Ideas Change Everything - Designers Sustainable Toolbox

Monika Laudencka-Sobik | Director | 2nd February 2016
Arcadis and CallisonRTKL

- Callison joined the Arcadis family in 2014; RTKL in 2007
- Shared vision and culture: commitment to creating a better, more sustainable world
- Arcadis partnering in the ‘Zero Emissions Cities’ program
- Arcadis ‘Sustainable Cities Index 2015’
- AIA 2030 REPORTING
- Over 50 sustainability tools used globally, internal sustainable initiatives
Issues are Opportunities

Deteriorated Infrastructures/Built Assets
Derelict Industrial Brownfield
Dysfunctional Transport Nodes
Under Used Areas And Neighborhoods
Abandoned, Inaccessible Waterfronts

Future Proofing And Resiliency
Reveal, Unlock + Create Identity
Use The Dynamics Of Transit
Create Places And Lifestyles
Develop Unique Destinations
Transformation needs Design and Vision

‘STAR’
- Establishes and defines goals: community, stakeholders, experts, investors
- Informs and supports design process
- Evaluates and measures financial results

PDD ‘DART’
- Guides and supports design process
- Evaluating 3 categories: Environmental, Economic, and Social
- Leading to and establishing design objectives

‘MATRIX’
- Educational and analytical tool to assist design process / 5 categories: Energy, Water, Waste, Materials, Tools
- Cost and complexity benchmarking
- Promotes innovative solutions
Making the Journey – THE MATRIX
## Making the Journey – PDD DART

### Case Study 1

#### Belgrade Waterfront Masterplan – Develop Mixed Use Destination

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<tr>
<th>TRIPLE BOTTOM LINE</th>
<th>VALUES</th>
<th>STRATEGIES</th>
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<tbody>
<tr>
<td><strong>ECONOMIC VALUES</strong></td>
<td>CLIMATE COMMUNITY EQUITY FIRST COSTS HABITAT HEALTH + WELL-BEING HUMAN RESOURCES MARKET VALUE OPERATING COSTS PUBLIC HEALTH RESOURCES USABILITY</td>
<td>CONNECTION TO OUTDOORS EFFICIENT ENVELOPES MATERIAL RECOVERY MATERIAL USE PLUG LOADS RENEWABLE ENERGY SITE PLANNING SOLAR ORIENTATION + CONTROL SYSTEMS USE</td>
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Making the Journey - DART PDD

- Retail: 375,000 sq ft GFA
- Office: 305,000 sq ft GFA
- Hotel: 45,000 sq ft GFA
- Residential: 1,000,000 sq ft GFA
- Community Facilities: 65,000 sq ft GFA
- Parks & Squares: 135,000 sq ft
- Waterfront Promenade: 2 acres
Making the Journey – PDD DART & BREEAM

Case Study 2

O2 LONDON - CREATE PLACES AND LIFESTYLES
Making the Journey

- UKs largest retail project to potentially score BREEAM outstanding
- Re-use of existing building – high score on re-use and waste control
- Low energy use – Internal/external environment of the tent helps in controlling heat gains and losses
- District Heating – Connected to the Greenwich peninsula district heating system that provides heating from a low carbon energy centre
- Well-connected public transport (Jubilee, Buses, Thames Clipper, Cable Car, Cyclist amenities)
Making the Journey – PDD DART & LEED

Case Study 3

1225 Connecticut Av. Washington DC - Future Proofing and Resiliency

Goal
Improve Productivity
Reduce Operating Costs

Research

Strategy
Use open workplace strategies to improve both utilization rates and productivity

Results
Economic: Lower Operating Costs, Higher ROI
Social: Better Collaboration
Environmental: Significant Reduction In Resources
Making the Journey

Industry Stats:
- LEED Platinum
- 28% Energy Savings
- 40% Water Savings

Market Stats:
- Cost: <5%
- ROI: Highest Sales Rate in DC that year

Green Building:
- Ea. 10% savings in energy
  ~ 1% increase in market value
- $1 psf savings in OPEX
  ~ +$10 psf in prop value
- +15-17% rent
- +16-18% occupancy
- +10.9% in building value
- +$129 psf sales

Sources: WBC, NRDC, Costar, McGraw Hill
Thank you