Domicology: Changing the CEM Paradigm

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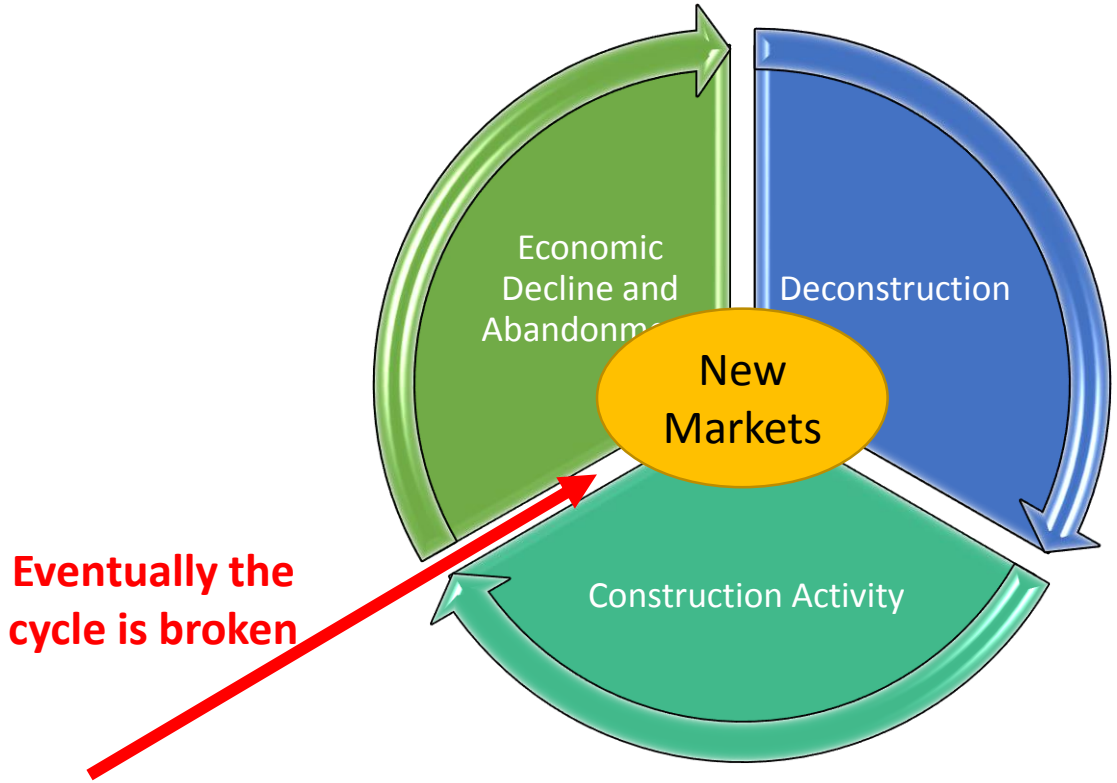
Shifting the CM Paradigm

- Domicology changes the role of construction management in community and economic development

Traditional Concept Model

New Concept Model



Materials and Supply Chain

- Materials and markets are at the core of this paradigm shift
- Material quality and quantity varies by “skim”
- 1st Skim – fixtures, copper, commodities
- 2nd Skim – More difficult to remove commodities
- 3rd Skim – High volume, low value materials

Materials and Supply Chain

- Upper Great Lakes has an abundance of such "3rd Skim" material
  - 'Other vacant' = 264,660 homes
  - Potentially-available lumber **~1.5 billion BF**
  - Estimated value **~$3.45 billion**

- Other high-value materials include bricks/blocks, flooring, steel scrap etc. Concrete had additional costs for processing before reuse or sale as aggregate

Salvagable Materials Available after 3 Skims.	
S.No	**Material name**
1	Framing Lumber
	1.1. Size 2*4
	1.2. Size 2*8
	1.3. Size 2*10
	1.4. Size 2*12
2	Plywood
3	Oriented Strand Boards
4	Bricks
5	Blocks
6	Masonry Clay bricks
7	concrete
8	Drywall (Gypsum board)
9	Asphaltic Shingles
10	Wooden Roof Sheathing
11	Structural Steel
12	Flooring
	12.1. Wooden
	12.2. Linoleum
13	Hardwood
14	Barn Wood Siding
15	Wooden panels
16	Stones

Materials and Supply Chain

- Mixed picture on markets
  - Highly location and public policy- dependent
  - Retail vs. industrial; material-specific and limited
  - Transportation modes

- Research needed
  - Location of markets for difficult materials
  - Shipping modes and costs

Shifting the CEM Paradigm - Revisited

- How do we shift our paradigm “norms” in CEM and related fields?

- Potential research areas
  - Predictive cost models
  - Time studies/scheduling concerns
  - Safety practices and models
  - Impact of DFD on (de)construction
  - Assembly construction and performance
  - Post-occupancy surveys
  - Spillover effect
  - Life cycle costs

Thank You!

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