

Creating Value in the Real Estate Development Process

Presented to:

Maryland Association of Assessing Officers

2013 Education Conference

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Academic Director

Introduction

“Real Estate Development is simple business, but very difficult one!”

Clay Emery

- A real-world dilemma
 - Potomac Yard land purchased for \$122 mill;
 - assessed for \$300 million in Arlington and Alexandria, Virginia
- Many Definitions; many Stakeholders; much Confusion

Potomac Yard

300 Acres, 10 million Square Feet



Arlington North Tract
Looking North to DC - wide



All of Arlington South Tract
With Four Mile Run's 4 bridges



Alexandria
Retail Center from West Glebe Road North





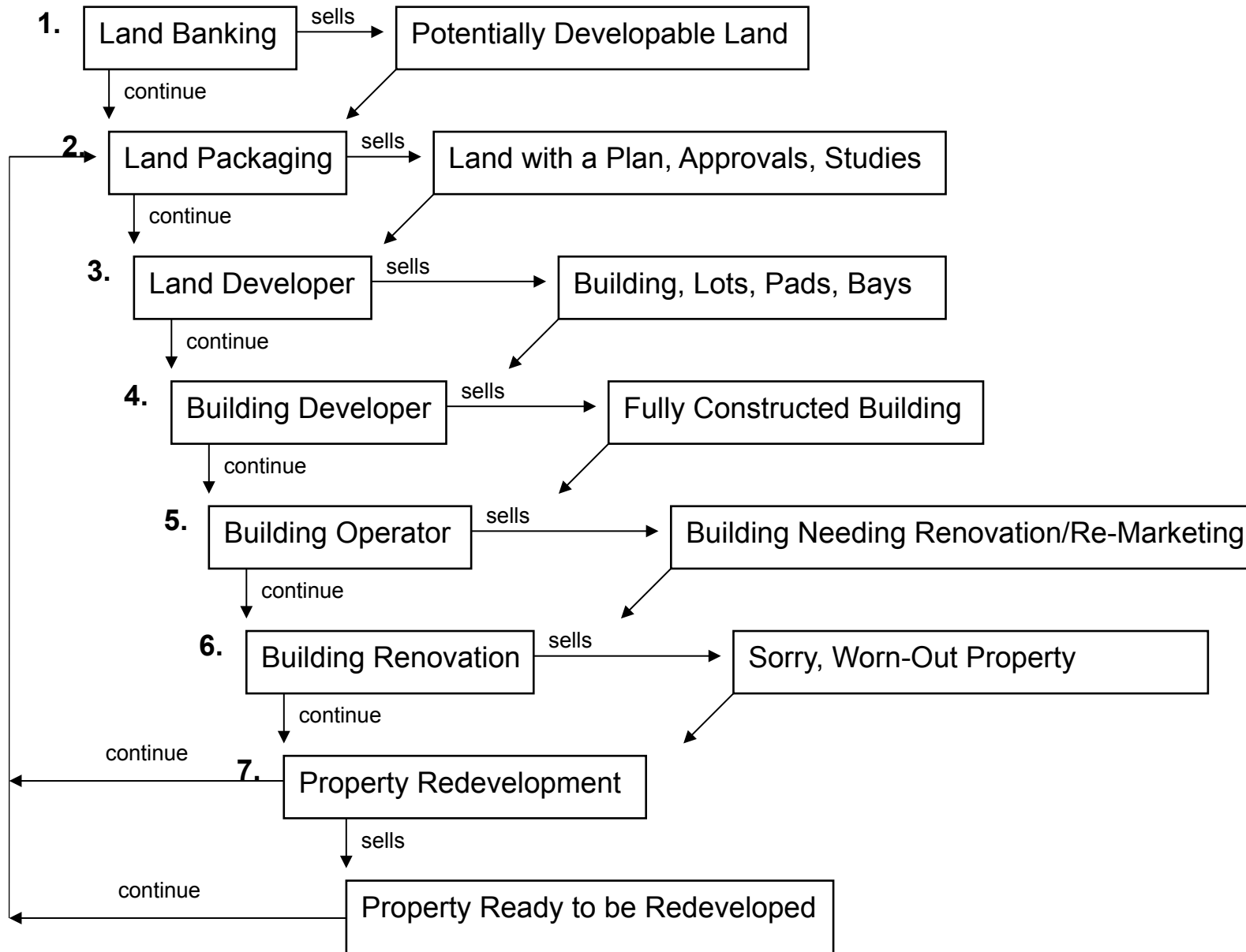
Alexandria
Land Bay A, I, J, & K
From Bridge looking Northeast

Real Estate Development Process

- Traditional Real Estate Text Books
- The Appraisal of Real Estate, Appraisal Institute
- James Graaskamp Approach
- 7-Stage Model
 - Land Banking
 - Land Packaging
 - Land Development
 - Building development
 - Building Operations
 - Building Renovation
 - Property Redevelopment

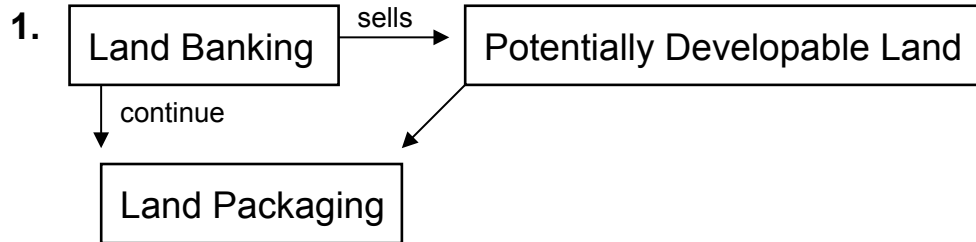
Real Estate Development Process

A Value Creation Process



Real Estate Development Process

A Value Creation Process



Real Estate Development Process

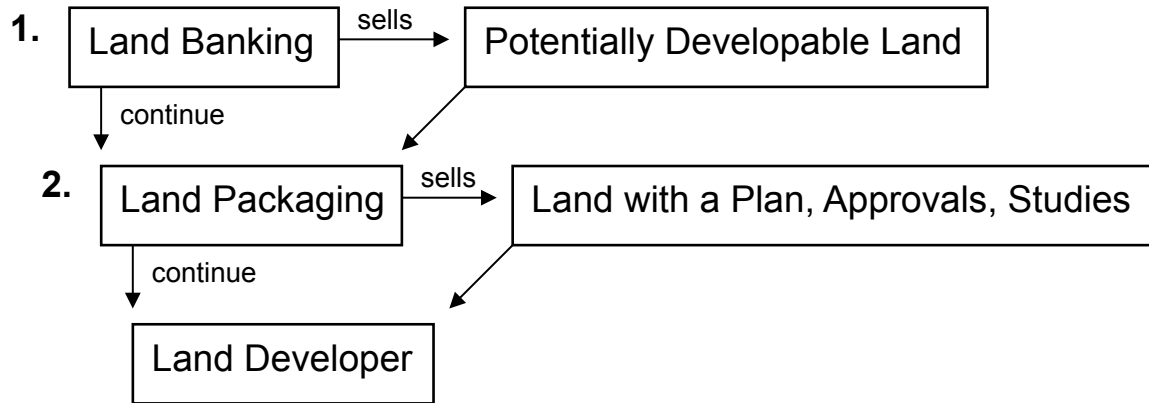
A Value Creation Process

1. LAND BANKING

<i>Buy:</i>	Land w/ Some Potential
<i>Sell:</i>	Land w/ Great Potential
<i>Critical Tasks:</i>	Positive Market Trends

Real Estate Development Process

A Value Creation Process



Real Estate Development Process

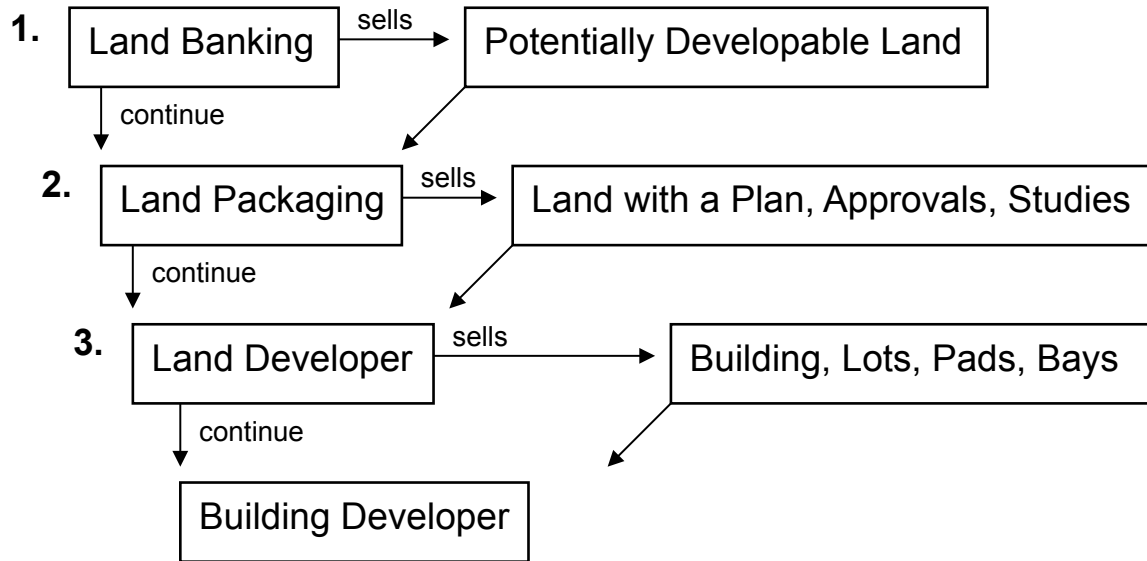
A Value Creation Process

2. LAND PACKAGING

<i>Buy:</i>	Land w/ Great Potential
<i>Sell:</i>	Land w/ a Plan
<i>Critical Tasks:</i>	Approved and Feasible Development Plan

Real Estate Development Process

A Value Creation Process



Real Estate Development Process

A Value Creation Process

3. LAND DEVELOPMENT

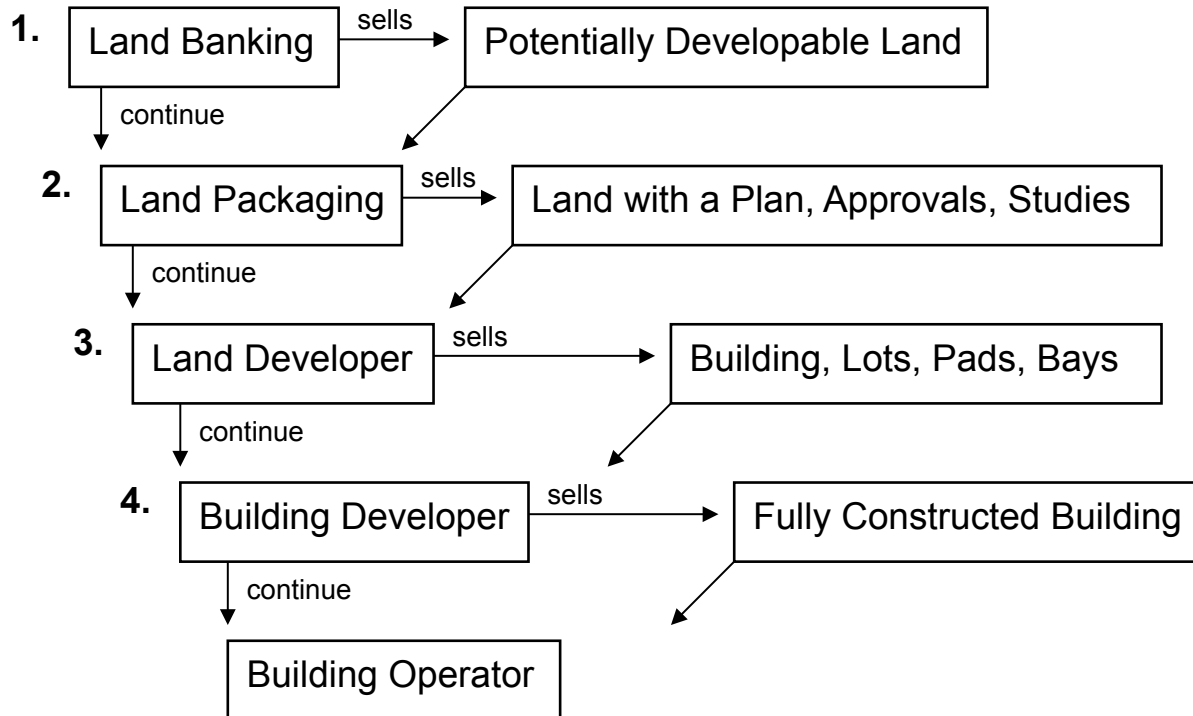
Buy: **Approved and Feasible
Development Plan**

Sell: **Building-ready Pads**

Critical Tasks: **Infrastructure
Construction
on Time, on Budget**

Real Estate Development Process

A Value Creation Process



Real Estate Development Process

A Value Creation Process

4. BUILDING DEVELOPMENT

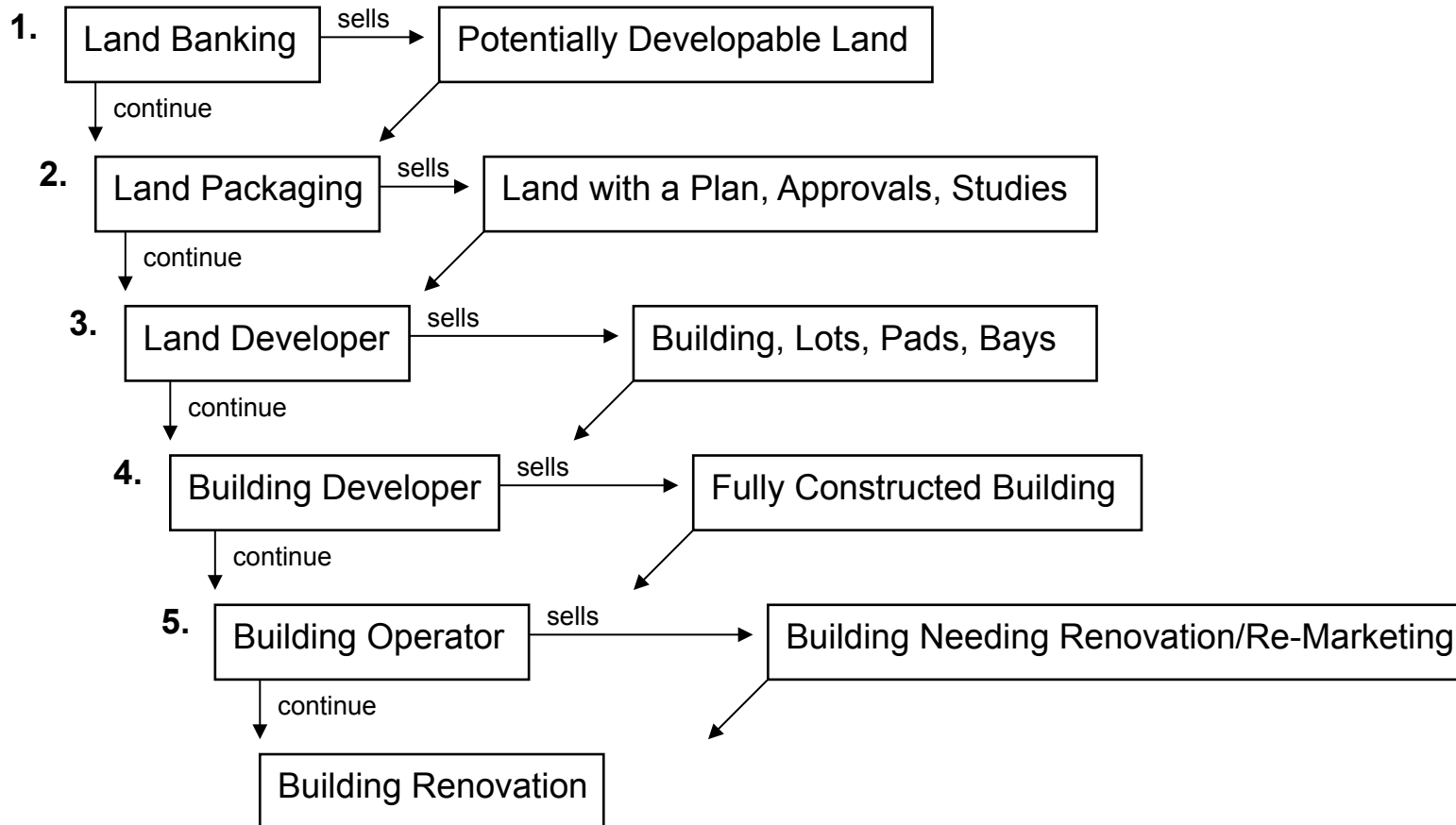
Buy: **Building-ready Pads**

Sell: **Constructed Building
on Pad**

Critical Tasks: **Building Construction
On Time, on Budget**

Real Estate Development Process

A Value Creation Process



Real Estate Development Process

A Value Creation Process

5. BUILDING OPERATION

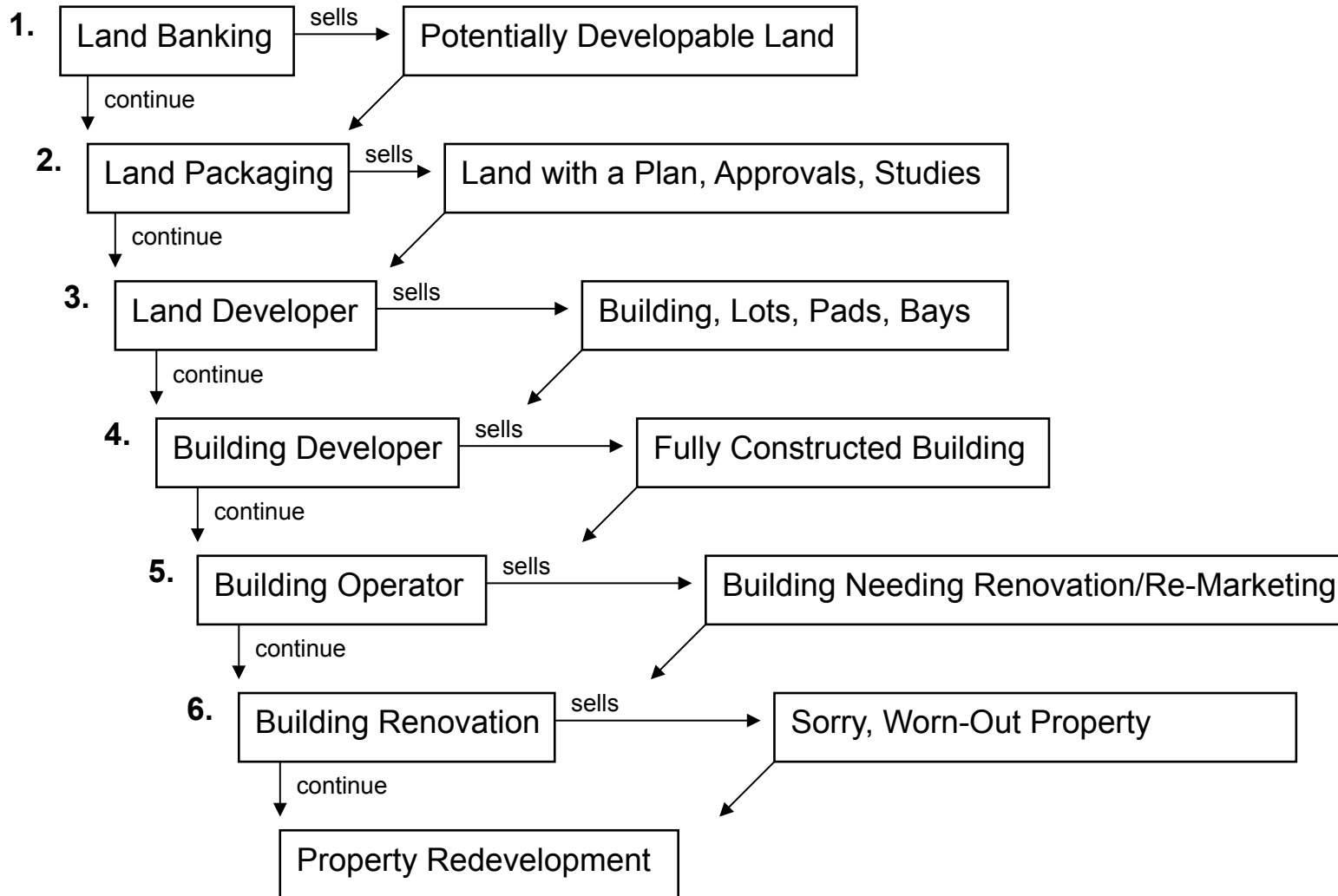
Buy: **Constructed Building**

Sell: **Leased Building w/
Operating History**

Critical Tasks: **Lease-up, Documented
Operating History**

Real Estate Development Process

A Value Creation Process



Real Estate Development Process

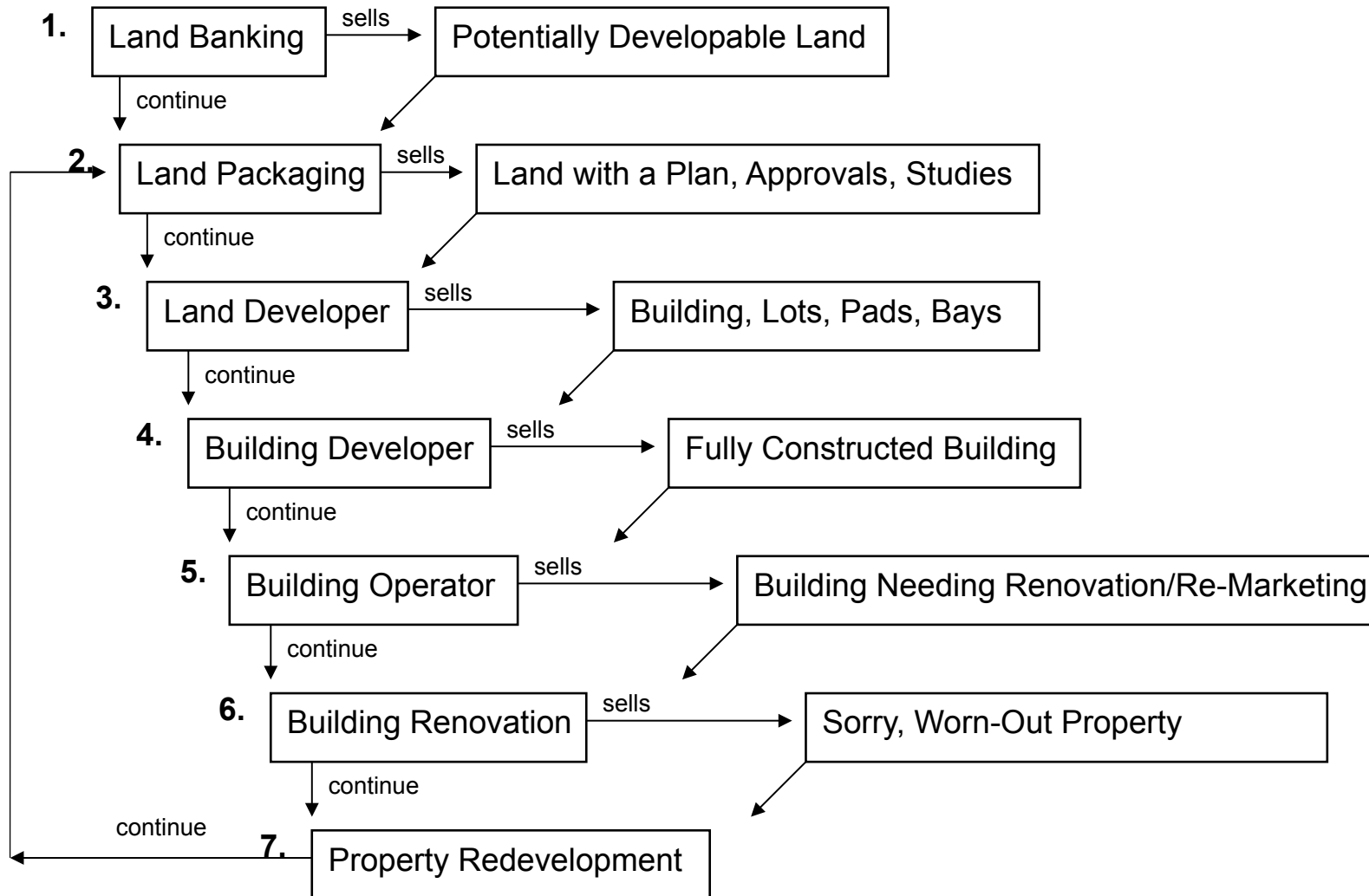
A Value Creation Process

6. BUILDING RENOVATION

<i>Buy:</i>	Under-performing Property
<i>Sell:</i>	Highly-performing, Repositioned Property
<i>Critical Tasks:</i>	Accurate Market Analysis & Timely Renovation

Real Estate Development Process

A Value Creation Process



Real Estate Development Process

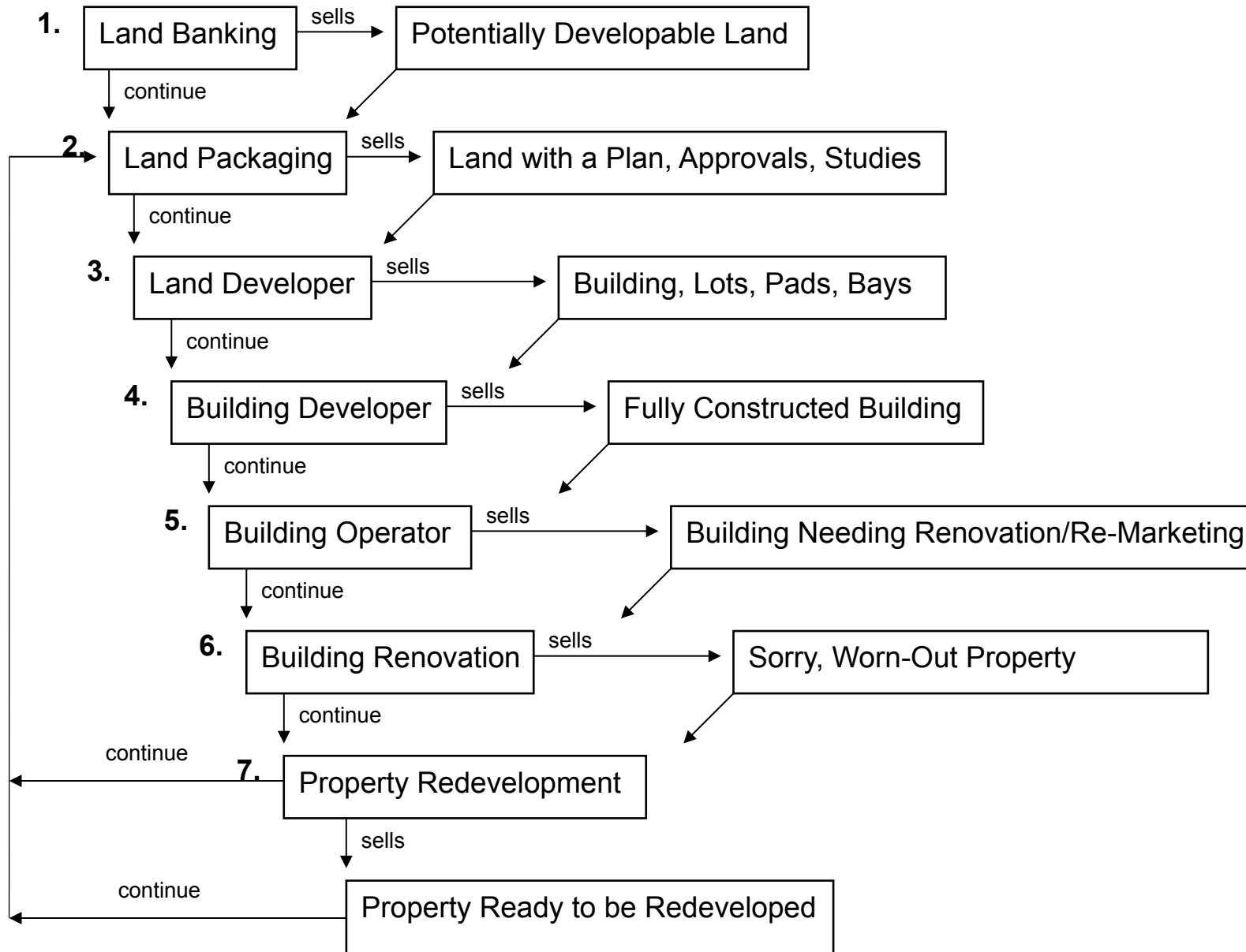
A Value Creation Process

7. PROPERTY REDEVELOPMENT

<i>Buy:</i>	Sorry Property w/ Some Potential
<i>Sell:</i>	Sorry Property w/ Great Potential
<i>Critical Tasks:</i>	Positive Market Trends

Real Estate Development Process

A Value Creation Process



Value Creation Chain

- **Each stage of development**
 - Has less risk and uncertainty
 - Requires more additional capital (bad news)
 - Has a lower cost of capital (good news)
 - Creates value by creating a new product
 - The developer creates value
 - By incurring additional risks and increasing its capital exposure

Stages of Development

In each stage, the Developer must answer the questions:

- 1) Can I do **WHAT'S GOT TO BE DONE?**
- 2) Do I have the **SKILLS, RESOURCES, TIME, TEAM, SUPPORT?**
- 3) Can I take the **RISK** of **FAILURE?**
- 4) Can I create **REAL VALUE?**

Tasks in the Real Estate Development Process

- I. Acquisition**
- II. Financing**
- III. Marketing**
- IV. Environmental**
- V. Approvals and Permits**
- VI. Physical Improvements**
- VII. Transportation and Accessibility**
- VIII. Sales and Dispositions**

Tasks of Development

I. Acquisition Tasks

- Feasibility
- Underwriting
- Contract
- Due Diligence
- Closing

Tasks of Development

II. Financing Tasks

- Financial Projections
- Capital Formation and Accumulation
- Management and Reporting

Tasks of Development

III. Market Studies & Marketing Strategies

- Market Conditions
- Strategies
- Promotion / Advertising

Tasks of Development

IV. Environmental Tasks

- Studies - Phase I, II and III
- USGBC LEED Certification
- Sub-surface, Surface, and Atmospheric Conditions
- Cultural and Historic Conditions

Tasks of Development

V. Approval and Permits

- Federal
- State
- Regional
- Municipal
- Private

Tasks of Development

VI. Improvements

- Land Planning
- Architectural Design
- Engineering
- Construction

Tasks of Development

VII. Transportation and Accessibility

- Location, Location, Location
- Off-Site
- On-Site

Tasks of Development

VIII. Sales and Disposition Tasks

- Seller's Due Diligence
- Marketing
- Contract
- Development Agreements

Development Matrix

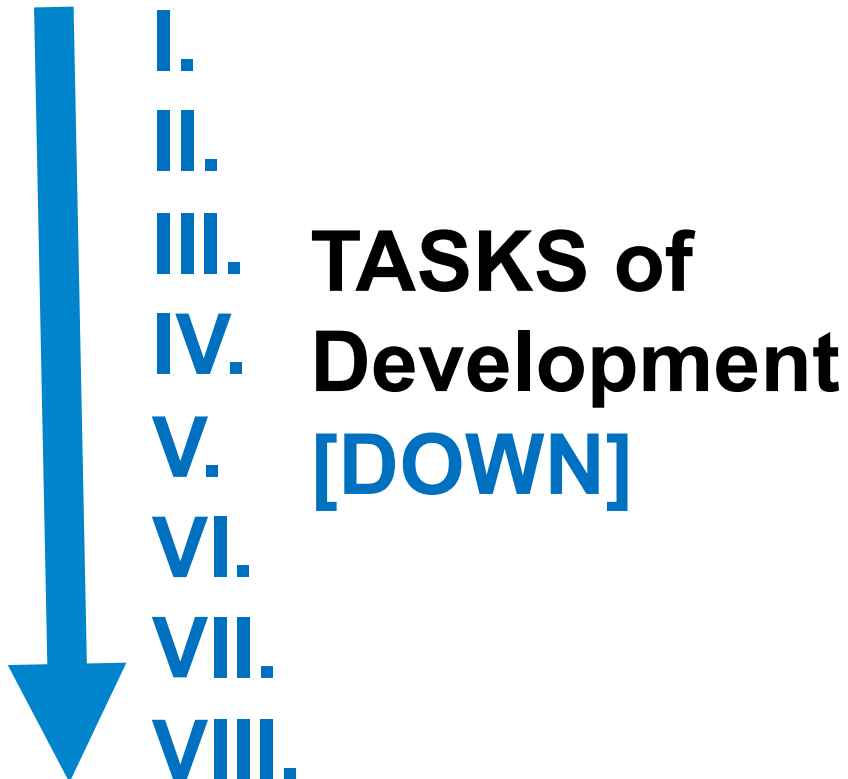
STAGES of Development [ACROSS]



Development Matrix

STAGES of Development [ACROSS]

1 2 3 4 5 6 7



Development Matrix

STAGES of Development [ACROSS]

1 2 3 4 5 6 7

I.
II.
III. **TASKS of**
IV. **Development**
V. **[DOWN]**
VI.
VII.
VIII.

→ 56 CELLS

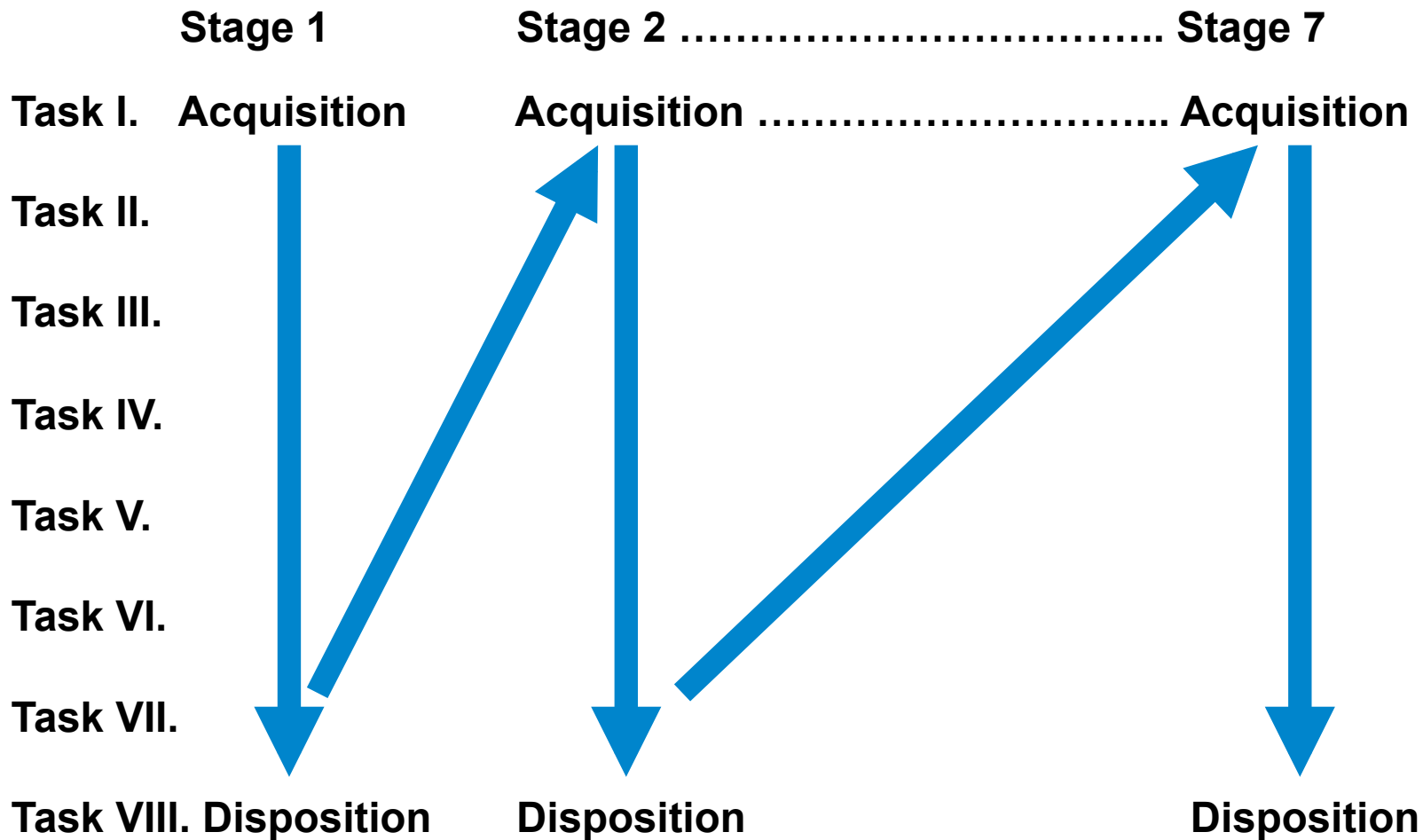
Development Matrix

Development Matrix	1. Land Banking	2. Land Packaging	3. Land Dvpmt	4. Building Dvpmt	5. Building Operations	6. Building Renovation	7. Site Redevelopment
I. Acquisition	I. 1.	I. 2.	I. 3.	I. 4.	I.5.	I. 6.	I.7
II. Financing	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.
III. Market Studies & Marketing Strategies	III.1.	III.2.	III.3.	III.4.	III.5.	III.6.	III.7.
IV. Environmental Studies	IV.1.	IV.2.	IV.3.	IV.4.	IV.5.	IV.6.	IV.7.
V. Approvals and Permits	V.1.	V.2.	V.3.	V.4.	V.5.	V.6.	V.7
VI. Improvements	VI.1.	VI.2.	VI.3.	VI.4.	VI.5.	VI.6.	VI.7.
VII. Transportation/Accessibility	VII.1.	VII.2.	VII.3.	VII.4.	VII.5.	VII.6.	VII.7.
VIII. Sales and Disposition	VIII.1.	VIII.2.	VIII.3.	VIII.4	VIII.5.	VIII.6.	VIII.7.

Stages of Development

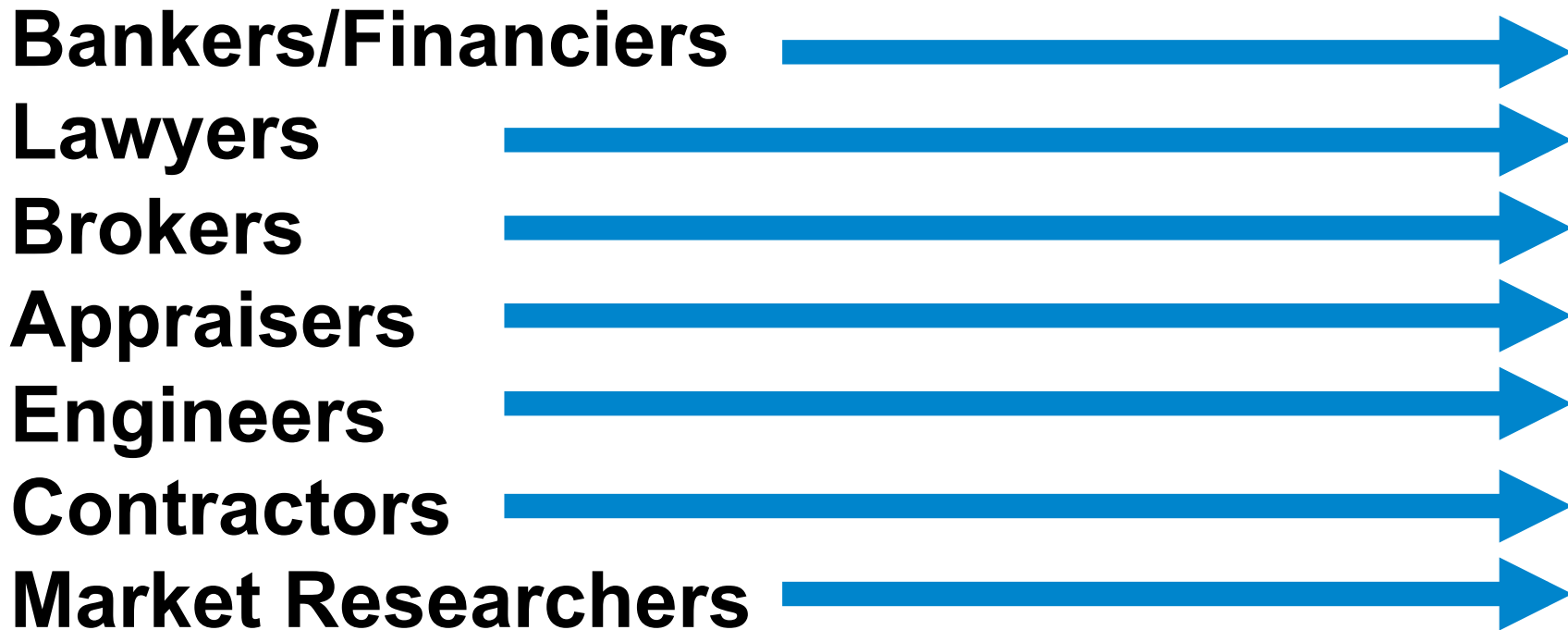
- **In each cell:**
 - **Expenditures are made**
 - **Risks are taken**
 - **Value is created (or destroyed)**

Developers work DOWN the Matrix:

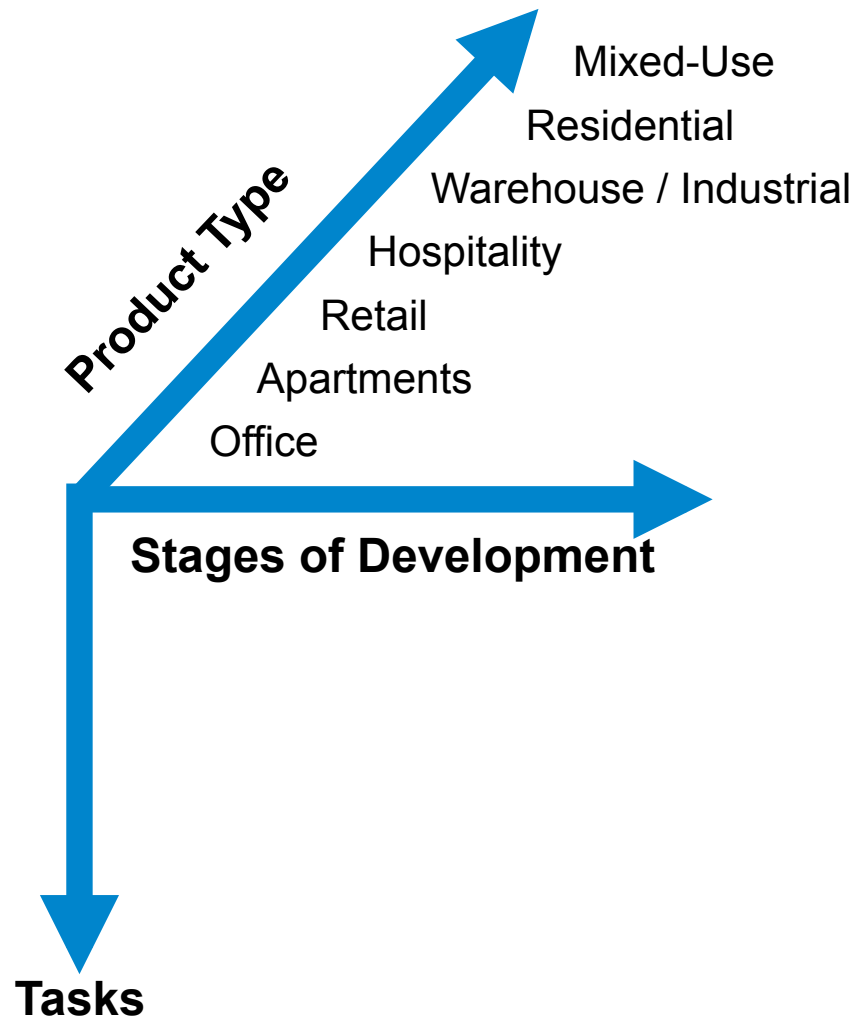


Real Estate Professionals work **ACROSS** the Matrix:

Stage 1 Stage 2 Stage 3 Stage 7



The Third Dimension



Where do APPRAISERS / ASSESSORS fit in?

- Where does the subject property fit in the development matrix?
- Where do the comparable properties fit in the development matrix?
- What is the value of the subject property?

Case study
Potomac Yard
2000 - 2006

Value Added in Real Estate
Development Process

Value Added in Real Estate Development Process

- $(\text{Sales Price} / \text{Total Development Cost}) - 1$
- Total Development Cost =
 - Sales Costs
 - + Infrastructure Costs
 - + Land Costs
 - + Capital Costs

Potomac Yard

The Set up

- **Seller:** Commonwealth Atlantic Properties (Lazard Feres)
- **Buyer:** Crescent Resources, LLC (Duke Energy)
- **What:** Acquired 300 Acres
Former Rail Yard
- **When:** September 1999 – Alexandria CDD Approval
November 1990 – Buyers Due Diligence Packa
June 2000 – 1st Round of Bidding
August 2000 – Purchase & Sale Agreement
October 2000 – Arlington PDSP Approvals
March 2001 – Closing

Potomac Yard

The Set up

- **Where:**
 - Ronald Reagan National Airport
 - DOD's Pentagon
 - CSX Rail Corridor
 - NPS's George Washington Parkway
 - WMATA (METRO) line
 - Arlington AND Alexandria
 - Adjacent to Charles E. Smith's Crystal City
 - Bisected Four Mile Run

Potomac Yard

The Set-up

- **Why:**
 - To capture profits in:
 - Land Development stages
 - Building Development Stage on an opportunistic basis
- **Target Yield:**
 - IRR on Total Capital = 15%

Potomac Yard Previous Land Use

- 1842-1992 Potomac Yard was used as a rail transfer station by RF&P and CSX railroads



Potomac Yard Conceptual Master Plan



Arlington North Tract
Looking North to DC - wide



All of Arlington South Tract
With Four Mile Run's 4 bridges



Alexandria
Retail Center from West Glebe Road North





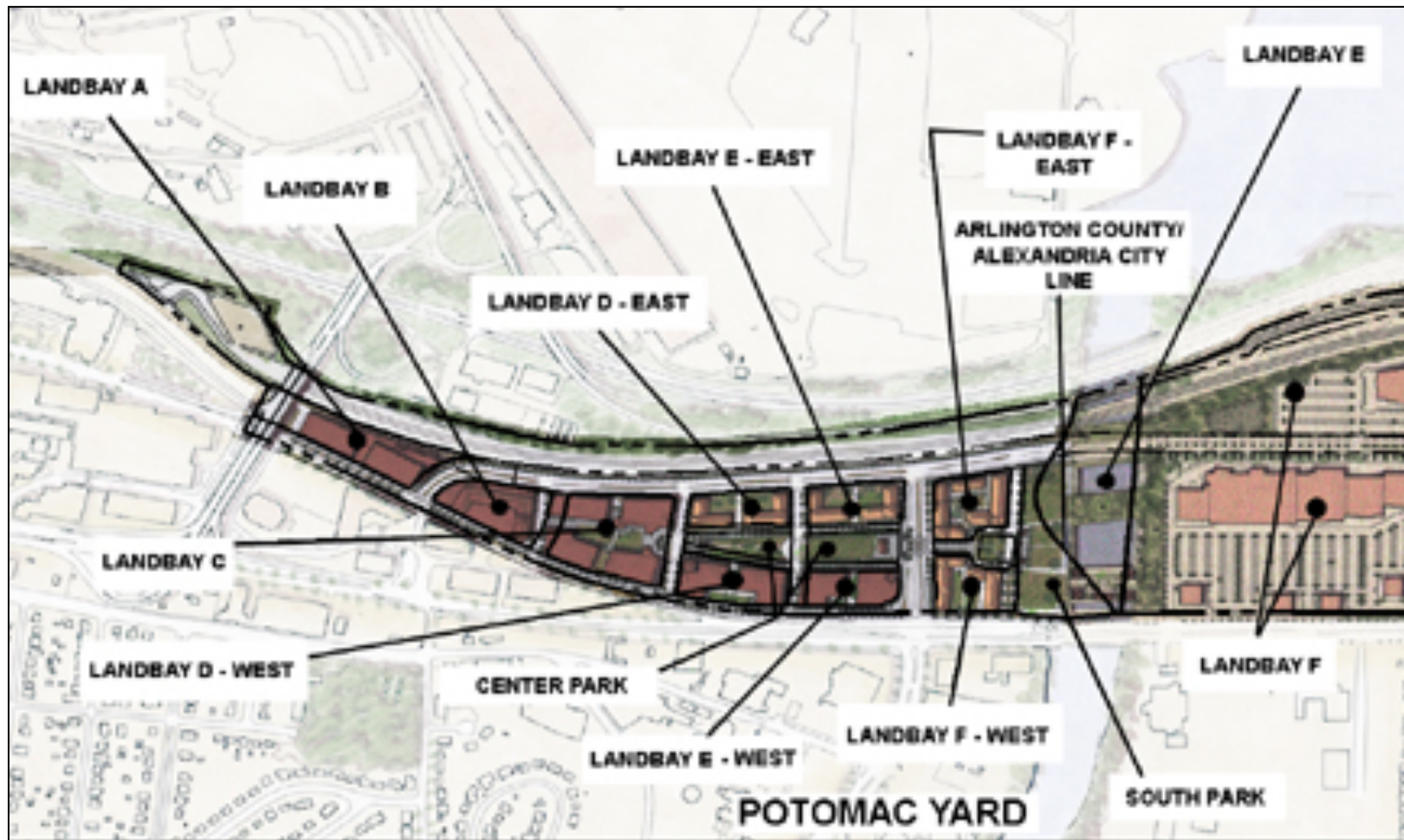
Alexandria
Land Bay A, I, J, & K
From Bridge looking Northeast

Potomac Yard

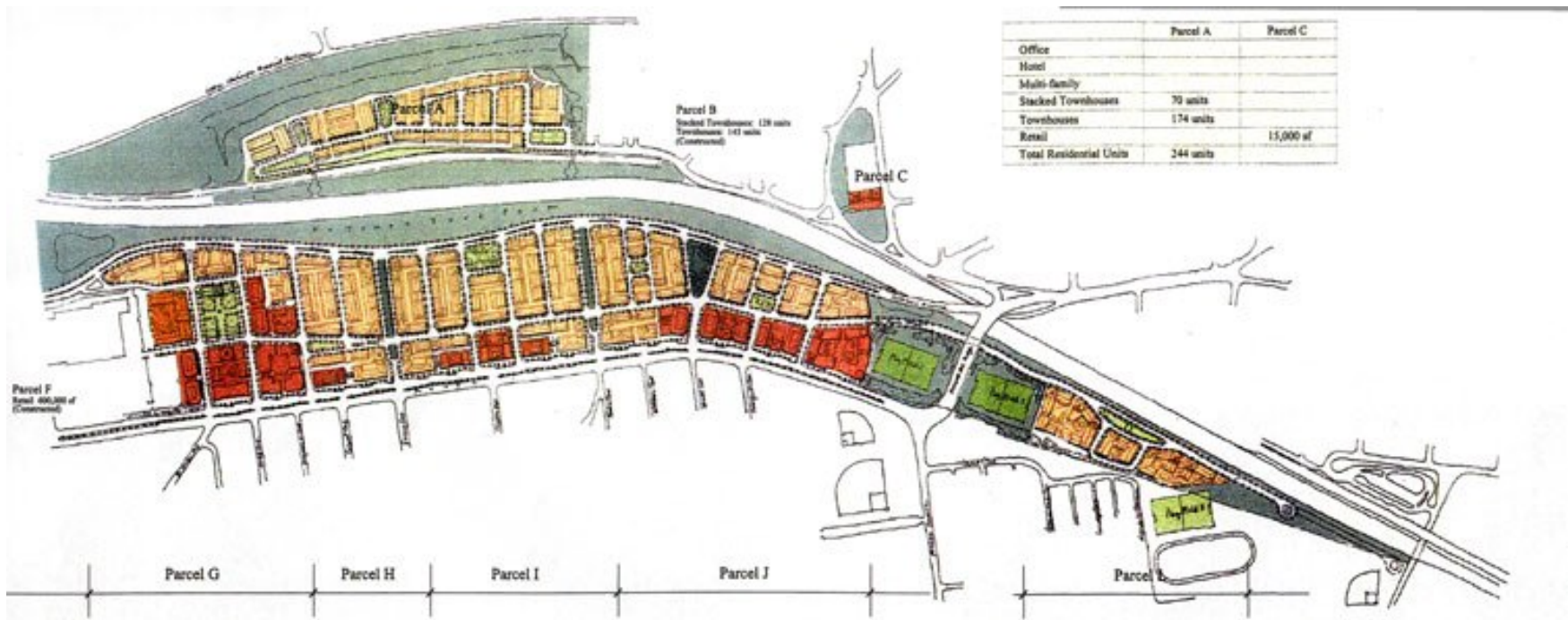
A Tale of two municipalities

	ARLINGTON:	ALEXANDRIA:
SIZE:	88 Acres	212 Acres
OFFICE DENSITY:	2,900,000 SF	1,900,000 SF
RESIDENTIAL DENSITY:	1,000,000 SF	1,927,000 SF
RETAIL DENSITY:	60,000 SF	135,000 SF
HOTEL DENSITY:	469,835 SF	469,835 SF
NEIGHBORS:	Office Buildings and Hotels	Residential and Small Commercial
DIFFERENT SELF IMAGES & EXPECTATIONS:	Transit-oriented urban village <ul style="list-style-type: none"> □ High Density □ Majority Office 	Metro-based Old Town North <ul style="list-style-type: none"> □ Low Density □ Majority Residential
REGULATORY ENVIRONMENTS (The same but different)	<ul style="list-style-type: none"> □ Phased Development Site Plan (PDSP) □ 4.1 Site Plan Approval 	<ul style="list-style-type: none"> □ Coordinated Development District (CDD) □ Special Use Permit (SUP)
NECESSARY FIRST STEPS	The North Tract Transfer (28 acres north of Crystal City encumbered by a Charles E. Smith law suit)	The Trunk Sewer Project (Potomac Yard to Water Treatment Plant)

Potomac Yard Land Bays - Arlington



Potomac Yard Land Bays - Alexandria



Potomac Yard The Alexandria Story



Potomac Yard Alexandria Development Program

- **Major Challenges**
 1. 2-mile Trunk Sewer Project
 2. Site Plan Approvals
- **Land Bay Sales**

The Alexandria Story

Regulations & Permits

- **First thing first; The Trunk Sewer Project (2001-2003)**
 - CDD condition: no site plan approvals will be granted until a sanitary trunk sewer is constructed from Potomac Yard to the sanitary water treatment plant



The Alexandria Story

Infrastructure

Planning and Feasibility



The Alexandria Story

Infrastructure

Planning and Feasibility



The Alexandria Story

Infrastructure

Trunk Sewer Installation



The Alexandria Story

Infrastructure

Trunk Sewer Installation



The Alexandria Story

Infrastructure

Land Development -Improvements



The Alexandria Story

Infrastructure

Pipe Installation



The Alexandria Story

Infrastructure

Construction



Alexandria Approvals and Permits

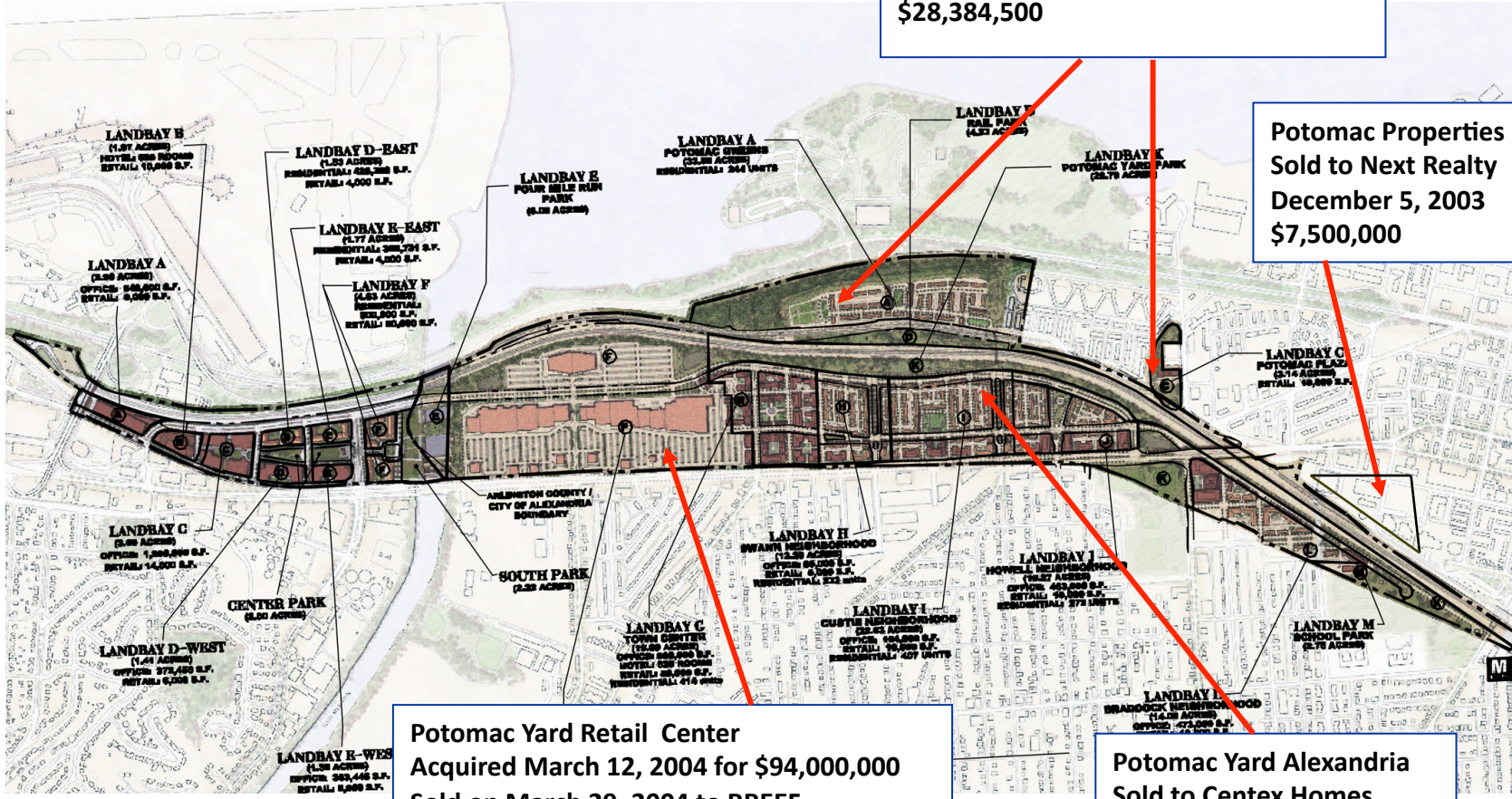
- Trunk Sewer Construction
 - City of Alexandria
 - Alexandria Sanitation Authority
 - Washington Metropolitan Area Transit Authority
 - CSX Transportation
 - Virginia Department of Health
- Potomac Greens Site Plan Approval
 - City of Alexandria
 - National Park Service
 - Washington Metropolitan Area Transit Authority (Metro Stop Site)
- Storm Water Outfall Expansion
 - CSX Transportation
 - National Park Service
 - Washington Metropolitan Area Transit Authority

The Alexandria Story

Land Bay Sales

Land Bay A and C
 Sold to Eakin Youngentob Associates
 & Elm Street Development
 September 25, 2003
 \$28,384,500

Potomac Properties
 Sold to Next Realty
 December 5, 2003
 \$7,500,000



Potomac Yard Retail Center
 Acquired March 12, 2004 for \$94,000,000
 Sold on March 29, 2004 to RREEF
 \$116,500,000

Potomac Yard Alexandria
 Sold to Centex Homes
 and Pulte Homes
 June 30, 2004
 \$105,000,000

Potomac Yard The Arlington Story



Potomac Yard Arlington Development Program

- **Major Challenges**
 1. North Tract Transfer
 2. Transit way design
 3. Soil conditions
- **Land Bay Sales**
- **One and Two Potomac Yard**

The Arlington Story

Approvals & Permits

- **First thing first; North Tract Transfer**

- PDSP Conditions: No Land Bay (except Land Bay A) can be permitted until North Track is transferred to Arlington County
- Environmental impacted soils require a dirt management program
- In 2002 it became evident that the residential markets were much stronger than the office markets so Crescent decided to bring the residential land bays in Arlington to the market. This decision required that the Arlington Infrastructure be constructed as soon as possible



The Arlington Story

Infrastructure

Planning and Implementation



The Arlington Story Infrastructure

Soil Management Plan Implementation



The Arlington Story

Infrastructure

Infrastructure Development 2003-2005



The Arlington Story Infrastructure

Construction Phase



The Arlington Story

Infrastructure

Construction

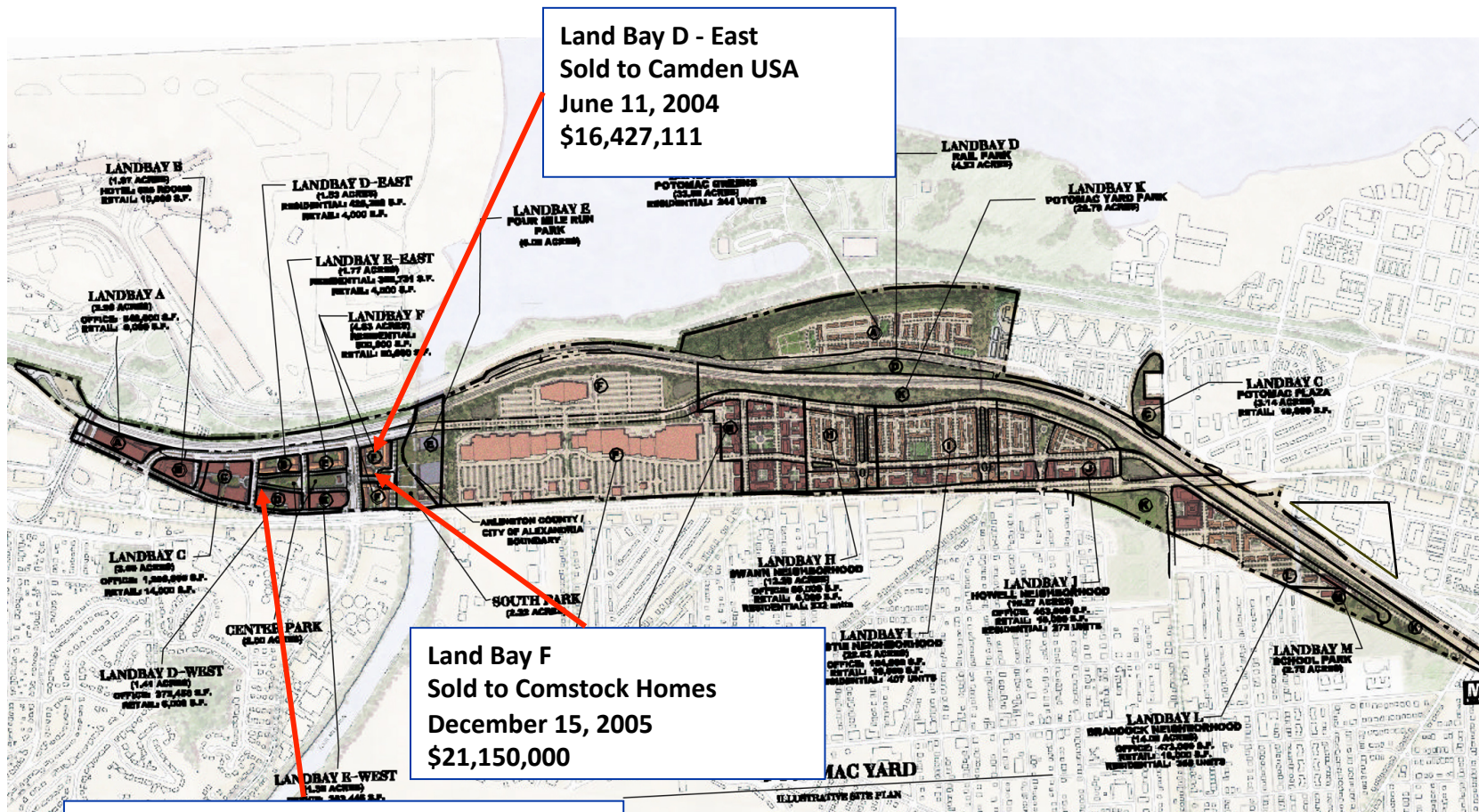


Arlington Approvals and Permits for Infrastructure Construction

- Arlington County
- City of Alexandria
- Virginia Department of Health
- Virginia Department of Transportation
- Virginia Department of Environmental Quality
- U.S. Army Corps of Engineers

The Arlington Story

Land Bay Sales



Potomac Yard

The Land Bay A Story



One and Two
Potomac Yard

The Land Bay A Story

The GSA/EPA Challenge

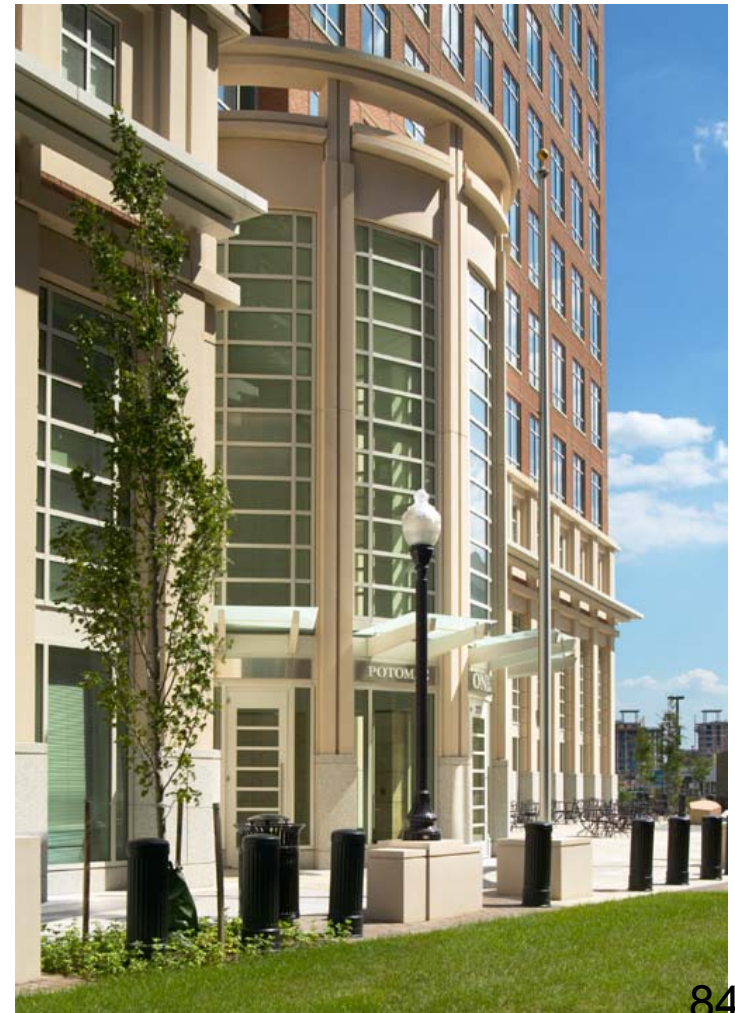
- **Achieve LEED-NC (version 2.1) Silver or 10% reduction in gross rent**
 - GSA Lease (2 inches thick)
 - EPA's Program of Requirements (100 pages)
 - Federal protection Agency (Level IV Security Requirements)
 - Arlington 4.1 Site Plan Conditions (71 requirements)
 - Arlington PDSP and Urban Design Guidelines (46 requirements)
 - USGBC's LEED Rating System (constantly changing)
- **Building Design and Construction**
 - Originally designed as speculative office building (17 points)
 - Low hanging fruit
 - System redesign
 - Pre-construction planning and budgeting (\$4.0 million or \$6.00/SF)
 - Construction monitoring and recycling
 - Product selection
 - Commissioning
 - Indoor Air Quality Testing



The Land Bay A Story

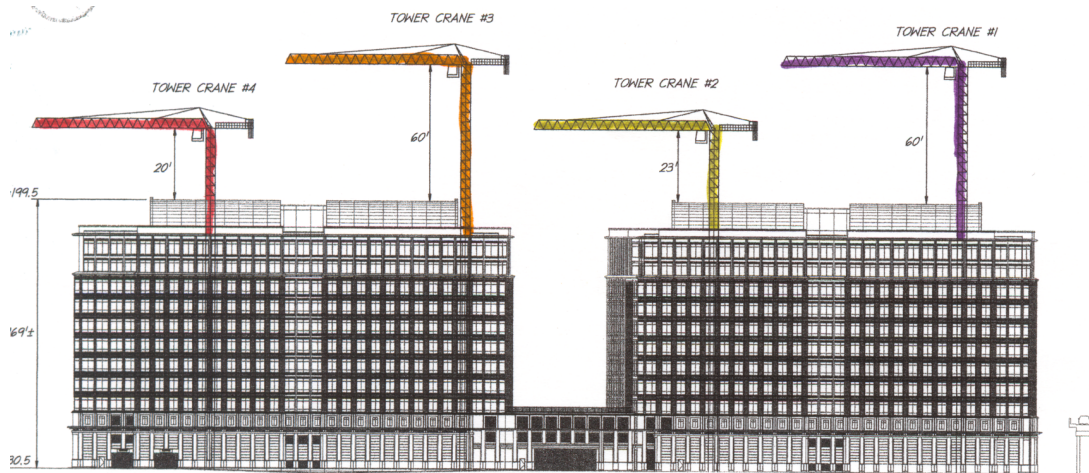
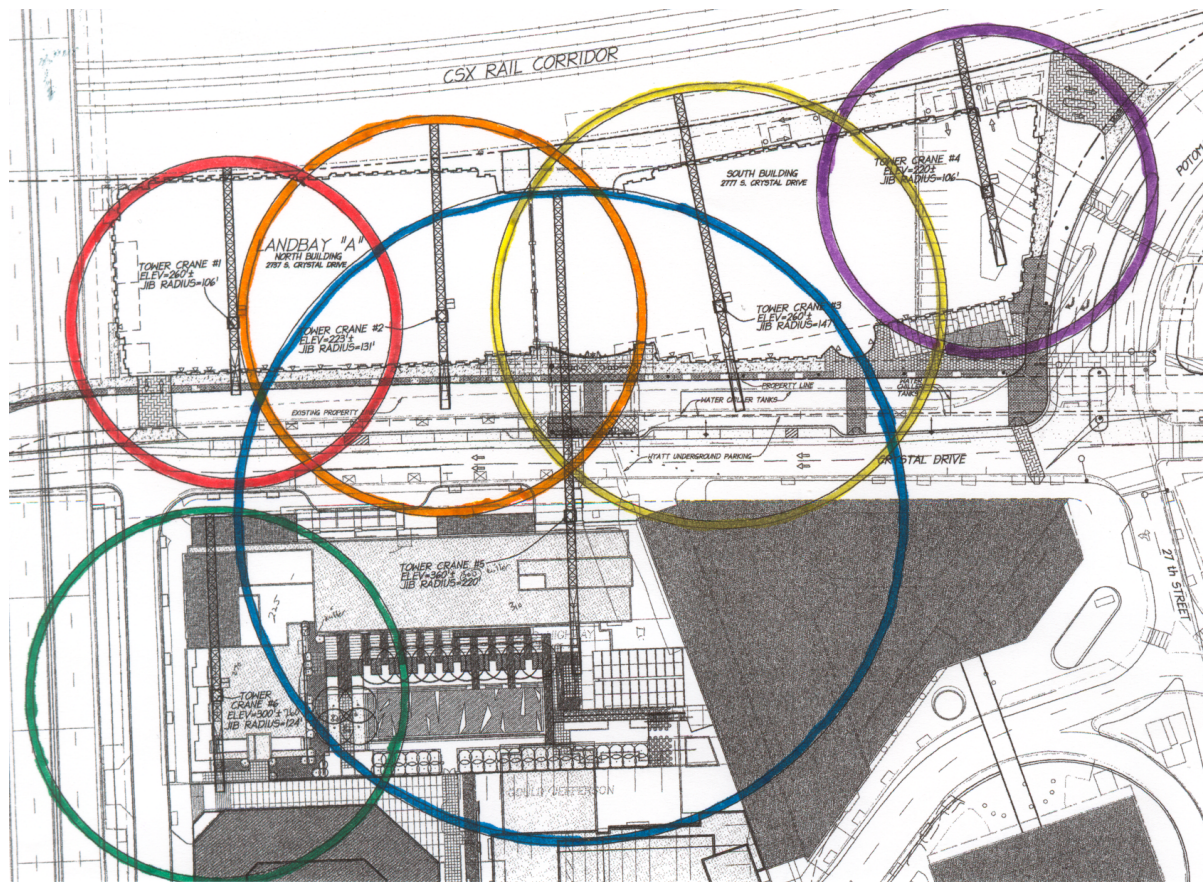
The GSA/EPA Challenge

- **Building Certification and Operation**
 - Submission to USGBC for review after construction is complete
 - USGBC Review & Audit, Crescent Response
 - Certification
 - USGBC LEED-EB and Energy Star Rating going forward
- **Sale of Land Bay A**
 - Sold Land Bay A to JP Morgan
 - November 2005
 - \$215 million with an \$18 million
 - LEED hold back
- **LEED-NC Gold Designation**
 - Obtained August 2006









Potomac Yard

Total Development Costs in Millions

<i>Land</i>	\$ 118.86
<i>Infrastructure</i>	\$ 48.39
<i>Building Costs</i>	\$ 123.89
<i>Selling Costs</i>	\$ 2.43
<i>Capital Costs @ 15%</i>	\$ 77.33
<hr/>	
Total Development Costs	\$ 370.90

Potomac Yard

Total Benefits (aka Sales) in Millions

<i>Alexandria</i>	<i>Land Bays A, C</i>	<i>\$ 28.37</i>
<i>Arlington</i>	<i>Land Bay F</i>	<i>\$ 21.15</i>
<i>Arlington</i>	<i>Land Bay E-East</i>	<i>\$ 16.43</i>
<i>Alexandria</i>	<i>Land Bays G, H, I, J, L</i>	<i>\$ 105.00</i>
<i>Arlington</i>	<i>Land Bays B, C, D, E-West</i>	<i>\$ 80.00</i>
<i>Arlington</i>	<i>Land Bay A</i>	<i>\$ 213.50</i>
<hr/> Total Sales		\$ 464.45

Potomac Yard

Total Value Added

Total Sales \$464.45

Divided by **Total Costs** \$370.90

Equal **125%**

Minus 100%

Equal **Total Value Added** **25%**

Potomac Yard

Value Added by Municipality

	VALUE ADDED w/ NO CAPITAL COSTS	VALUE ADDED w/ CAPITAL COSTS
<i>Alexandria</i>	63%	18%
<i>Arlington</i>	57%	29%
<i>Combined</i>	58%	25%

Potomac Yard

Value Added by Type of Buyer

SELLER	BUYER	VALUE ADDED w/ NO CAPITAL COSTS	VALUE ADDED w/ CAPITAL COSTS
Land Developer	Land Developer		
<i>Crescent</i>	<i>Pulte / Centex</i>	74%	23%
Land Developer	Building Developer		
<i>Crescent</i>	<i>EYA / Elm Street</i>	30%	1%
<i>Crescent</i>	<i>Comstock Homes</i>	39%	3%
<i>Crescent</i>	<i>Camden Property</i>	75%	24%
<i>Crescent</i>	<i>Meridian Property</i>	47%	6%
Mean		47.7%	8.5%
Land Developer	Building Operator		
<i>Crescent</i>	<i>JP Morgan</i>	61%	44%

Potomac Yard

Value Created by Chronology

Land Bay	VALUE ADDED w/ NO CAPITAL COSTS	VALUE ADDED w/ CAPITAL COSTS
Alexandria Land Bays A & C	30%	1%
Arlington Land Bay F	39%	3%
Arlington Land Bay E-East	75%	24%
Alexandria Land Bays G,H,I,J,L	74%	23%
Arlington Land Bays B,C,D,E-West	47%	6%
Arlington Land Bay A	61%	44%

What's New
at the Johns Hopkins
Carey Business School?

What's New at Johns Hopkins Carey Business School?

- 1) Multi-disciplinary Real Estate and Infrastructure Program in a School of Business**
- 2) A Portfolio of Graduate Real Estate Programs**
 - Full-time MSREI (for 20-somethings)
 - Part-time MSREI (for mid-career professionals)
 - Full-time MBA with REI Concentration (GMBA)
 - Part-time MBA with REI Concentration (Flex MBA)
- 3) The Development Matrix Wiki Book Project**
 - <http://jhuesjrealestateprogram.pbworks.com/w/page/51965103/FrontPage>

What's New at Johns Hopkins Carey Business School?

4) Infrastructure Concentration

- Sustainable Cities' Best Practices
 - AY13/14 - 2-day workshop format
 - AY 14/15 - 8-week course format
- Public Private Partnerships
 - AY13/14 - 2-day workshop format
 - AY 14/15 - 8-week course format
- Infrastructure Project Financing
 - AY13/14 - 2-day workshop format
 - AY 14/15 - 8-week course format
- What is Infrastructure?

Creating Value in the Real Estate Development Process

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