

Creating High Performance Parks and Recreation Systems



David Barth, PhD, CPRP

 **Barth Associates**
PUBLIC REALM PLANNING, DESIGN, AND FACILITATION

The Adoption of Innovation in the Planning and Design Process; Creating High Performance Public Spaces ©

What are the key factors that influence the adoption of sustainable design innovations in the planning and design of high performance public spaces?



Johnson St

Johnson St

E Monument Ave





Dec. 2008





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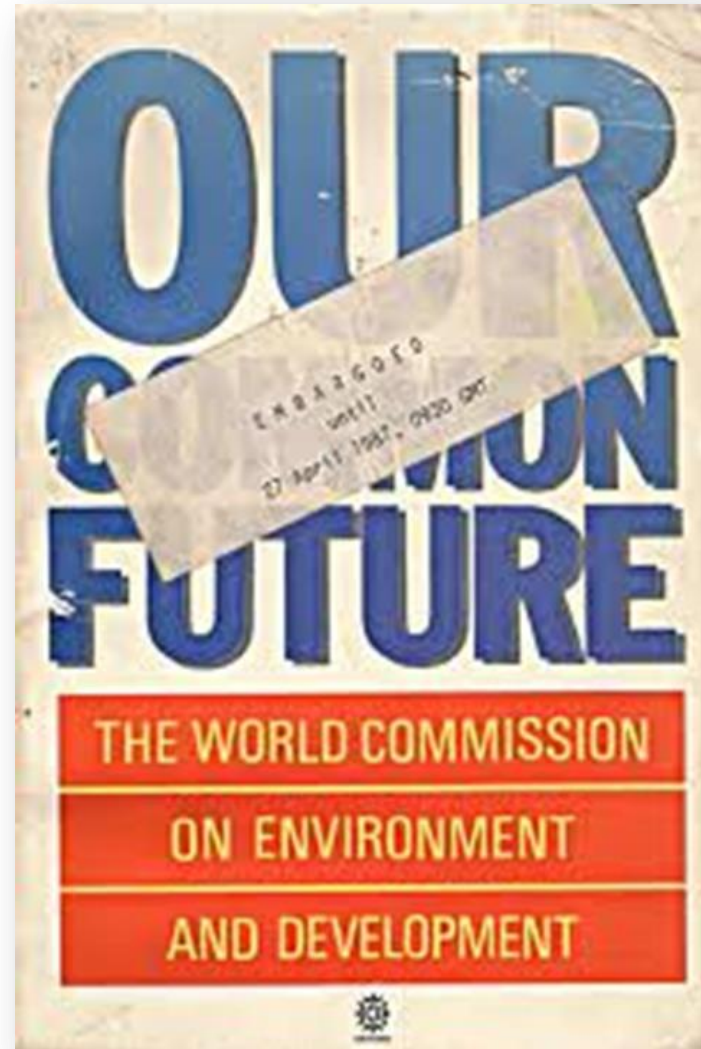
- Why, while there is general acknowledgement of the potential to generate sustainability benefits through the public realm, do so many parks and public spaces still fail to do so?
- Why do some public space planning and design teams (public and private) adopt sustainable design innovations while others don't?

The Adoption of Innovation in the Planning and Design Process; Creating High Performance Public Spaces©

- Why, while there is general acknowledgement of the potential to generate sustainability benefits through the public realm, do so many parks and public spaces still fail to do so?
- Why do some public space planning and design teams (public and private) adopt sustainable design innovations while others don't?
- **What are the key factors that influence the adoption of sustainable design innovations in the planning and design of High Performance Public Spaces© (HPPS)?**
- **What are the criteria for a HPPS?**

Sustainability

“Meeting the needs of the present without compromising those of future generations”
(World Commission on Environment and Development, 1987, p. 43).



The Public Realm

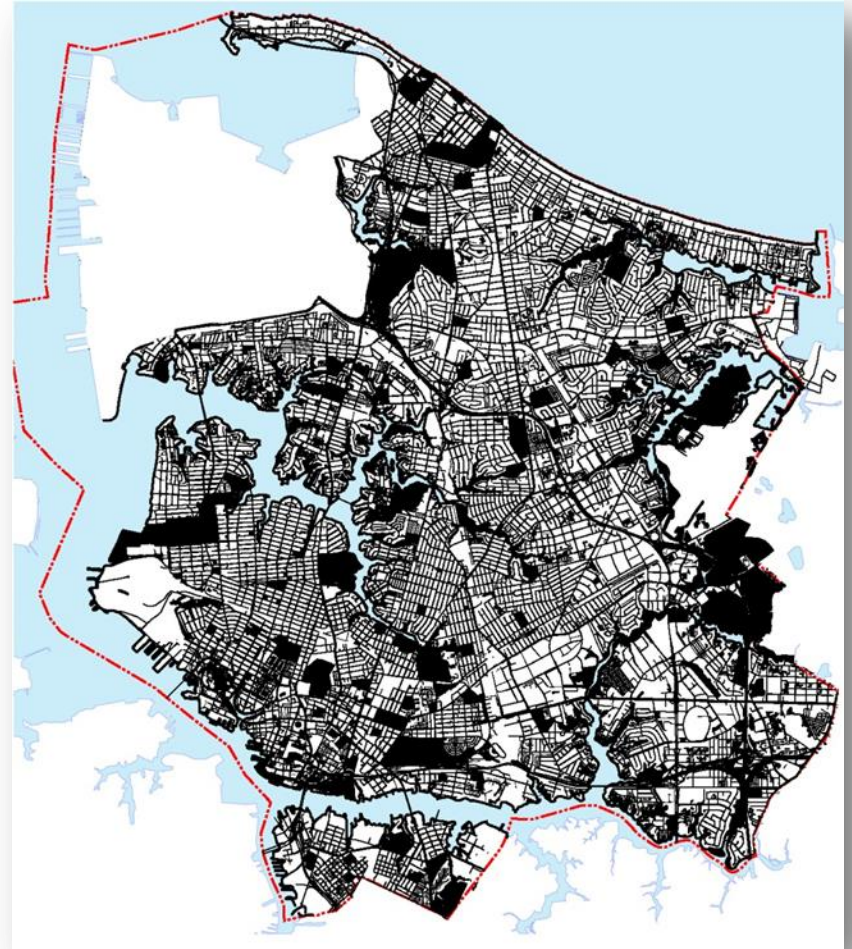
“A community’s publicly accessible system of streets, sidewalks, parks, civic spaces, historic and cultural areas, natural areas, trails, stormwater treatment ponds, utility corridors and/or other lands owned and managed by city, county, regional, state or federal agencies” (Barth, 2013).



Glatting Jackson

The Public Realm

“Our common property...the fundamental element in any community – the framework around which everything grows” (Garvin, 2013).



Glatting Jackson

High Performance Public Space (HPPS)

“Any publicly accessible space that generates economic, environmental, and social sustainability benefits for their local community. A HPPS can be a park, trail, square, green, natural area, plaza or any other element of the ‘public realm’ that generates all three types of benefits” (Barth, 2015).



Citygarden, St. Louis

Sustainability Benefits

Economic Sustainability

- Attracting Tourists
- Attracting Businesses
- Attracting Retirees
- Enhancing Real Estate Values
- Reducing Taxes
- Stimulation of Equipment Sales

Environmental Sustainability

- Protecting Drinking Water
- Controlling Flooding
- Cleaning Air
- Reducing Traffic Congestion
- Reducing Energy Costs
- Preserving Biological Diversity

Social Sustainability

- Reducing Environmental Stress
- Community Regeneration
- Cultural and Historic Preservation
- Facilitating Healthy Lifestyles
- Alleviating Deviant Youth Behavior
- Raising Levels of Education Attainment
- Alleviating Unemployment Distress

(Crompton, 2007)



The High Line, New York

Innovation

“An idea, practice, or object that is perceived as new by an individual or other unit of adoption [e.g. an organization]”
(Rogers, 2003, p. 475)



City of Tallahassee Gaines Street

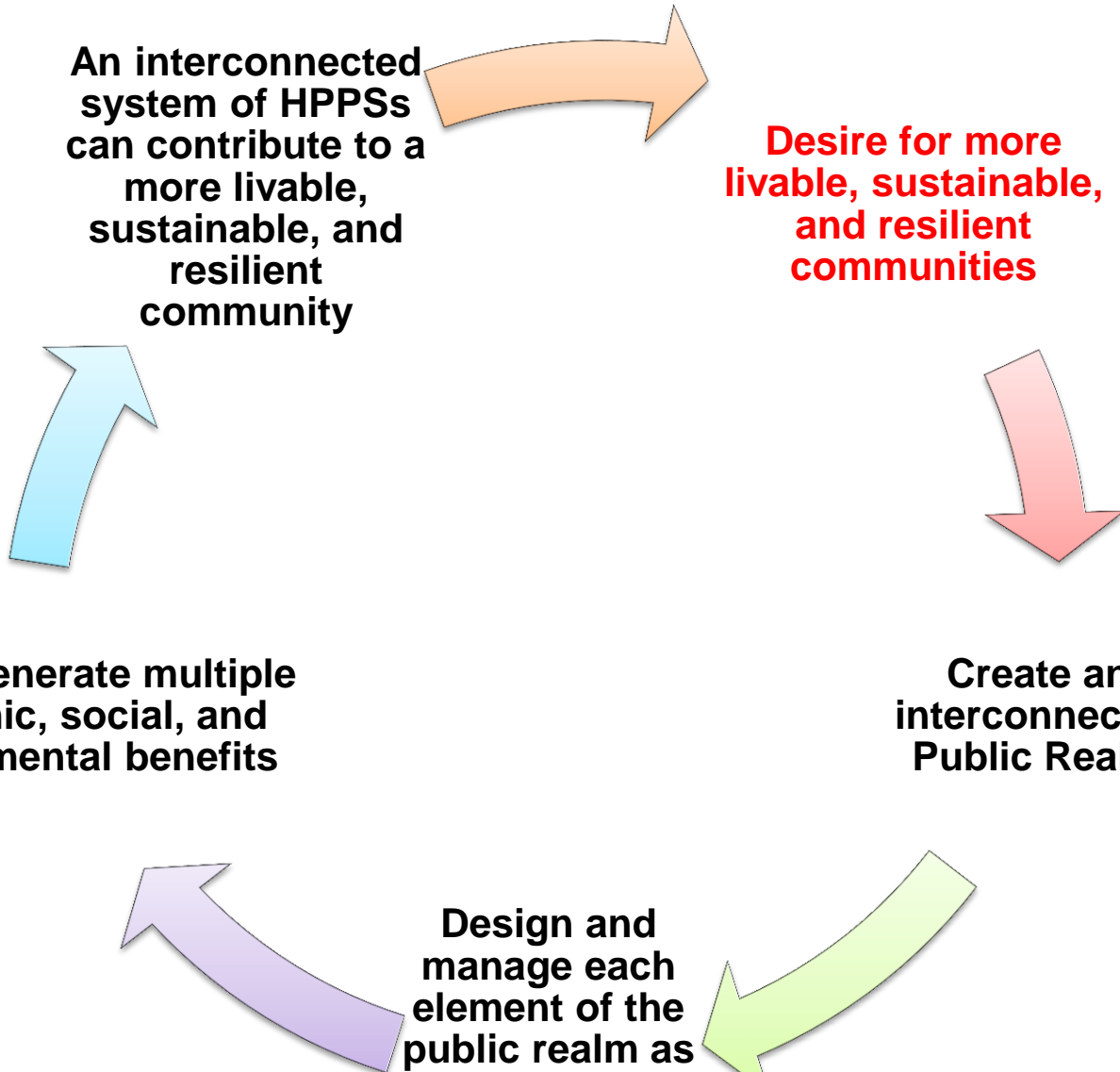
**An interconnected
system of HPPSs
can contribute to a
more livable,
sustainable, and
resilient
community**

**Desire for more
livable, sustainable,
and resilient
communities**

**HPPSs generate multiple
economic, social, and
environmental benefits**

**Create an
interconnected
Public Realm**

**Design and
manage each
element of the
public realm as
a High
Performance
Public Space
(HPPS) ©**



Four Underlying Concepts

- 1) **Sustainable Communities** - the desired outcome
- 2) **Sustainability and the Public Realm** – a subsystem of sustainable communities
- 3) **Criteria for High Performance Public Spaces** - the dependent variables for this research
 - Principles of good public spaces
 - Sustainable development indicators

Hypothesis 1: preliminary set of criteria for HPPSs

- 4) **Factors that May Influence the Adoption of Innovation in the Planning and Design Process** - the independent variables for this research
 - Diffusion of Innovations Theory, Everett Rogers (1962)
 - Specific research regarding the adoption of sustainable design by public organizations

Hypothesis 2: potential factors that may influence the adoption of sustainable design in the planning and design of public spaces.

Mixed Methods Case Study Design

Phase I: Criteria for HPPSs

- **A Delphi Method** to develop and refine criteria to be used to identify case studies of High Performance Public Spaces.

Phase II: Selection of Cases for Study

- **Solicitation of City/County Managers and Parks Directors** to nominate cases based on the adopted criteria.
- **Field studies** to validate, score and select cases.

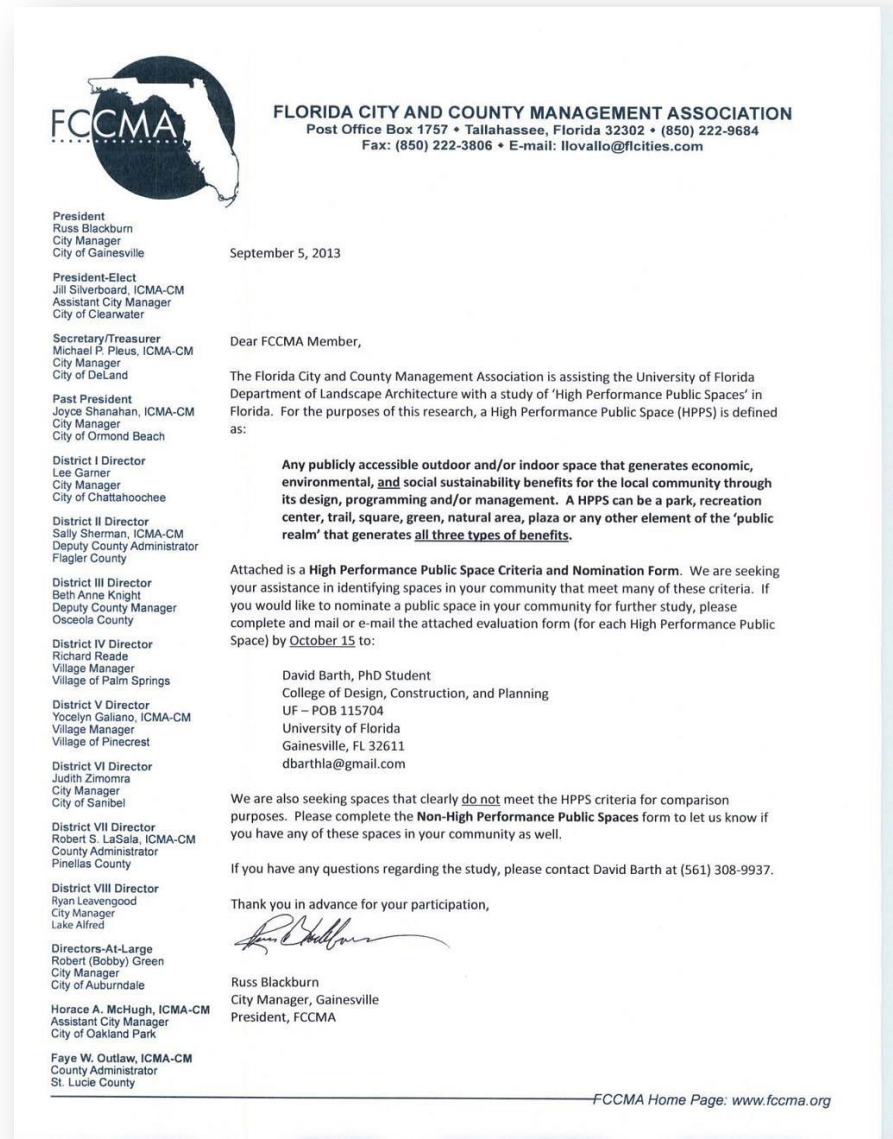
Phase III: Evaluation of Cases

- **Background interviews**, review and evaluation of **public case files**.
- **Statistical analysis of a survey instrument** administered to members of the planning and design teams involved in the planning, design and construction of the cases.
- **Structured interviews** with the planning and design team members to further explore the variables that contributed to the HPPSs.

Phase II: Selection of Cases for Study

Solicitation of Cases:

- Florida City County Managers Association: 550 Members
- Florida Recreation and Parks Association: 212 Members
- Goal: 3 cases



Phase II: Selection of Cases for Study

Nomination, Scoring of Cases

Table 4-1. Scoring of projects nominated by Florida public agencies as High Performance Public Spaces

Project	Economic criteria (9)	Environmental criteria (7)	Social criteria (9)	Total possible score (25)
Lakeland Lake Mirror Park	9	7	9	25
West Park McTyre Park	9	7	9	25
Pinellas County Fort DeSoto Park	8	7	9	24
West Park Mary Saunders Park	9	5	9	23
Tavares Seaplane Base & Marina	8	5	9	22
The Villages Softball Complexes	9	4	9	22
Seminole County Softball Complex/ Sanlando Park	9	3	9	21
Destin Harbor Boardwalk	7	5	9	21
Pinellas County Weedon Island Preserve	6	7	8	21
Pinellas County Brooker Creek Preserve	6	7	8	21
Oakland Park Culinary Arts District	8	4	9	21
Clearwater Beachwalk	8	4	9	21
Tallahassee Gaines Street District	8	4	9	21
Cape Coral Yacht Club Community Park	8	4	8	20
Clearwater The Long Center	7	3	9	19
Doral Trails and Tails Park	6	3	9	18
Port Orange All Children's/ Spruce Creek Park	4	4	9	17
Charlotte County South County Regional Park	5	4	8	17
Port Orange City Center	4	3	9	16
Port Orange Causeway Park	7	3	6	16
Doral Morgan Levy Park	5	2	8	15
Largo Central Park	5	2	8	15
Charlotte County Bayshore Live Oak Park	4	3	8	15
Palm Beach Gardens Veterans Plaza	5	1	9	15
Clearwater Bright House Networks Field	8	2	4	14

- Scores ranged from 25 (100%) to 9 (36%)
- Screened for access to public files and team members
- Conducted field visits to evaluate five shortlisted cases, re-scored to select top three

Table 4-2. Re-scoring of five shortlisted cases based on field studies

Project	Economic criteria (9)	Environmental criteria (7)	Social criteria (9)	Total possible score (25)
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City of Tallahassee Gaines Street



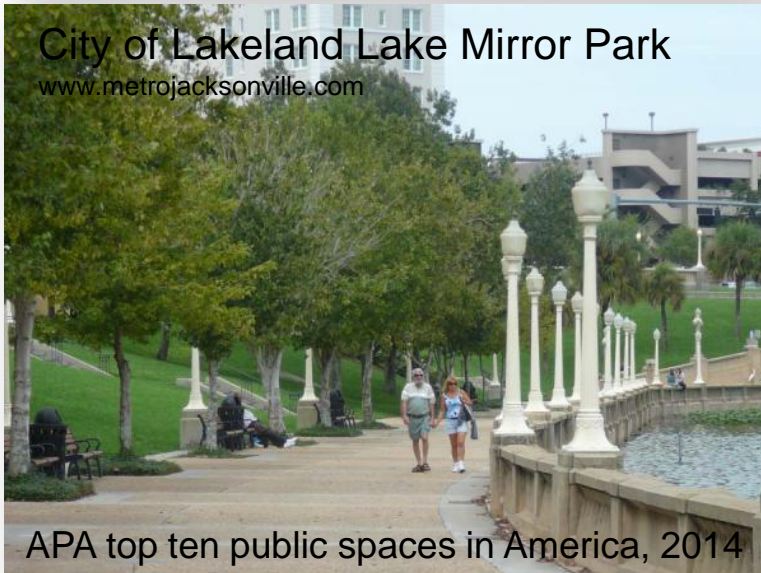
City of Clearwater Beachwalk

www.clearwaterdreaming.com



City of Lakeland Lake Mirror Park

www.metrojacksonville.com



APA top ten public spaces in America, 2014

Phase I: Criteria for HPPSs – Delphi Process



Social

- Improves the neighborhood
- Improves social and physical mobility
- Encourages health and fitness
- Provides relief from urban congestion, stressors
- Provides places for formal and informal social gathering, art, performances, events
- Provides opportunities for individual, group, passive and active recreation
- Facilitates shared experiences among different groups
- Attracts diverse populations
- Promotes creative and constructive social interaction



Environmental

- Uses energy, water, and resources efficiently
- Improves water quality of both surface and ground water
- Serves as a net carbon sink
- Enhances, preserves, promotes, or contributes to biological diversity
- Hardscape materials selected for longevity of service, social/ cultural/ historical sustainability, regional availability, low carbon footprint
- Provides opportunities to enhance environmental awareness and knowledge
- Serves as an interconnected node within larger scale ecological corridors and natural habitat



Economic

- Creates and facilitates revenue-generating opportunities for the public and/or the private sectors
- Creates meaningful and desirable employment
- Indirectly creates or sustains good, living wage jobs
- Sustains or increases property values
- Catalyzes infill development and/or the re-use of obsolete or under-used buildings or spaces
- Attracts new residents
- Attracts new businesses
- Generates increased business and tax revenues
- Optimizes operations and maintenance costs

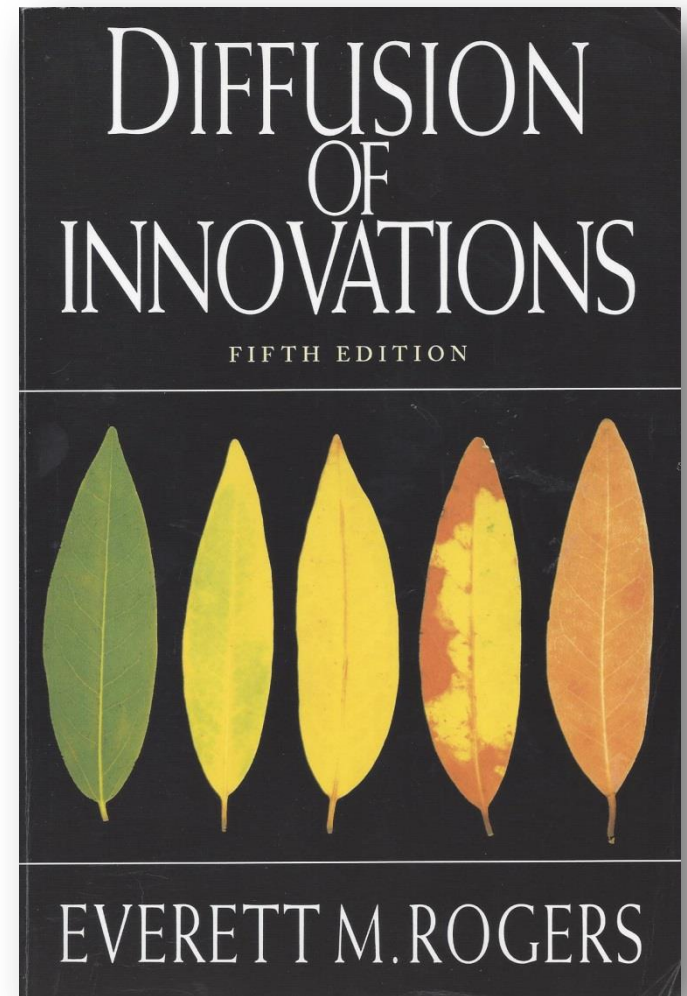
Role of Parks in Responding to Urban Issues – Cranz, Politics of Park Design, 1982

- Pleasure Ground: 1850 - 1900
- Reform Park, 1900 - 1930
- Recreation Facility, 1930 - 1965
- Open Space System, 1965 - 1990
- **The Sustainable Park, 1995 – present (Cranz, 2004)**

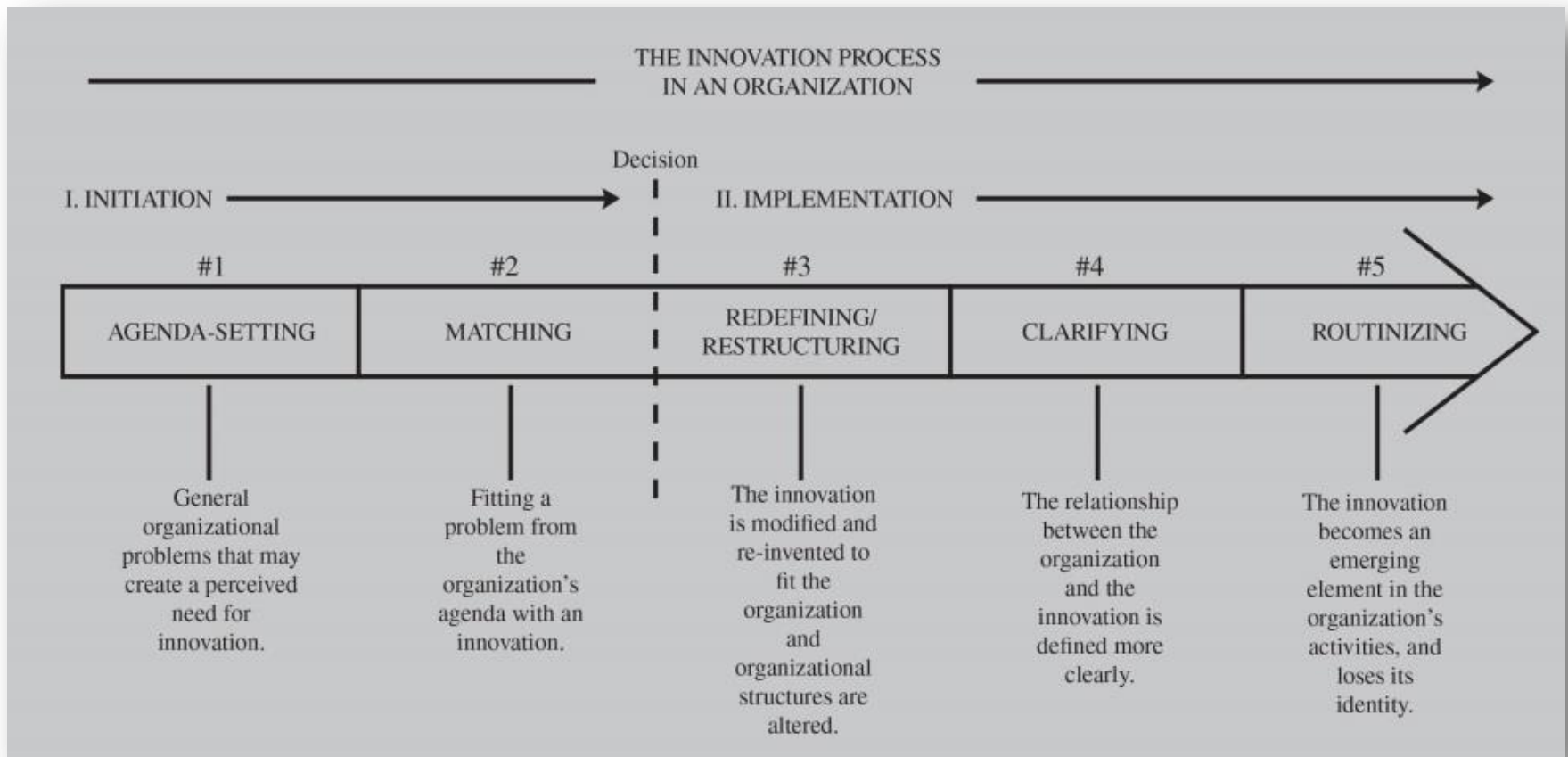


Factors that May Influence the Adoption of Innovation in the Planning and Design of Public Spaces – Diffusion of Innovations Theory (1962)

- Based on the 1957 Iowa State doctoral research of Everett Rogers
- Innovation is a universal, five-step process
- Certain factors are more influential in the adoption of innovations than others.
- “No other field of behavior science research represents more effort by more scholars in more disciplines in more nations”

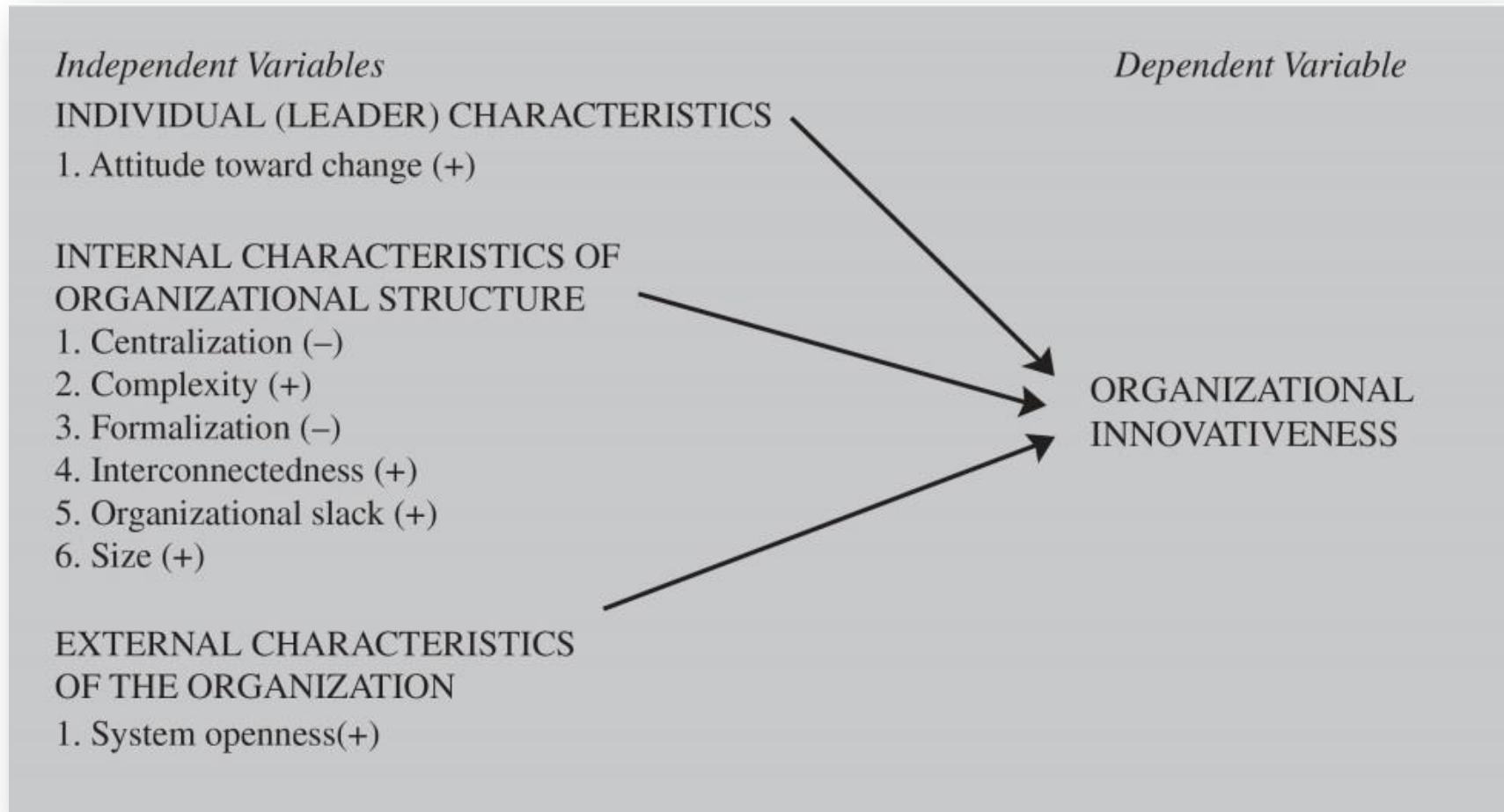


Factors that May Influence the Adoption of Innovation in the Planning and Design of Public Spaces



Rogers, 2003

Factors that May Influence the Adoption of Innovation in the Planning and Design of Public Spaces



Factors that May Influence the Adoption of Innovation in the Planning and Design of Public Spaces

Table 2-2. Adoption factors identified from recent research regarding the adoption of sustainable design by public organizations.

Author/ year	Research topic	Research design/ methods	Key adoption factors
1.Hays et al., 1996	State commitment to environmental policy	Data analysis	<ul style="list-style-type: none"> • Liberal public opinion • Strong environmental interest groups • Liberal legislatures • Professionalized legislatures
2.Symes & Pauwels, 1999	Urban design guidelines	Case study	<ul style="list-style-type: none"> • Set of different actors playing different roles, working on the project at different stages, with different concerns about the innovations proposed, with different levels of enthusiasm for the innovation
3.Jepson, 2004	Adoption of sustainable development policies	Cross-sectional survey of 390 cities with populations over 50,000 (103 returned)	<ul style="list-style-type: none"> • Level of community activity • Leadership character of the local planning office
4.Walker, 2006	Innovation in local government in UK	Cross-sectional survey of 120 English authorities	<ul style="list-style-type: none"> • Competition
5. Keen, Mahanty, & Sauvage, 2006	Practitioner networks	Case study	<ul style="list-style-type: none"> • Engagement of practitioners; communities of practice
6.Vasi, 2006	Municipal adoption of Cities for Climate Protection Program	<ul style="list-style-type: none"> • Event history analysis of 1072 cities using available data • Interviews 	<ul style="list-style-type: none"> • Local government's spatial and administrative proximity to previous adopters • Organizational linkages to international change agencies • Compatible organizational values, beliefs, needs and practices
7.Verhoest et al., 2007	Innovative behavior by public organizations	Cross sectional survey of 84 Flemish public organizations	<ul style="list-style-type: none"> • Managerial autonomy • Sanctions and rewards ("result control") • Competition • Threats to organizational legitimacy

- Follow-up studies by Rogers
- Studies by other DIT researchers
- DIT research specifically related to the adoption of sustainable design practices

Factors that May Influence the Adoption of Innovation in the Planning and Design of Public Spaces

Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area

- Transportation, water quality, public health
- What explains the adoption of certain techniques and policies over others?

14.Johnson & White, 2010	Adoption of sustainable transportation infrastructure	Cross-sectional; in-depth semi-structured interviews with 32 engineers and planners in the Kansas City, Mo. region	<ul style="list-style-type: none">• Leadership potential of Public Work Directors• Observability and perceived relative advantage of the innovation• Culture of innovation within the organization and the community• High rate of growth• Federal mandates (particularly related to transportation innovations)• Funding (to a lesser extent)
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Hypothesis

Primary factors:

- **Presence of a strong leader/advocate**
- **Perception of the innovation**
- **Collaborative relationship of the planning and design team**
- **Internal characteristics of the organization**
- **External characteristics of the organization, such as system openness and an engaged public**

Secondary factors:

- Perceived competition from neighboring communities
- Costs, economic benefits, and perceived return-on-investment
- Presence of a long-range vision plan, including sustainability goals and indicators
- A liberal/Democratic population

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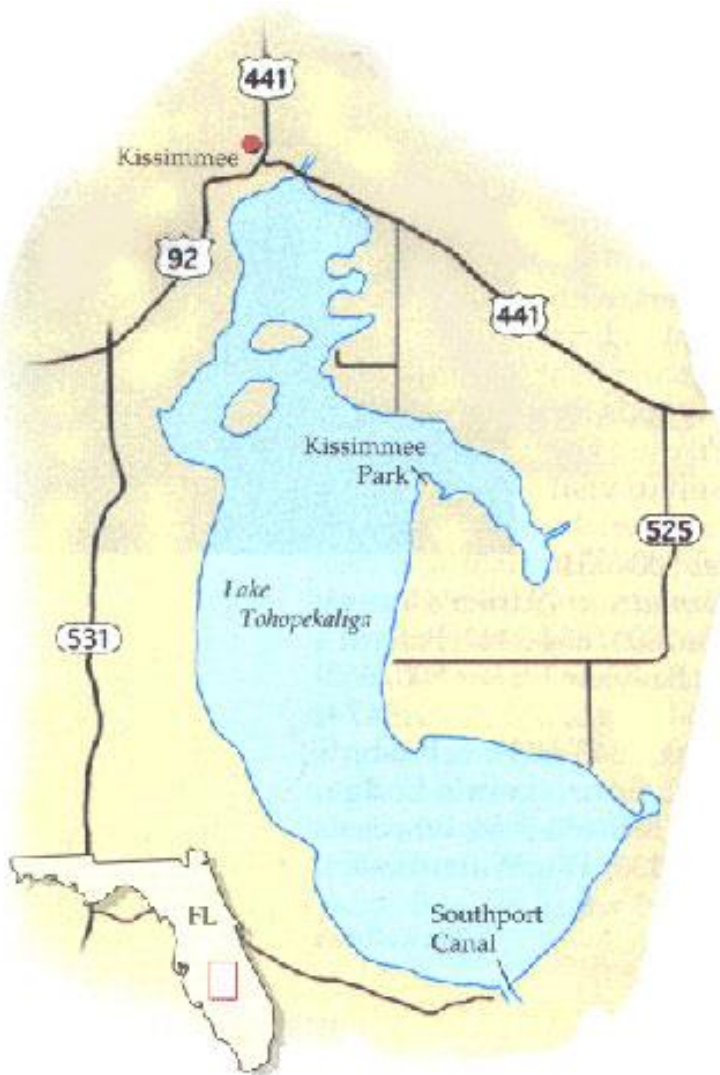
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City of Kissimmee Lakefront Park

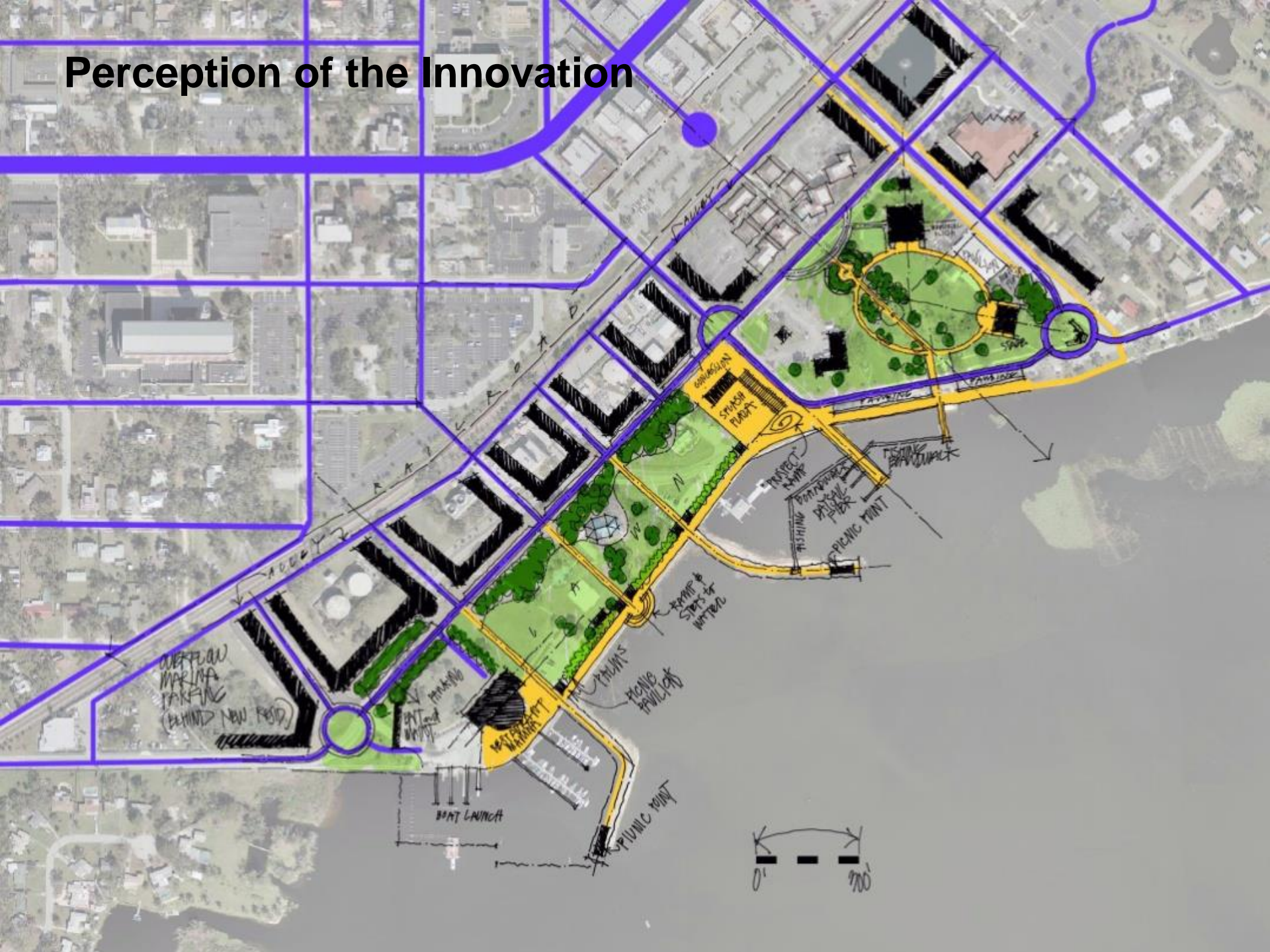
Population 64,000



System Openness, Engaged Public



Perception of the Innovation



Long Range Vision Plan



Glattig Jackson/ AECOM

Collaborative Relationships (+ Good Food)

- Elected Officials
- City Staff and Administration
- Community Redevelopment Agency
- Kissimmee Utility Authority
- Business and Property Owners
- Arts, Historical and Cultural Groups
- Service Clubs
- Consulting Team
- Construction Manager



Strong Leadership, Advocacy



CRA Director Gail Hamilton



Mayor Jim Swan, City Manager Mike Steigerwald



Parks, Recreation, and Public Facilities Director Dan Loubier

Benefits To-Date

- Estimated 500,000 visitors annually
- Improved lake habitat, storm water treatment
- Increased downtown activity
- \$50 million new planned development
- \$17 million investment from the KUA
- 5% increase in property values throughout downtown in 1st year
- New direct and indirect employment
- Pending RFQ for development of 6 acre utility site
- Fee-based venues booked 40 weeks in advance: pavilions, wedding lawn, events space, community house



Implications for the Adoption of Innovation in the Planning and Design Process for Public Spaces

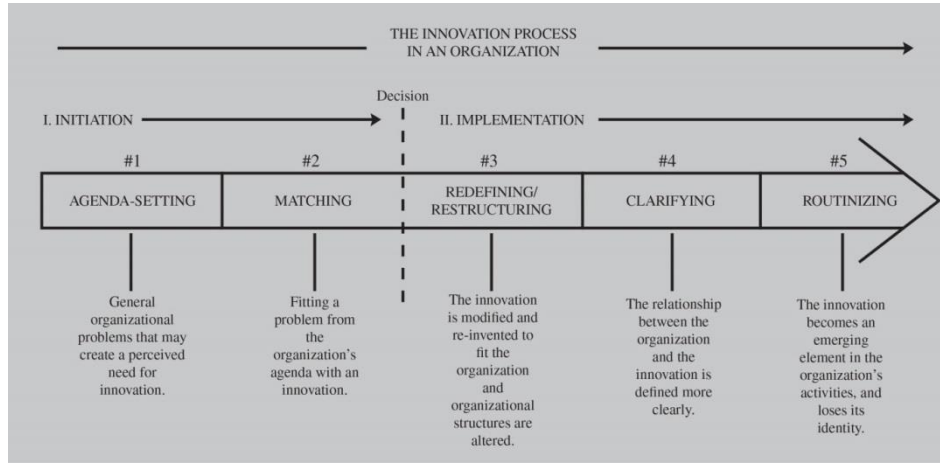


Figure 6-2. Innovation process in organizations (Rogers, 2003, p. 421).

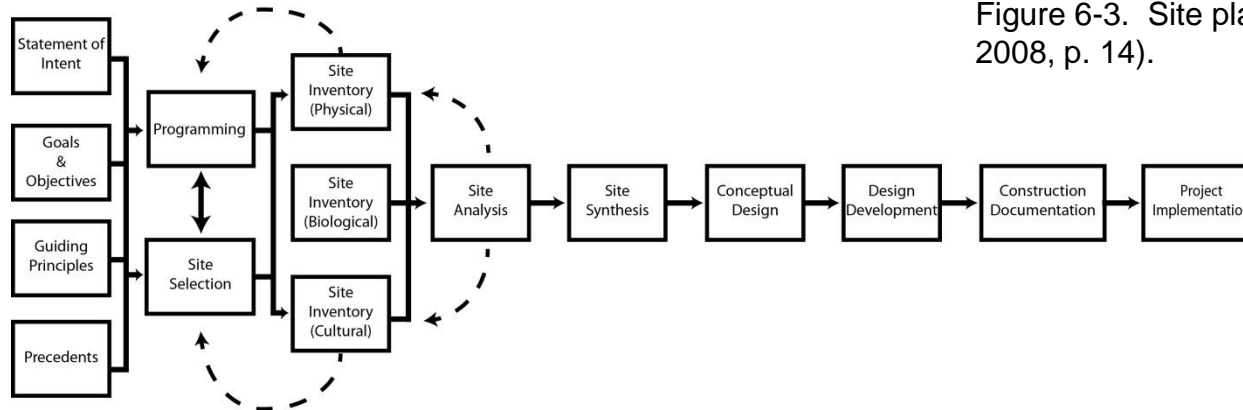
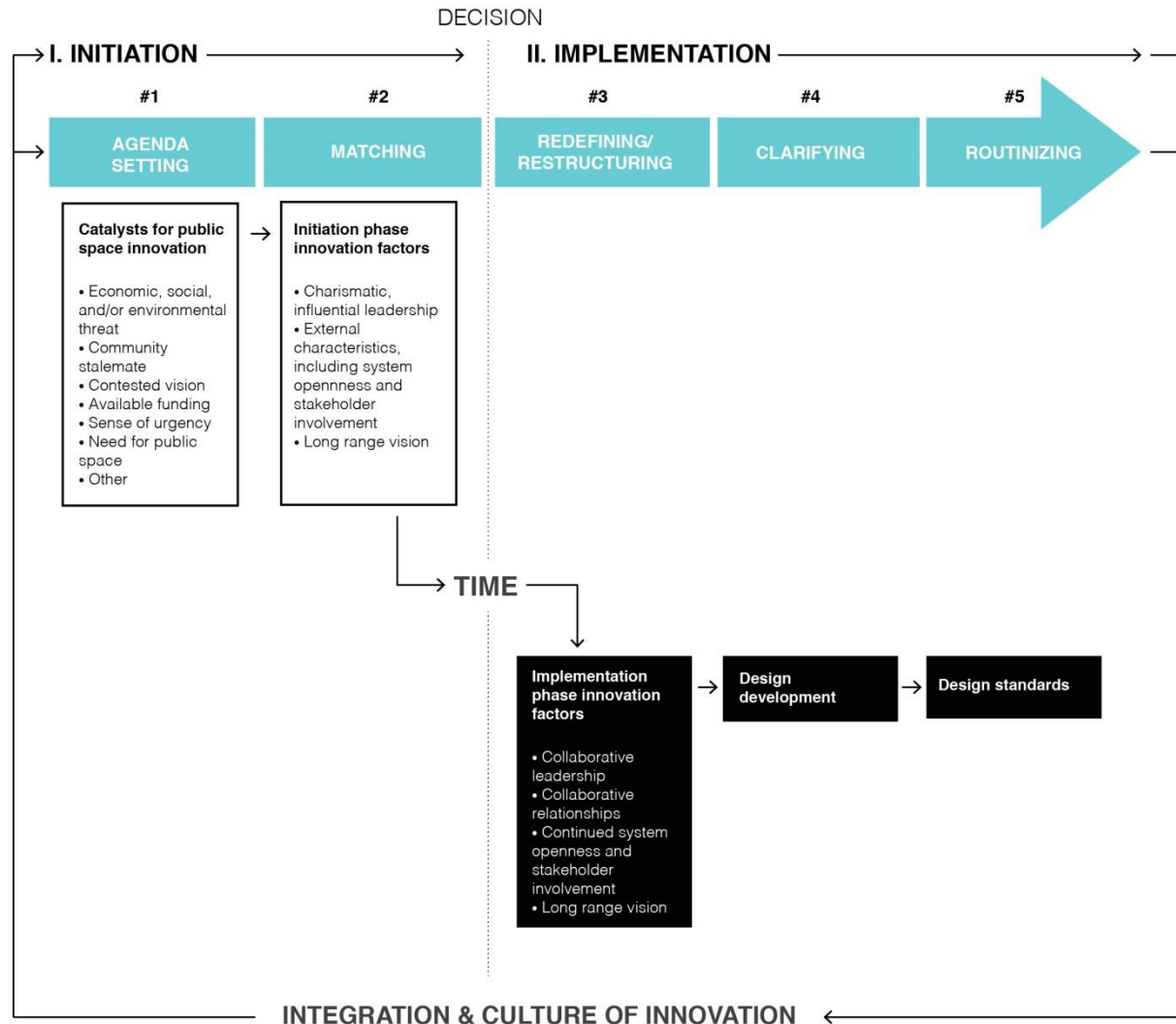


Figure 6-3. Site planning and design process (LaGro, 2008, p. 14).



Figure 6-4. Design process (Koberg & Bagnall, 1972, p. 20).

Implications for the Adoption of Innovation in the Planning and Design Process for Public Spaces



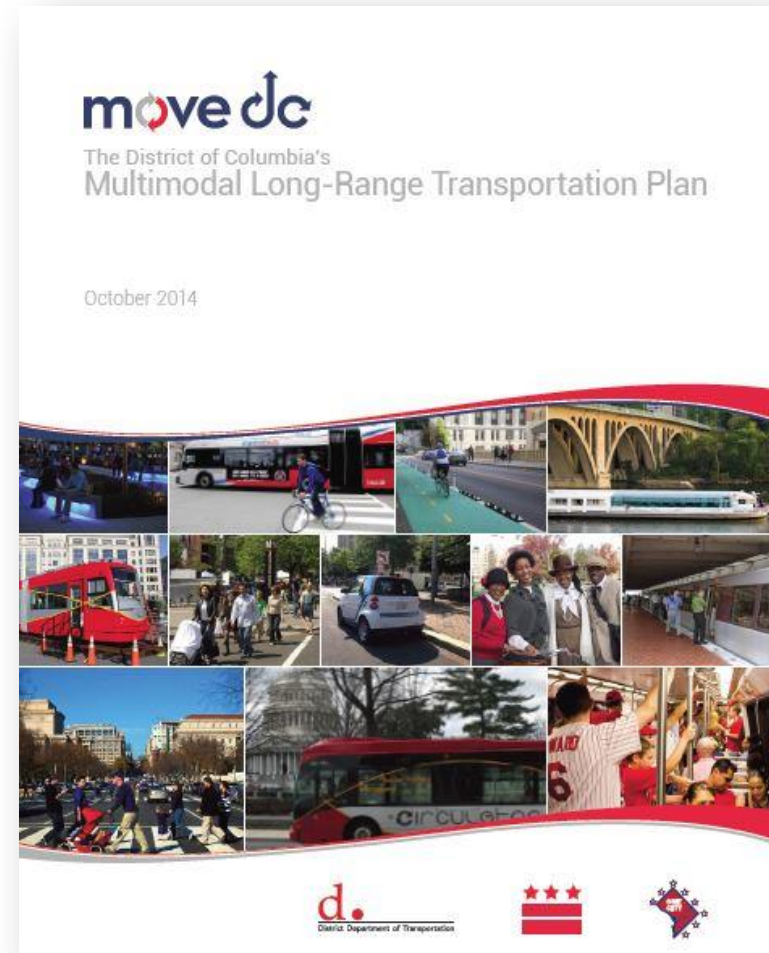
SUMMARY (DISSERTATION + SUBSEQUENT RESEARCH)

Civic Spaces Should be Planned and Designed as Elements of the Public Realm



Public Realm Subsystems Should be Planned Concurrently

- Parks and Civic Spaces
- Transportation
- Public Facilities
- Stormwater, Utilities
- Arts
- Schools, Libraries
- Others



Every Civic Space Should be Designed and Managed as a High Performance Public Space



Social

- Improve the neighborhood
- Improve social and physical mobility
- Encourage health and fitness
- Provide relief from urban congestion, stressors
- Provide places for formal and informal social gathering, art, performances, events
- Provide opportunities for individual, group, passive and active recreation
- Facilitate shared experiences among different groups
- Attract diverse populations
- Promote creative and constructive social interaction



Environmental

- Use energy, water, and resources efficiently
- Improve water quality of both surface and ground water
- Serve as a net carbon sink
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- Hardscape materials selected for longevity of service, social/ cultural/ historical sustainability, regional availability, low carbon footprint
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Economic

- Create and facilitate revenue-generating opportunities for the public and/or the private sectors
- Create meaningful and desirable employment
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- Sustain or increase property values
- Catalyze infill development and/or the re-use of obsolete or under-used buildings or spaces
- Attract new residents
- Attract new businesses
- Generate increased business and tax revenues
- Optimize operations and maintenance costs

Communities Should Conduct a Self-Audit Before Initiating a New Project

Project Pre-Planning Checklist

Primary Factors:

- ☐ Presence of a strong leader/ advocate for the innovation
- ☐ Collaborative relationship of the planning and design team
- ☐ External characteristics, including system openness and stakeholder involvement

Secondary Factors:

- ☐ Costs, economic benefits, and perceived return-on-investment
- ☐ Presence of a long-range vision

Other Possible Factors:

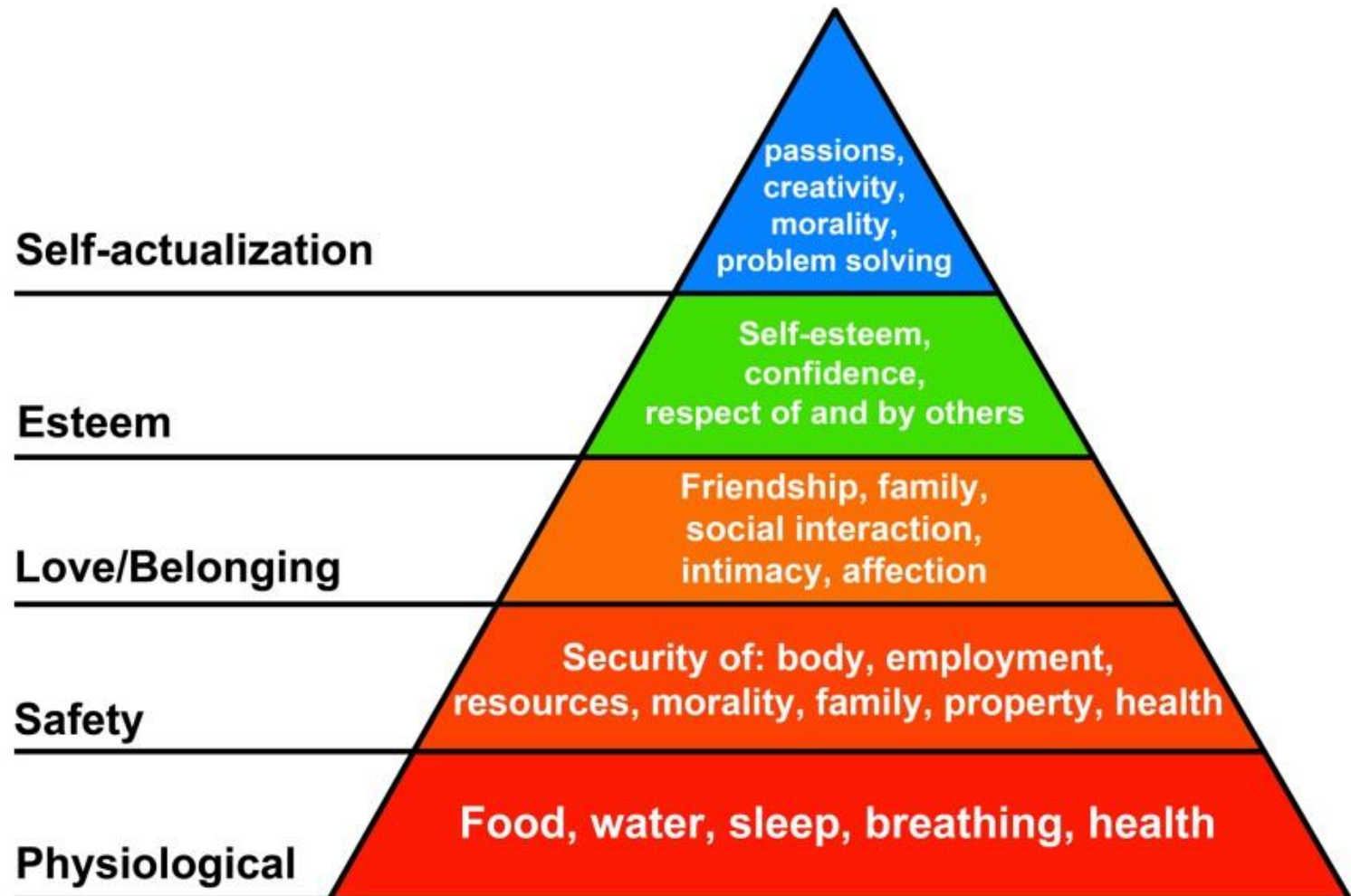
- ☐ Perception of the innovation
- ☐ Internal characteristics of the organization
- ☐ Funding
- ☐ Passion

Civic Spaces Should Focus on Experiences, Not Just Facilities

- Places to play vs. playground
- Places to relax vs. benches
- Places to eat and socialize vs. picnic tables
- Places to play ball vs. athletic fields
- Places to play hoops vs. basketball court
- Places to exercise vs. fitness center



Every Space Should be “Designed with Respect” to Meet Human, Ecological Needs



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