

A bird's eye view of the Vivid Picture analytical framework

*Decision support tools for understanding
the nature of sustainable food systems*

APA conference March 21st, 2005

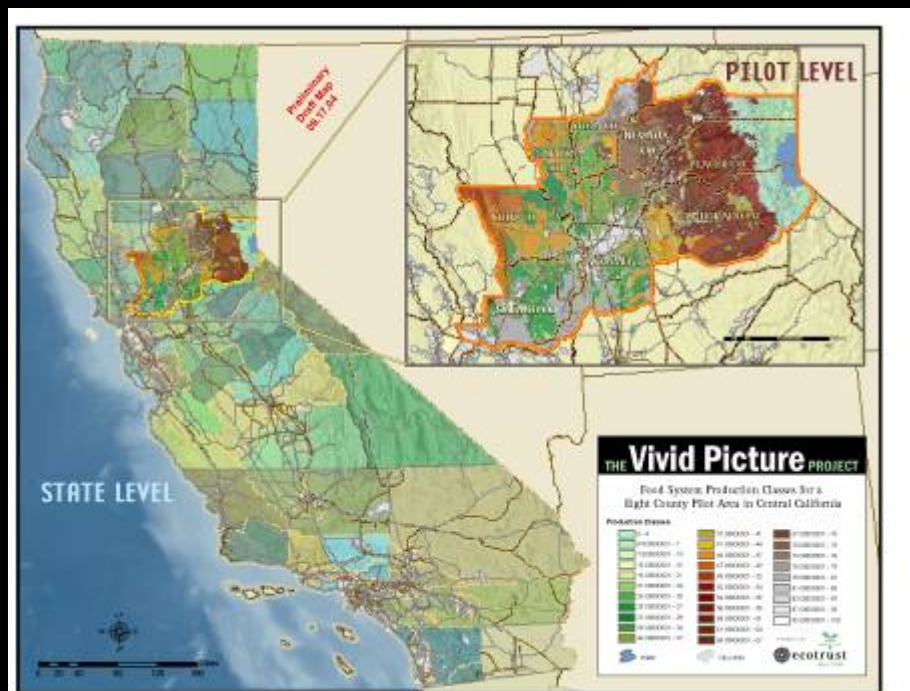
The Vivid Picture toolset

A spatially integrated analytical framework that facilitates the construction and measurement of a sustainable food system through specific processes including:

- Projections from credible sources (e.g. projected population by county)
- Proposed constraints (e.g. riparian zone protection)
- Recommended "targets" (e.g. USDA recommended healthy eater diet)
- Cumulative measured characteristics from system type placement tools (e.g. number of acres under organic production)

Why spatially integrated?

- The food system is inherently spatial
- Allows for evaluation of economic, environmental and social data in one common framework.
- Intuitive graphical outputs (maps)



System process

- Database driven with spatial components (GIS)
- Spatial data gives as inputs
- User defined assumptions that represent potential policy/planning decisions

Proximity to markets

Elevation data

Climate data

Land cover

Food Systems Community Visioning Tool: Outlet parameter inputs

Outlet placement | Distribution interactions | Economic characteristics

Outlet type: user defined | Outlet type name: o_1c | Proportion of perishable items purchased from local sources: 19 %

Placement characteristics:

- Placement rule: sales area demand, location demand, gravity based
- Maximum distance a person will travel: 8 miles
- Sales area (area of influence): 2 miles
- Proportion of business within sales area: 50 %

Grocery sales characteristics:

- Max sales (capacity): []
- Min sales (profitability): []
- Proportion by product (100%): 100 %
- Vegetables: 30 %
- Fruits and nuts: 27 %
- Poultry: 12 %
- Other meat: 15 %
- Dairy: 12 %
- Other: 4 %

Buttons: Defaults | Cancel | Place outlets | Run model | Help

Farmer

What's given in 2030?

■ Population

- Trends and projections from State of California

■ Land use constraints

- What can be grown where: AEZs used in conjunction with correlation analysis of existing crops and suitability analysis considering effects such as:
 - Proximity to market
 - Land use (wildlife corridors, riparian buffers, etc.)
- Urban growth projections (J. Landis).
- Other constraints: retired soils, commodity crops.

The Vivid Picture emerges: two scenarios

Get fresh!

- Healthy diet, eat more local food
- People eat more fruit and vegetables

Supercenters

- Current trends: “California is wide open for supercenters”
- Current expenditures by product

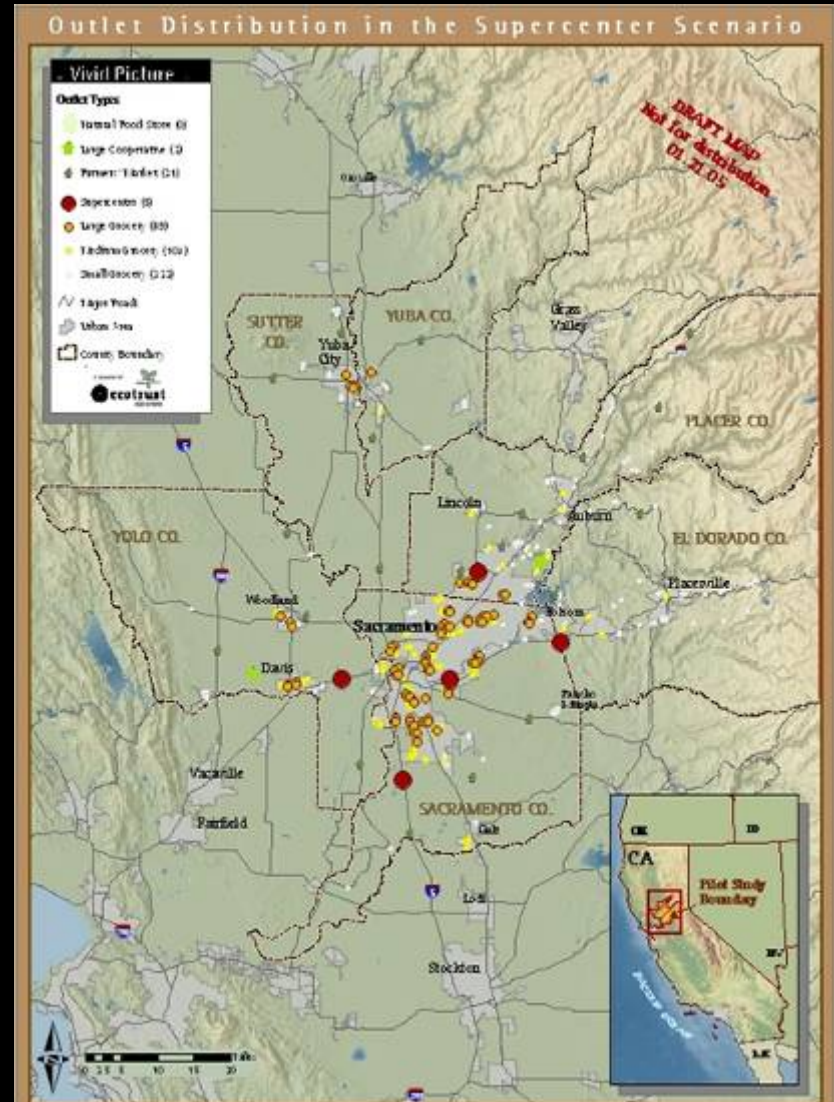
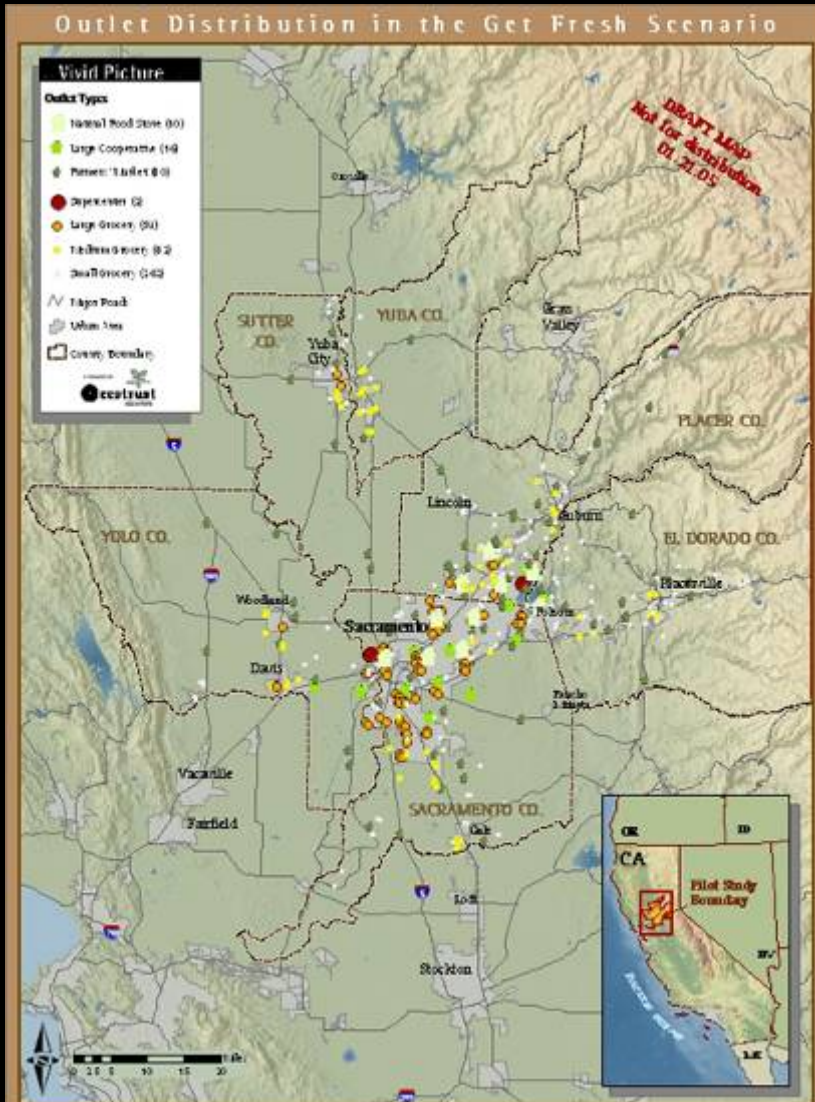
→ eater preferences drive expenditure by product categories

→ product categories linked to outlet types, which link to production through specific value chains

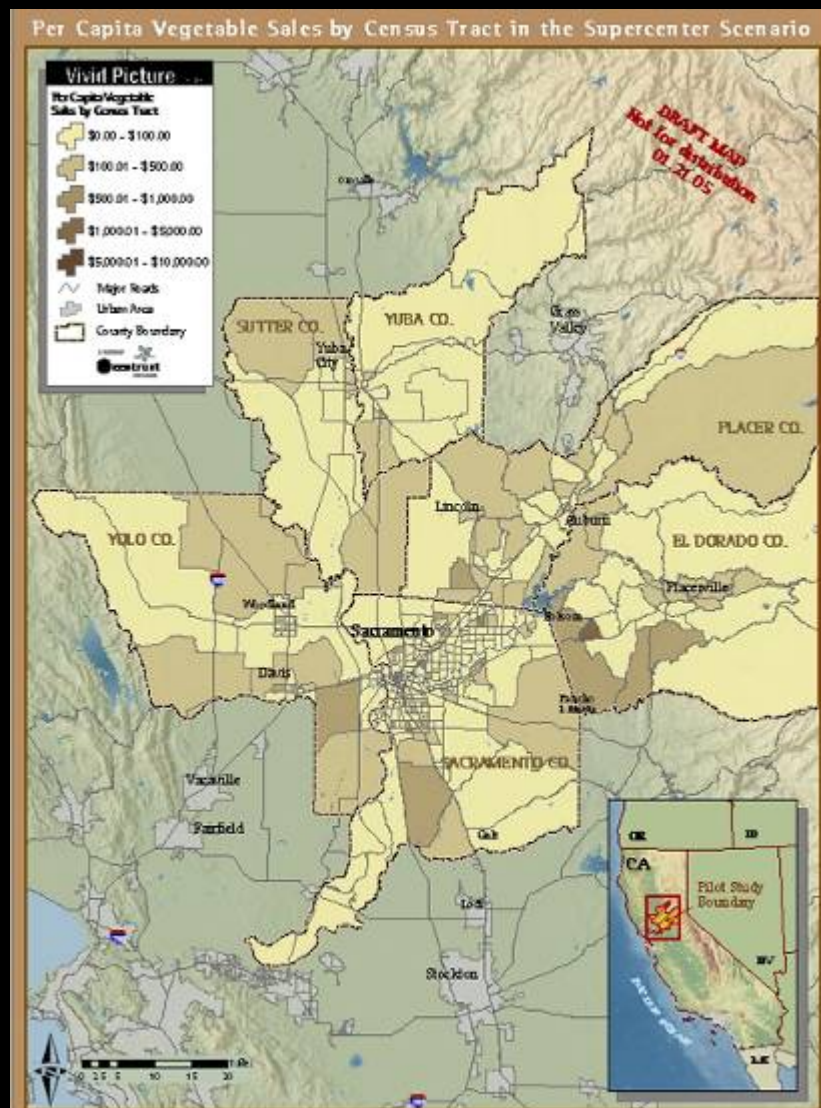
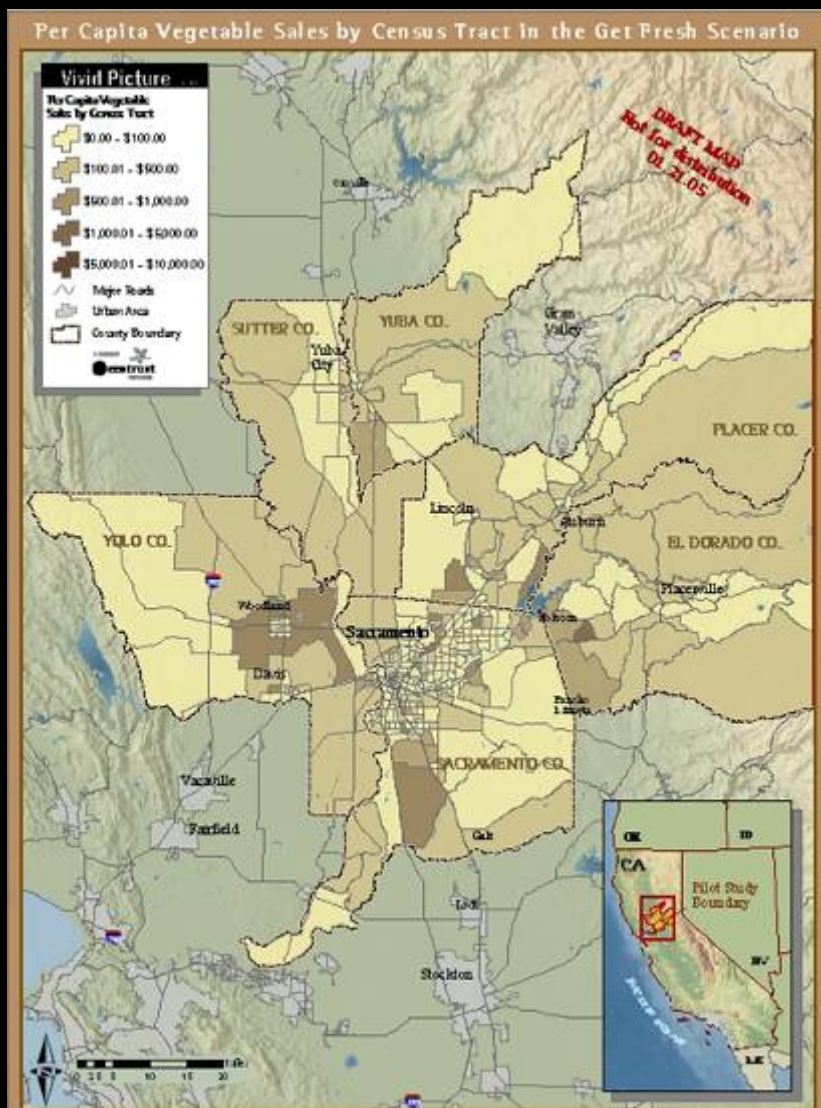
→ link to Change Agenda: e.g., influencing consumer preferences has implications on the landscape.



Where are the food outlets?



Vegetable sales



Conclusion

- Measuring the system through indicators
- Next steps