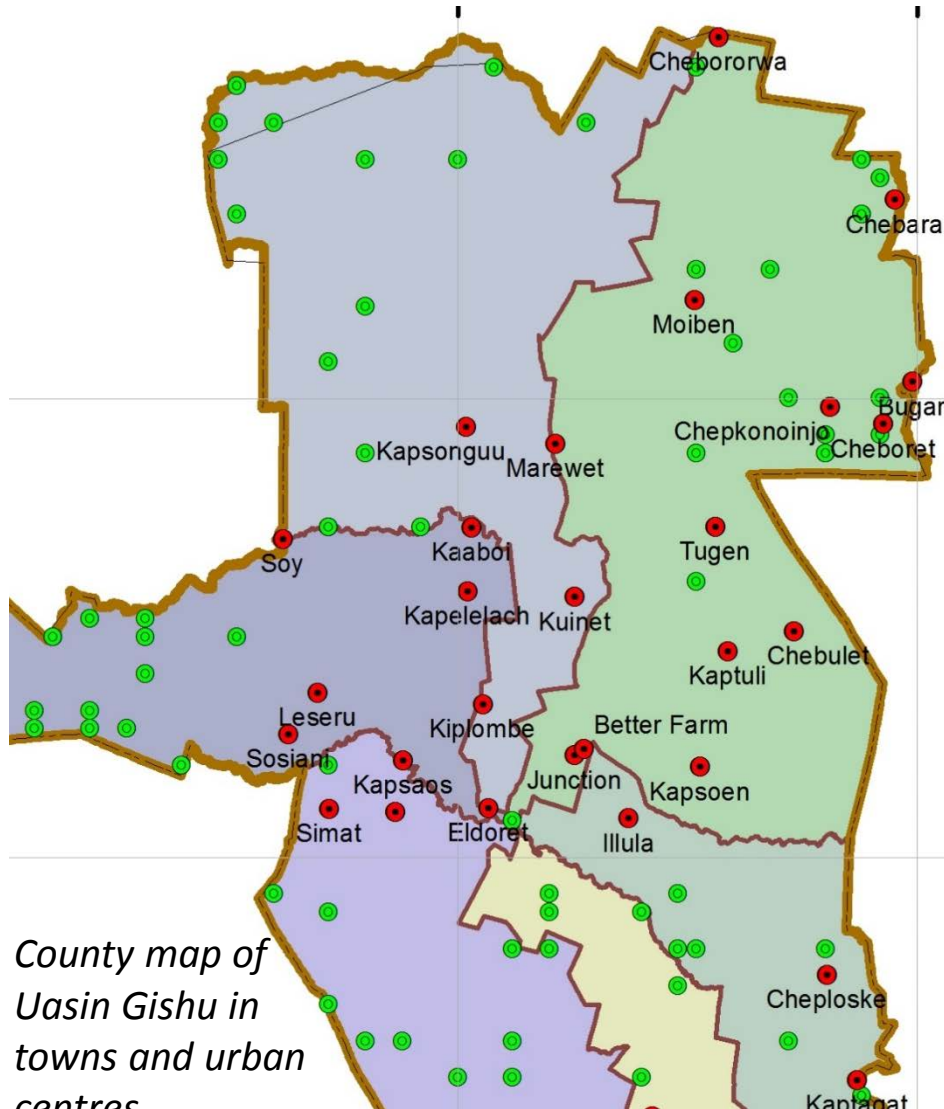
REAL URBANISATION SITUATION

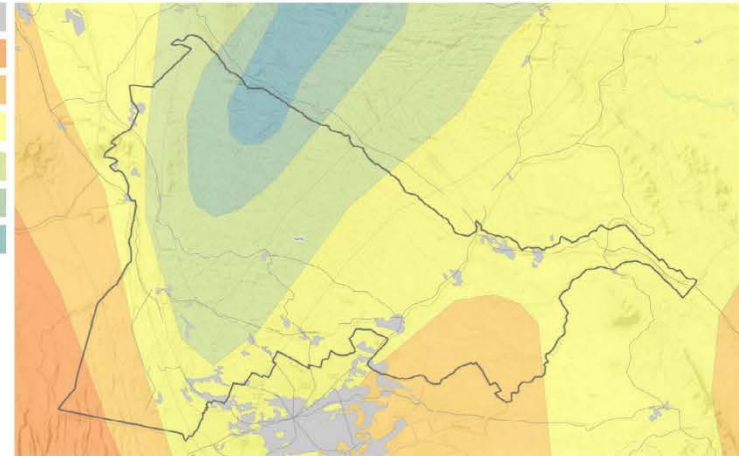*Uncontrolled, informal, land consuming urbanization (Kiambu, Thika Highway)*
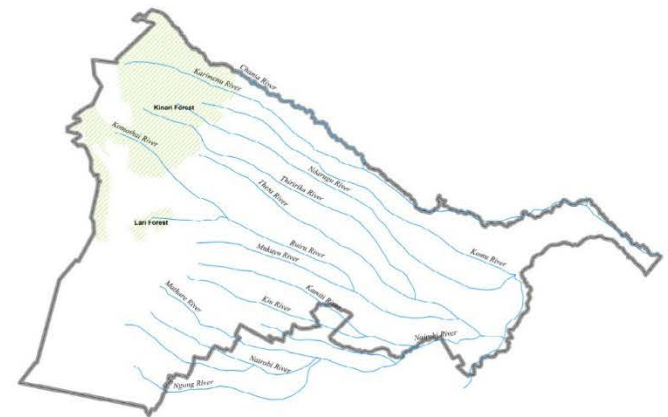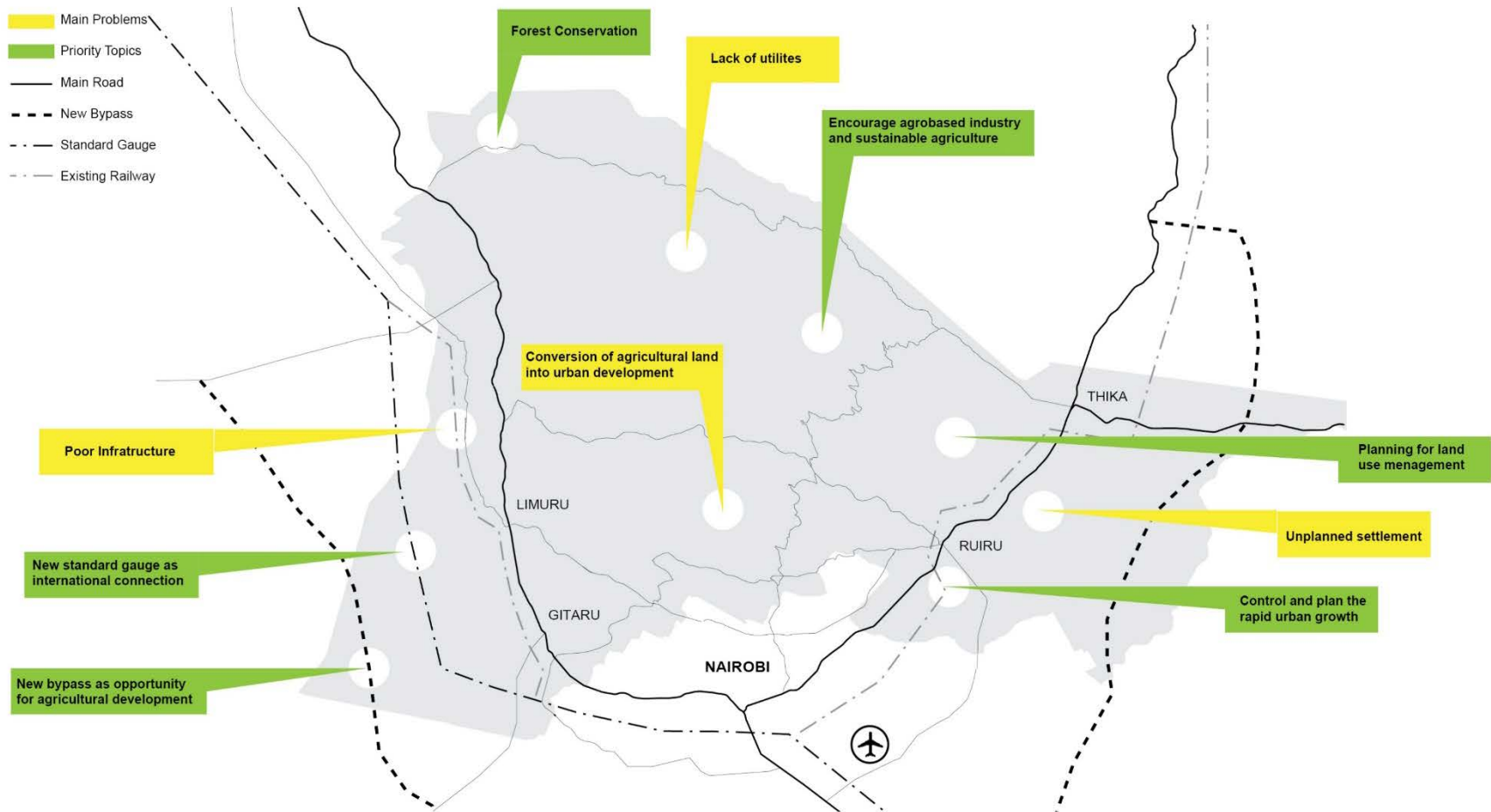
REGIONAL PLANNING ON BIG DATA

County of Kiambu; GIS data analysis on soil, rain, rivers and land use

CHALLENGES AND OPPORTUNITIES

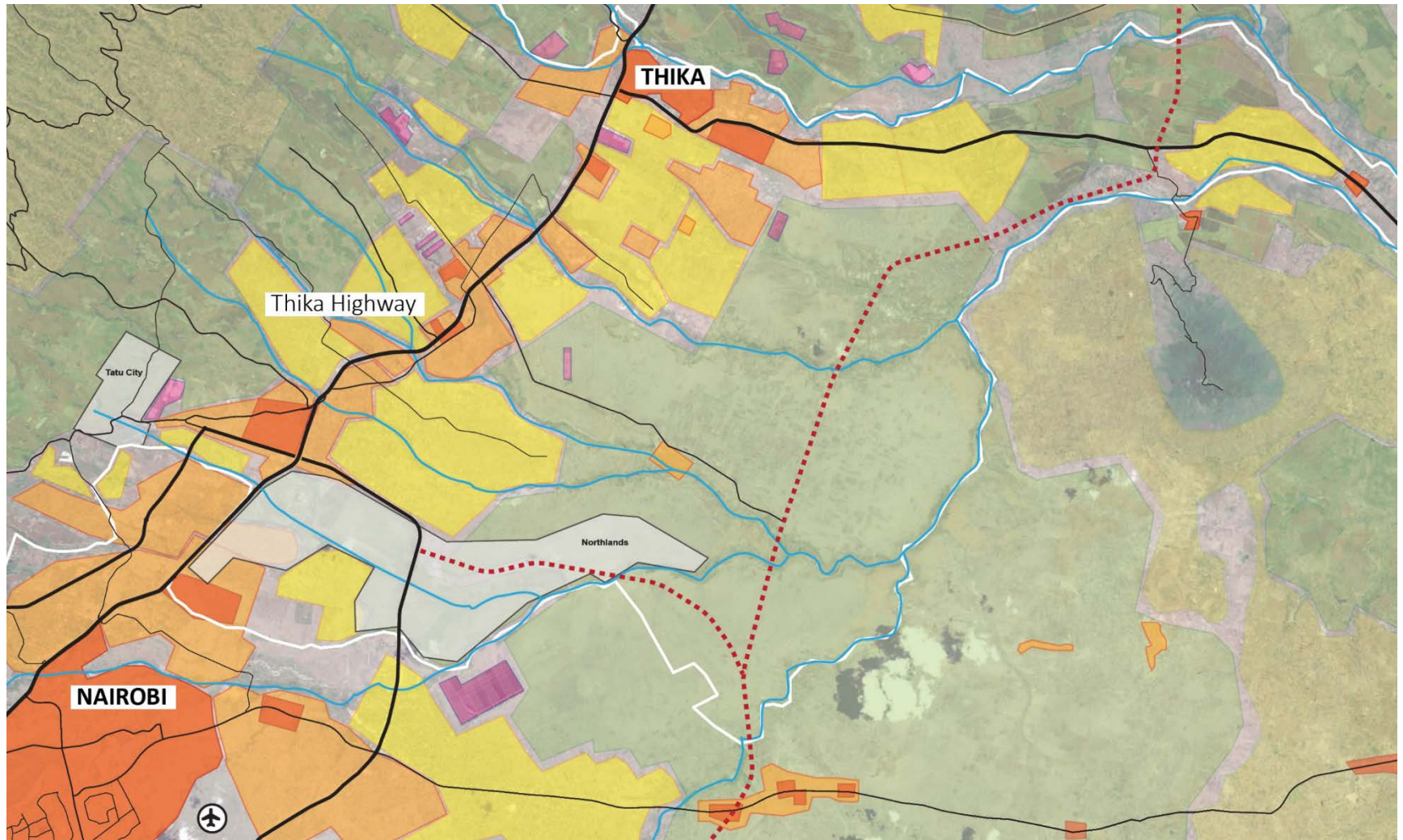*Prioritizing main influences to define best potential locations for Agro Industrial development*

STRATEGIC PLANNING

Abstract mapping of main spatial aspects to define focus areas for the subject
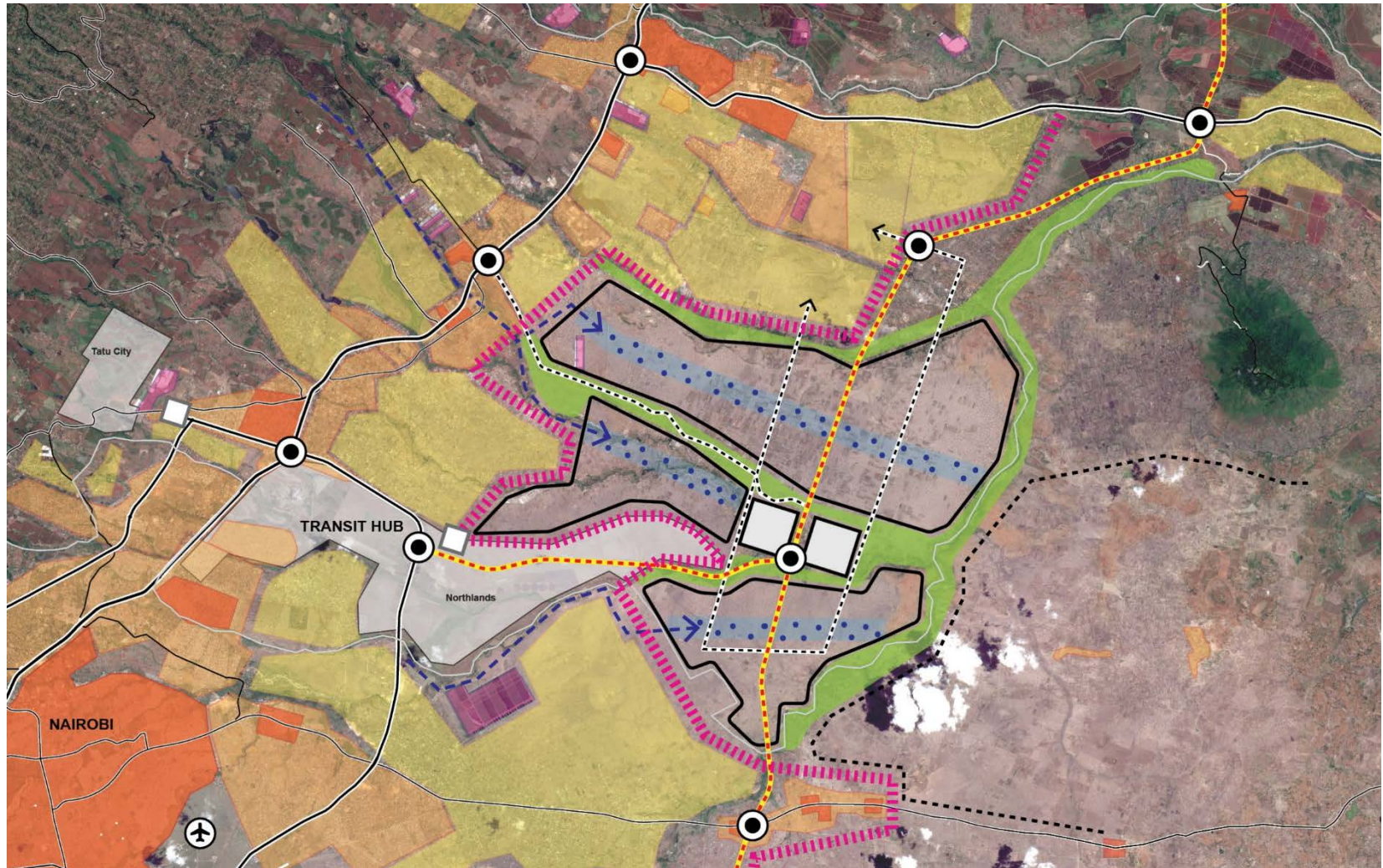
BASEMAP ANALYSIS

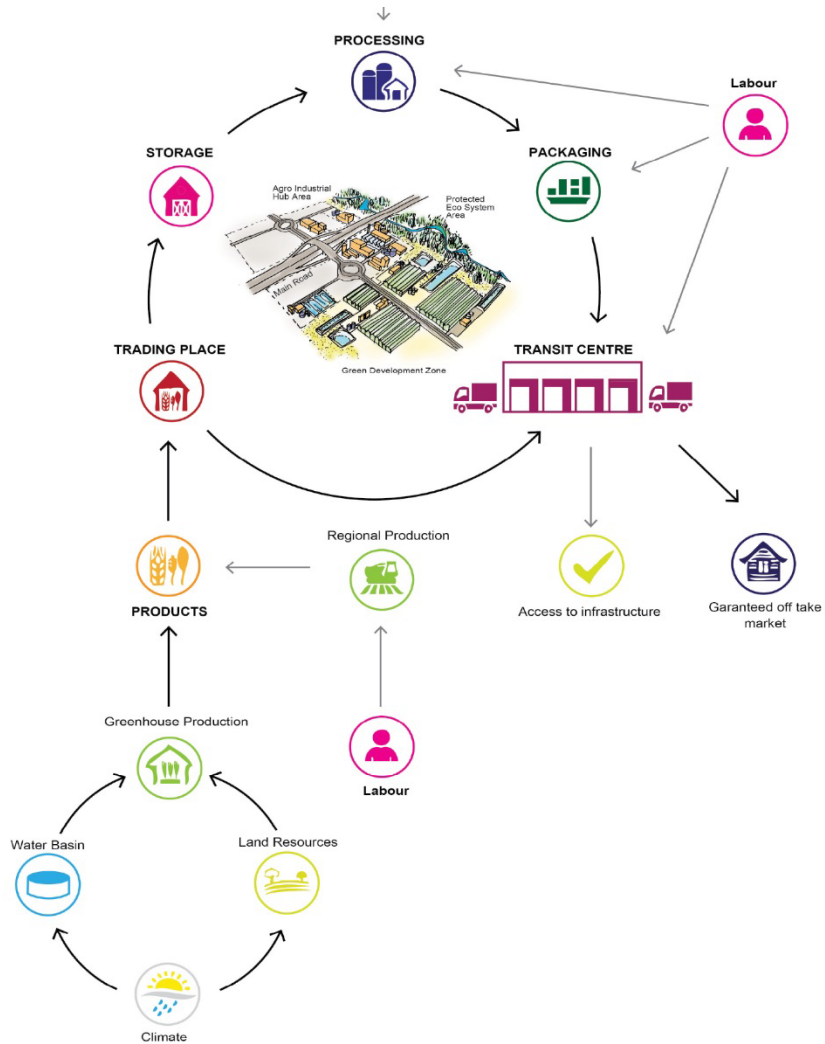*Basemap analysis of urban status of eastern Kiambu area*

STRATEGIC SPATIAL DEVELOPMENT

A strategy for dealing with the rapid urbanisation and marking key areas to steer structure and use

# GREENPORT: production+processing

CRITICAL ISSUES GREENPORT

Requirements for establishing such a cluster and production site are:

- Robust business cases for the individual functions

- Long term perspective on availability of land

- Accessibility to sufficient quality water

- Skilled growers who want to learn and innovate.

- Greenhouses management and maintenance.

BOTTOM UP APPROACH

AGRO INDUSTRIAL CLUSTER **PHASE 1**
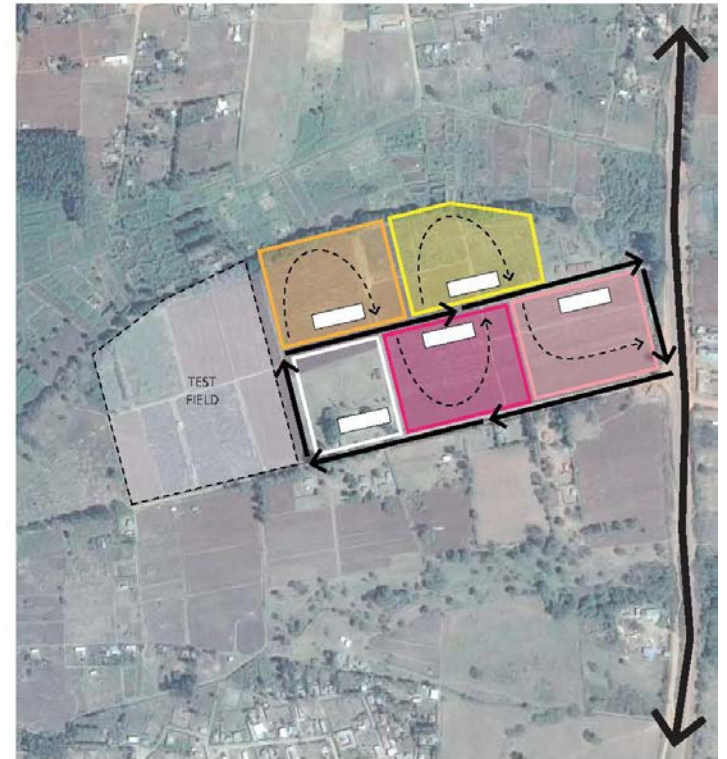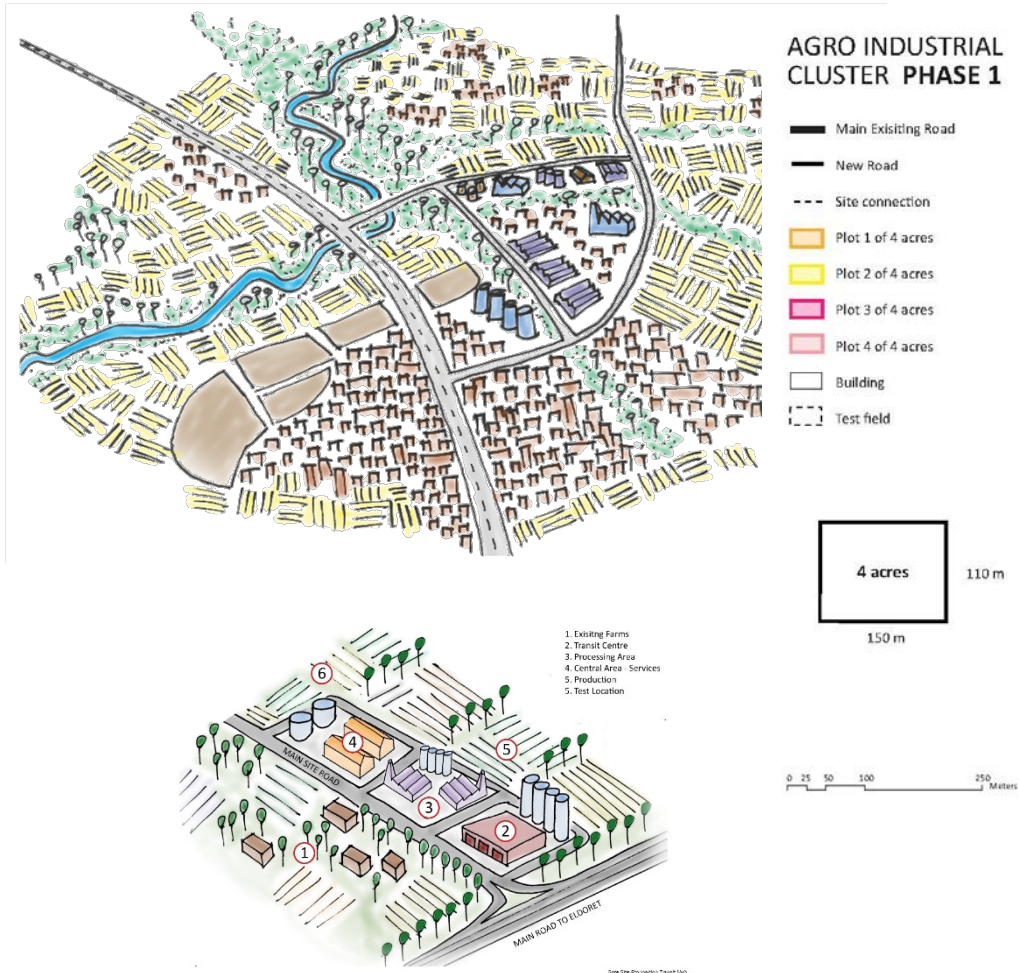
Enhancing economic development by mutual interest of participating companies in the cluster

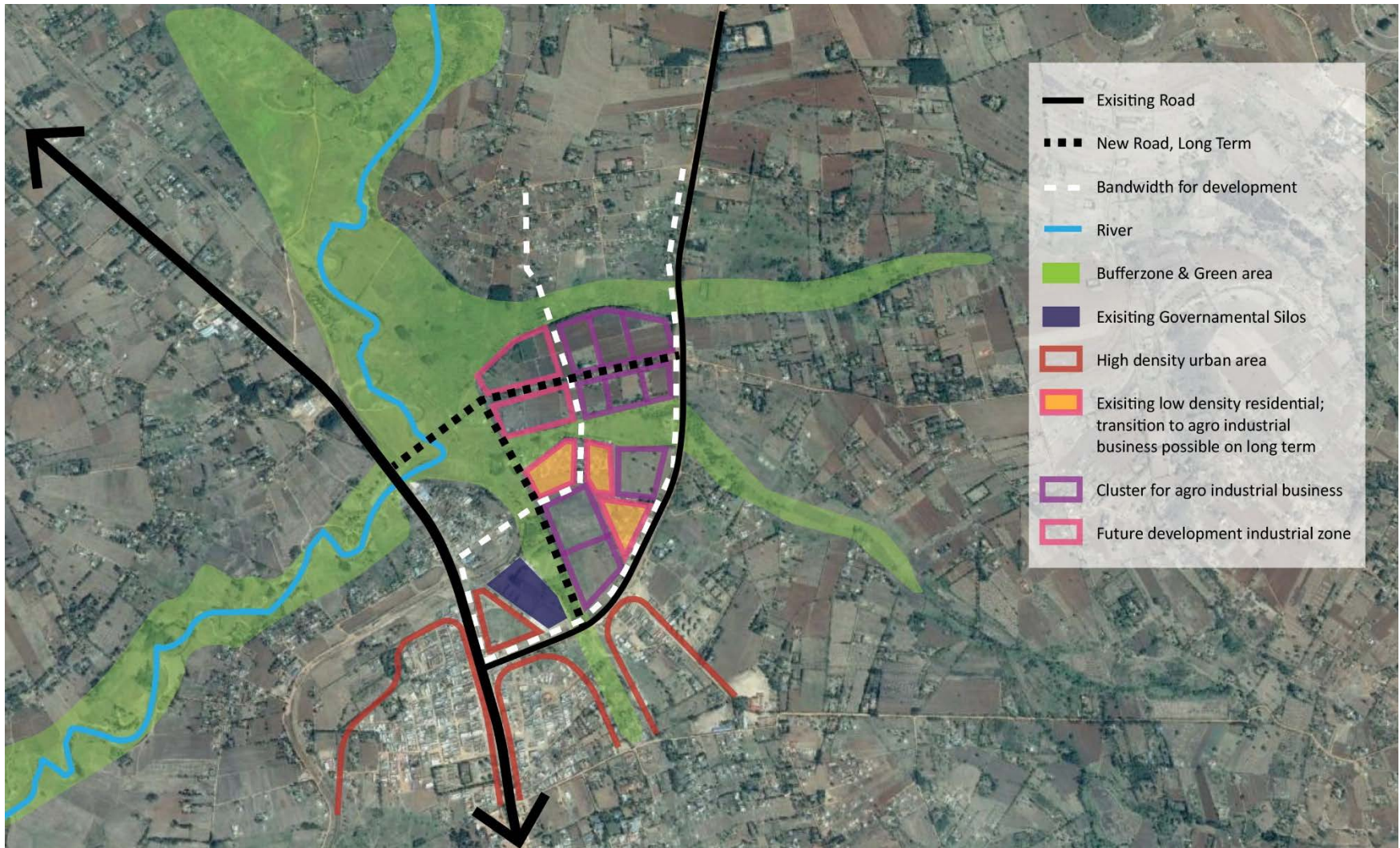# PLAN FOR AGRO INDUSTRY CLUSTER

Exisiting Road
New Road, Long Term
Bandwidth for development
River
Bufferzone & Green area
Exisiting Governamental Silos
High density urban area
Exisiting low density residential; transition to agro industrial business possible on long term
Cluster for agro industrial business
Future development industrial zone

Study for a spatial framework for Agro Industrial Cluster in Moi's Bridge

BUSINESS CASE

- <u>Masterplanning</u> a designated zone for the cluster
- Defining <u>investment & exploitation cost </u>parameters
- <u>Revenues</u> (lease, services)
- <u>Phasing</u>
- <u>Economic Cost Benefit Analysis</u>: Why is this development good for the region and its people?
- Exact choice of <u>consession model</u> based on parties, situation and sectors

In the workshop I would like to explore the ways in which <u>business can be interested for/participate in the implementation stages</u> of this concept.

Thank you.

Remco Rolvink