So often complex problems are only addressed one piece at a time within specific areas of deep expertise. MIT Collaborative Initiatives believes an approach that includes the entire system surrounding an issue and brings together many layers of expertise from within and outside a problem area, leads to broad, innovative change.

Tenley E. Albright, MD
We can apply a systems based approach such as that used in architecture or engineering to complex social issues to:

1. Better identify the problem
2. Clearly define a solution
Refocusing the Food System

Project Team

Urban Design Lab:
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In 2006, the total cost of obesity in the United States was estimated to be $147 billion.

Graphic: Urban Design Lab Team
Childhood Obesity Prevalence, 1963 - 2006

Source: CDC NHANES Data
Refocusing the Food System

- **INTAKE**
  - 7% soft drinks
  - 11% vegetables, fruits, and juice
  - 23% meat and dairy
  - 34% other
  - 12% sweets, desserts
  - 9% bread, rolls, crackers
  - 4% alcoholic beverages

- calorie imbalance stored as weight gain

- **EXPENDITURE**
  - 60% resting energy expenditure
  - 35% activity energy expenditure
  - 5% thermic effect of feeding

**2750 calories**
Increasing food consumption in the U.S.


Graphic: Urban Design Lab Team
Refocusing the Food System

Manhattan Supermarket Salescape

Upper East Side
Harlem
Upper West Side
Midtown
Refocusing the Food System

Obesity in Chicago

Food Access in Chicago

Obesity in New York City

Food Access New York City

Sources:
**Childhood Obesity Project**

**Why address the Food System to challenge Childhood Obesity?**

**Phase I Decision Map**

- **Childhood Obesity Epidemic**
  - Researched Root Causes
    - More calories taken in than used causes obesity
    - Physical Activity
      - PA vital for health but increasing physical activity alone will not effect pop. wide change
      - *must burn 3500 calories to Lose 1 lb = app. 17,500 sit-ups (@4.8 calories/min.)*
      - Many orgs. involved in promoting physical activity including new gaming tech. such as Wii - NOT PROJECT FOCUS
  - Calorie Intake
    - Not only are Americans taking in more calories (app. 19% inc. since 1960) the content of the calories has changed with the rise of processed foods
    - Food Quality
      - Access and Affordability
      - Food System

- Researched Current Interventions
  - Many groups across country working to address epidemic on local and community level
  - Programs having limited success because couldn’t control food environment outside their boundaries
    - No coordination of efforts therefore constant series start-ups - many orgs. such as Robert Wood Johnson addressing this issue - NOT PROJECT FOCUS

Typically, interventions to fight obesity have been done on an individual basis. However, to effect population wide change requires a larger environmental shift. The food system represents that broader challenge.
Refocusing the Food System
With the support of United Healthcare, MIT and Columbia researchers determine an essential key to challenging Childhood Obesity Epidemic is Food System reform.

**Current Food System**

- **A**
  - Availability Roadblocks
  - Affordability
  - Access

- **B**
  - Structural Roadblocks
  - Transportation Infrastructure
  - Retail Models
  - Supply Chain Development
  - Adequate Healthy Food Supply

**Need for Food System Reform**

- **C**
  - National Integrated Regional Food System
  - New economic models
  - New retail models
  - New production models
  - New processing models
  - New transportation models
  - New education models