



LEARNING LANDSCAPES

Transforming Cityscapes into Opportunities for Playful Learning



Learning Landscapes: Vision and Status to Date

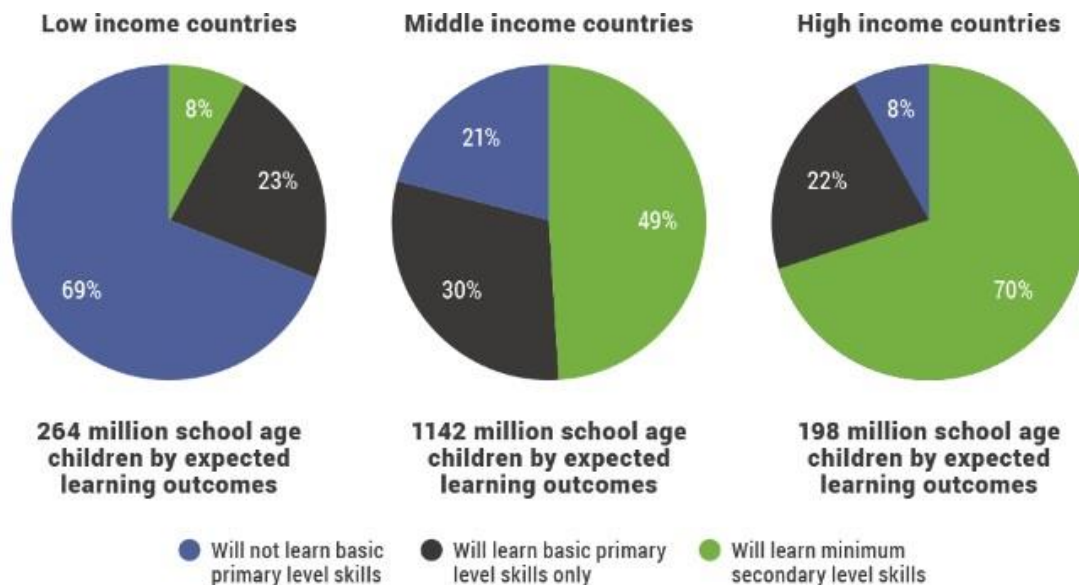
Kathy Hirsh-Pasek

Senior Fellow, Center for Universal Education

Professor of Psychology, Temple University

WE HAVE A GLOBAL LEARNING CRISIS

With business as usual, by 2030 half of the world's youth - over 800 million young people - will not have the skills they need to succeed in work and life.

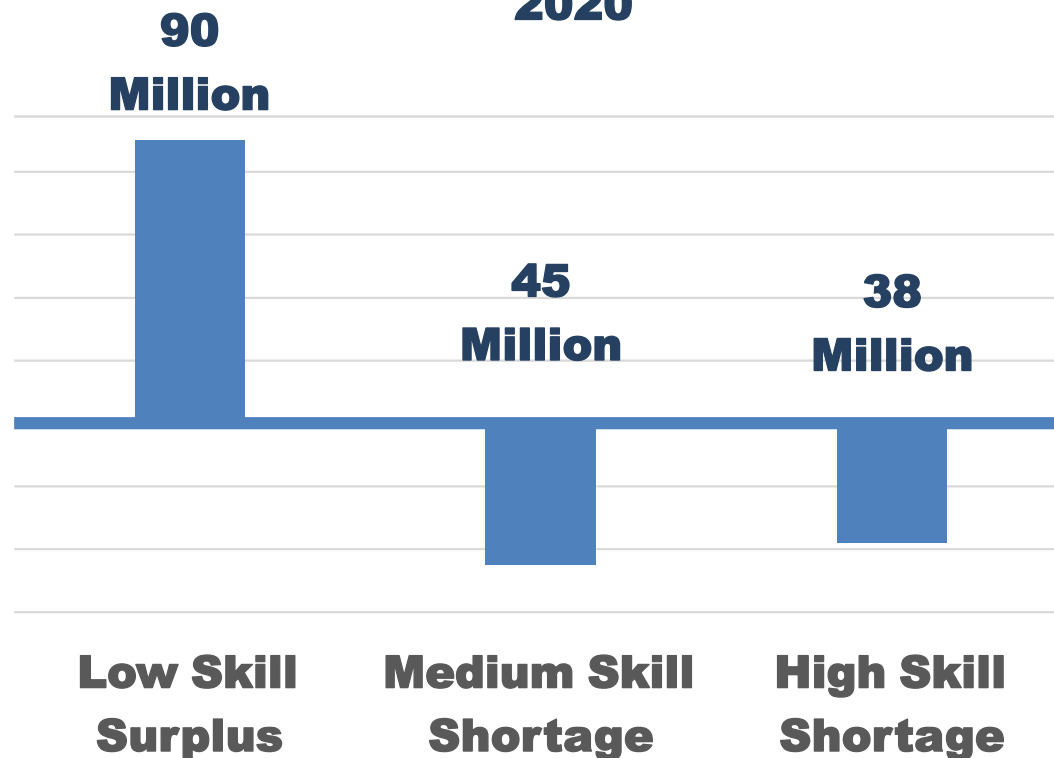


Source: Education Commission projections (2016)

TOMORROW'S WORKFORCE NEEDS DIFFERENT SKILLS

With business as usual,
higher order skills will be in
short supply.

Global Skills Gap Projected by 2020



Source: McKinsey

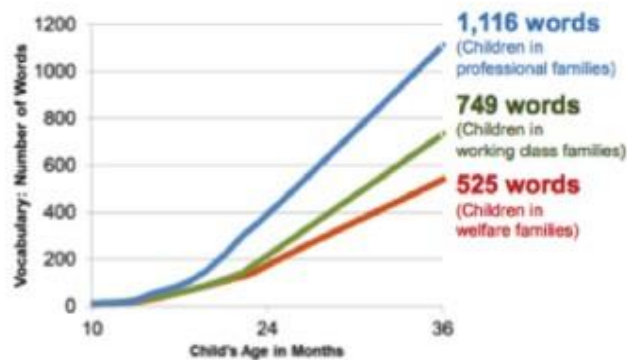
THE LEARNING CRISIS BEGINS EARLY

By age 3, low income children in the U.S. are already well behind their middle income peers.



LANGUAGE

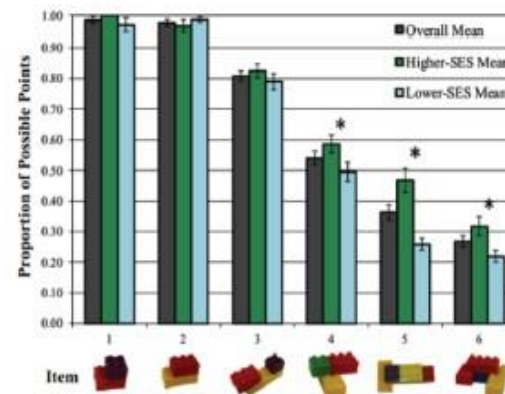
These differences translate to lower language scores at age 9-10 and lower reading comprehension scores throughout school



Source: Hart and Risley, 1995

SPATIAL SKILLS

SES impact children's ability to copy a block design with appropriate number and orientation, which predicts STEM outcomes at the beginning of formal schooling.



Source: Verdine et al., 2014

THE UNITED NATIONS RECOGNIZES THIS CRISIS AND DECLARED THAT :

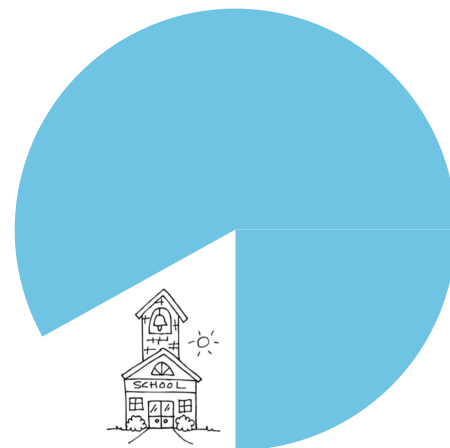


- Children are the basis for all dimensions of sustainable development.
- They have a right to thrive, develop to their full potential, and live in a sustainable world.
- As such, children should be at the center of the post-2015 Sustainable Development Goals.

MOST NATIONS RESPOND WITH SCHOOL-BASED LEARNING AS THE SOLUTION, NOTING A NEW PROLIFERATION OF PRESCHOOLS



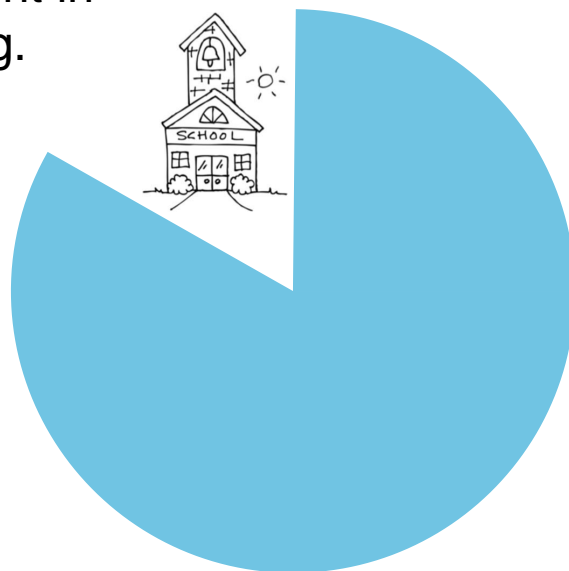
Yet, children only spend **20%** of their waking time in school. Reforming education, while important, cannot redress the inequity.



20%

THE OTHER 80% HAS THE POTENTIAL TO LEAPFROG CHILDREN'S LEARNING

Out-of-school learning can complement in-school learning.



Learning happens everywhere. The Center for Universal Education at Brookings is looking at new ways to use the science of learning to enrich children's experiences outside of school.

80%

LEARNING LANDSCAPES



The aim of Learning Landscape is to transform everyday places into learning opportunities in order to maximum “the other 80%” of time children spend outside of school and to augment what goes on in school.

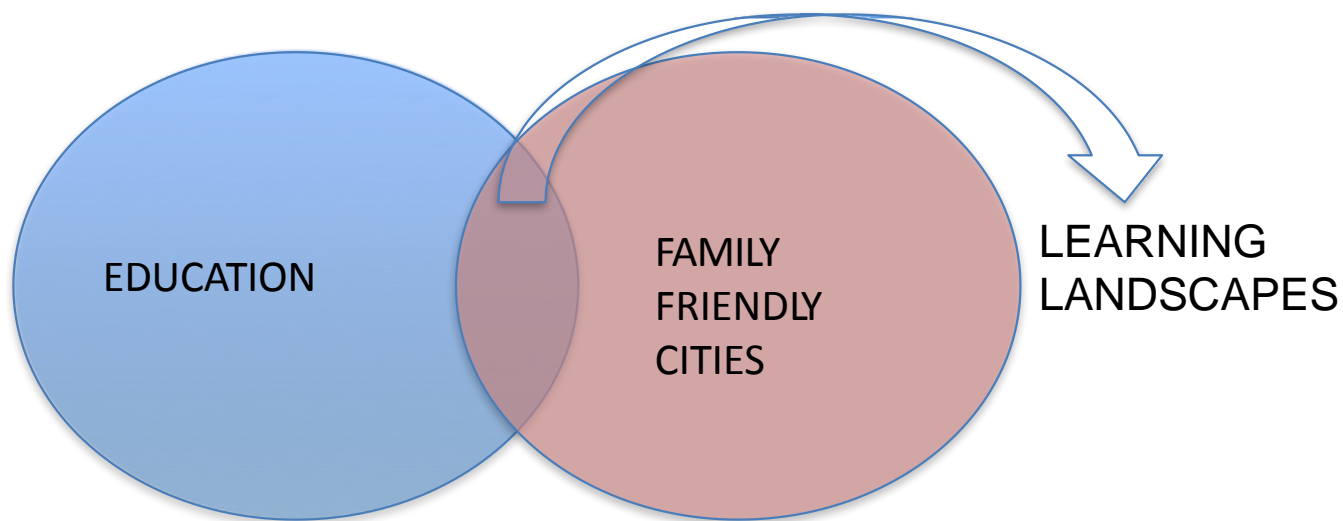
It's time to try something new.



By bringing together urban revitalization and education, we create a new model that fits into what architects call the conscious city movement.

<http://bit.ly/2nRaUJm>

LEARNING LANDSCAPES LIES AT THE SWEET SPOT BETWEEN CONSCIOUS CITIES AND EDUCATION



A NUMBER OF INDEPENDENT PROJECTS ARE MOVING IN THE SAME DIRECTION AROUND THE GLOBE



URBAN 95



A crosswalk in Iceland



A mural on stairs in NY

IN THE PHILADELPHIA PLAYFUL LEARNING PROJECT, WE USE THE LATEST SCIENCE TO DESIGN, BUILD, AND TEST STRUCTURES THAT FOSTER 21ST CENTURY SKILLS



- ✓ **SOCIO-EMOTIONAL SKILLS**
(e.g., Berk et al., 2006)
- ✓ **EXECUTIVE FUNCTIONS**
(e.g., Barnett et al., 2008; Blair & Raver, 2014)
- ✓ **LANGUAGE**
(e.g., Han et al., 2010; Hassinger-Das et al., 2014; Roskos & Burnstein, 2011)
- ✓ **MATHEMATICS**
(e.g., Ramani & Siegler, 2008; Seo & Ginsburg, 2004)
- ✓ **SCIENTIFIC THINKING**
(e.g., Schulz & Bonawitz, 2007)

EARLY PILOTS SHOW GOOD RESULTS

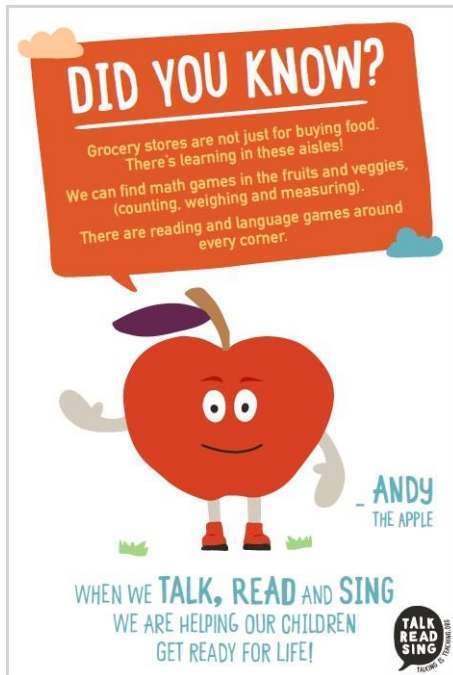
Specific interventions tested across seven cities across three countries.



- **Supermarket Language Intervention**
 - Philadelphia, PA
 - Fort Hare, South Africa
 - Tulsa, OK
- **Ultimate Block Party**
 - New York, NY
 - Baltimore, MD
 - Norwalk, CT
 - Toronto, Canada
- **Urban Thinkscape (in process)**
 - Philadelphia, PA
- **Playbrary (in process)**
 - Philadelphia, PA
- **Parkopolis**
 - Several cities in Switzerland, August, 2017
 - Pilot to begin in Philadelphia

SUPERMARKET LANGUAGE INTERVENTION

Using colorful, visually engaging signage in supermarkets to encourage caregiver-child conversations and interactions.



Results:

- Pilot results show a 33% increase in caregiver-child language when the signs were up in low-income neighborhoods.
- The intervention is cheap – average cost is between \$60-200 per supermarket.
- Results published in scientific literature – Ridge, Hirsh-Pasek et al., 2015.

ULTIMATE BLOCK PARTY

Build a public dialogue to underscore the value of play in fostering lifelong achievement and social, emotional, and physical well-being.



Results:



- Pilot results show increase in parents' attitudes to the play-learning connection, which is a vital component in public awareness.
- Over 10 million people reached; 50,000 at event itself!
- Results published in scientific literature – Grob, Schleisinger, Hirsh-Pasek & Golinkoff, 2017.

URBAN THINKSCAPE

Using architectural design and the science of learning to organically transform cityscapes into learning opportunities.

Intended Outcomes:

1. Families will be more engaged and interactive with the public space.
2. Caregiver-child discourse around public spaces will be increased in ways that create hotspots for learning and enhanced family interaction.
3. Families will begin to understand and change their attitudes regarding the links between play and learning and the utility of everyday environments for fostering their children's learning.



URBAN THINKSCAPE

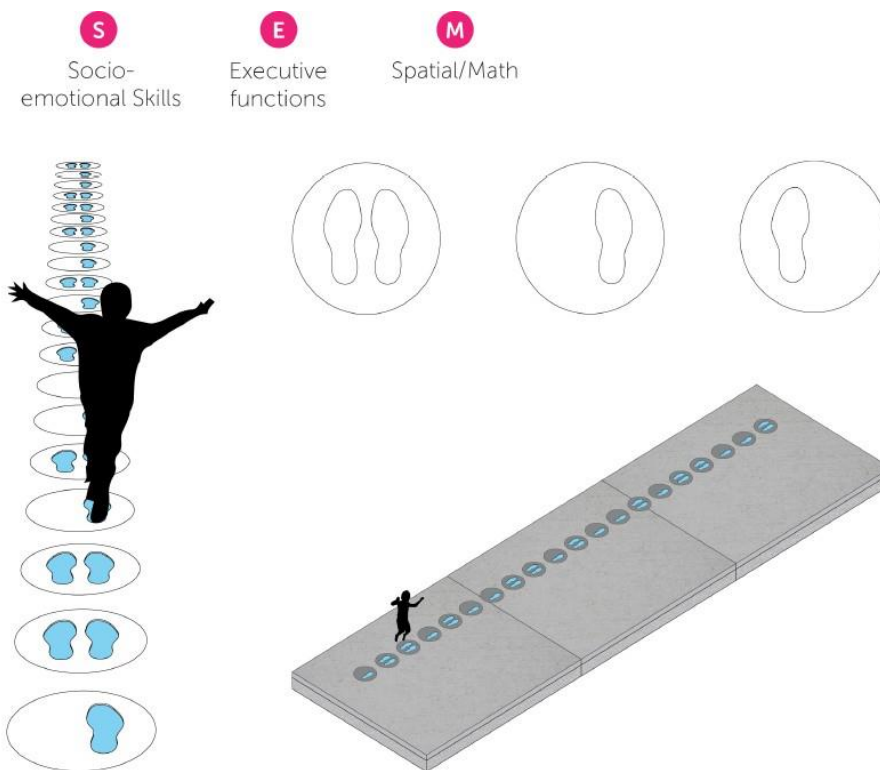
An example for developing social emotion, executive function, and spatial/math skills.



JUMPING FEET

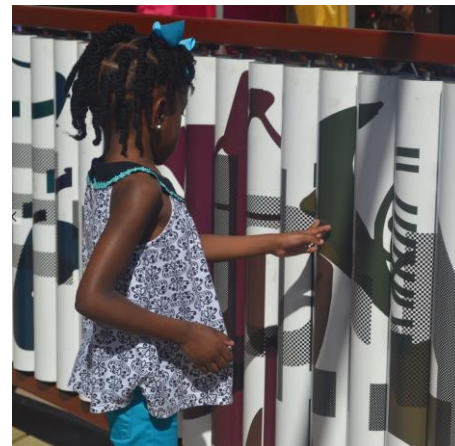
Placing cues for jumping patterns helps the development of executive functions.

Executive function is an umbrella term for the control of cognitive processes, including working memory, flexibility, and problem solving, and planning. Children's executive function abilities in the early childhood predict later reading and mathematics achievement better than IQ scores (Blair & Razza 2007).



URBAN THINKSCAPE OPENED IN OCTOBER 2017

- The community organizer, Bettye Ferguson, presented findings from the process of development at Harvard University's Frontiers of Education meeting in July 2017.
- Over 100 community members participated in building the site.
- Community members have been trained as “data ambassadors” to collect observational data on use and learning from the site.



Playbrary

Architect: Studio Ludo & Digsau



CECIL B. MOORE BRANCH
Free Public Library



PARKOPOLIS: THE HUMAN BOARD GAME

Offers a fun adventure in learning math and scientific reasoning.



PARKOPOLIS

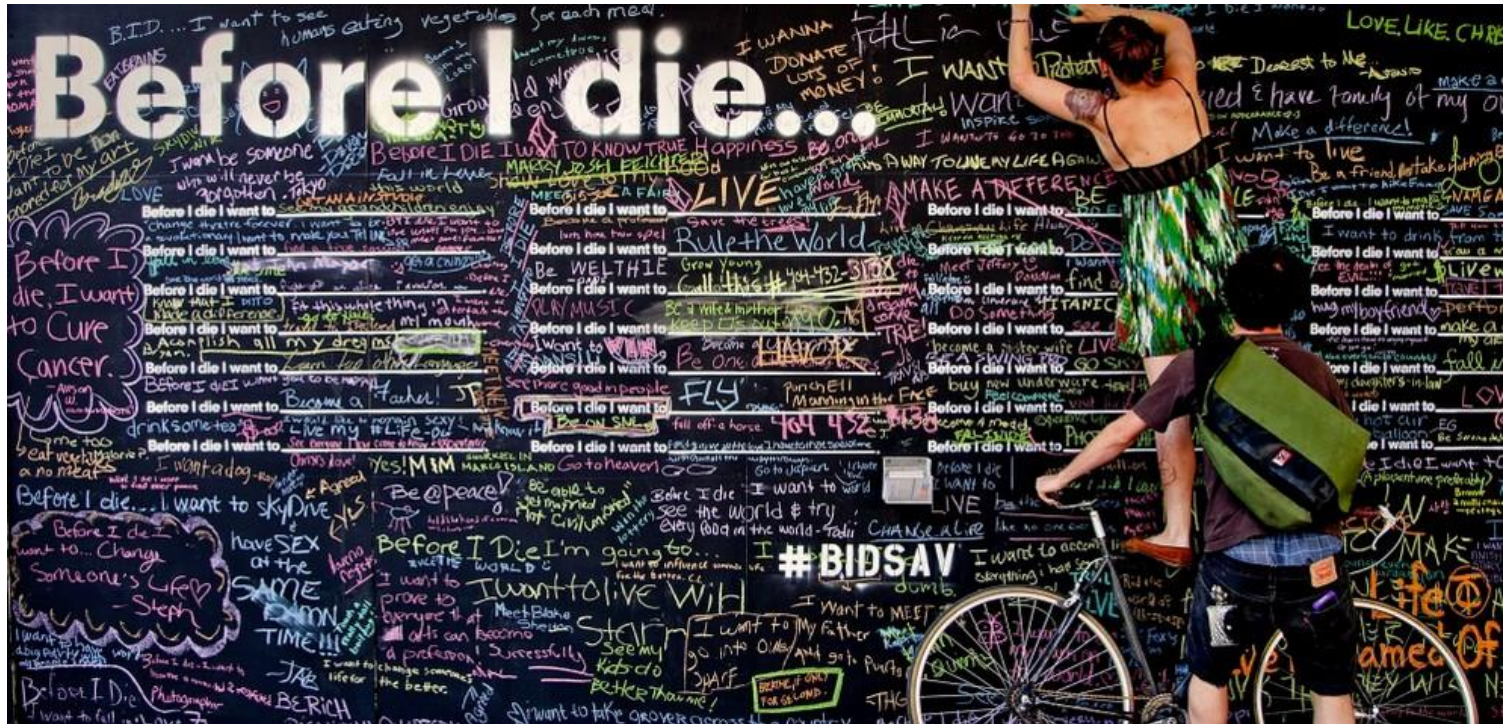
Note dice specially designed to prompt learning in fractions, which are known to be a stumbling block in mathematical learning.



From Zurich, Switzerland, 2017



Inspired by Candy Chang's Work



**Connie is moving to Philadelphia
and joining us in finding a wall
for.....**

When I was little, I played.....

#pass it on

Pilots underway in England, the U.S., and Chile

**THINK HOSPITAL WAITING
ROOMS, LAUNDROMATS....**



PUTTING IT ALL TOGETHER = LEARNING LANDSCAPES

What happens when a city puts all these, and other, interventions to use? Can it radically transform people's perception of children's learning?

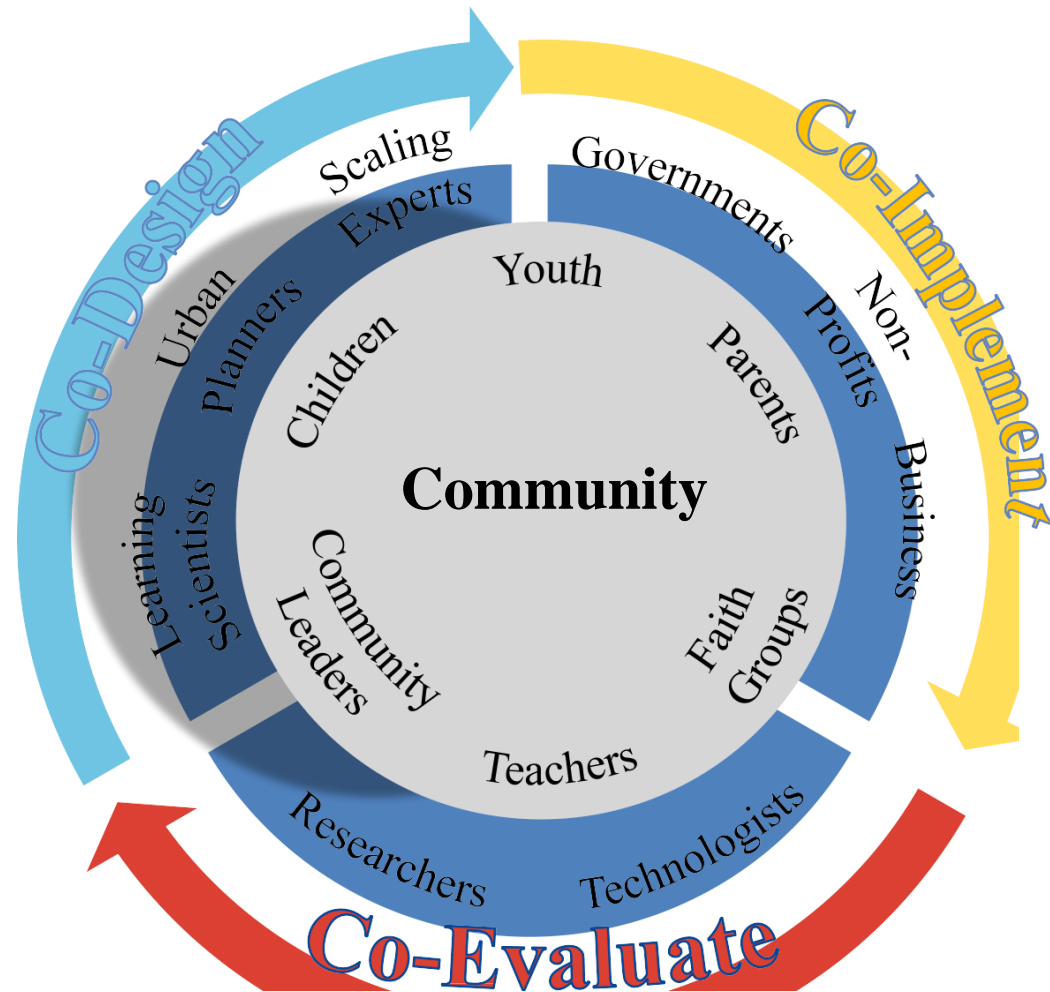


Philadelphia will be a grand experiment: become a Playful Learning City! And the impact can be scientifically evaluated!

THE VISION – TO PUT COMMUNITIES AT THE CENTER



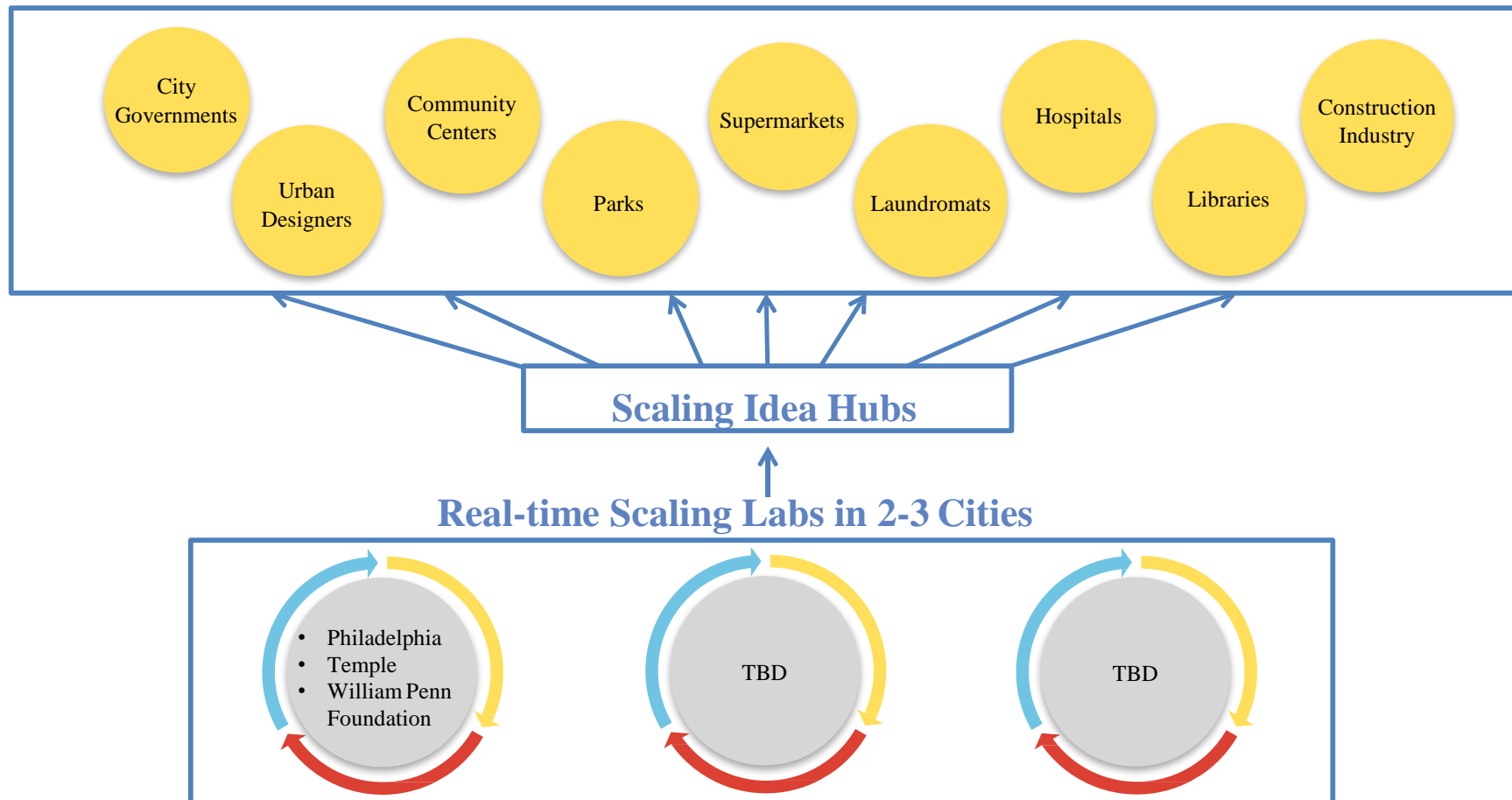
The process for designing, implementing, and evaluating learning landscapes involves deep collaboration between communities and outside experts.



TO CREATE A THEORY OF IMPLEMENTATION



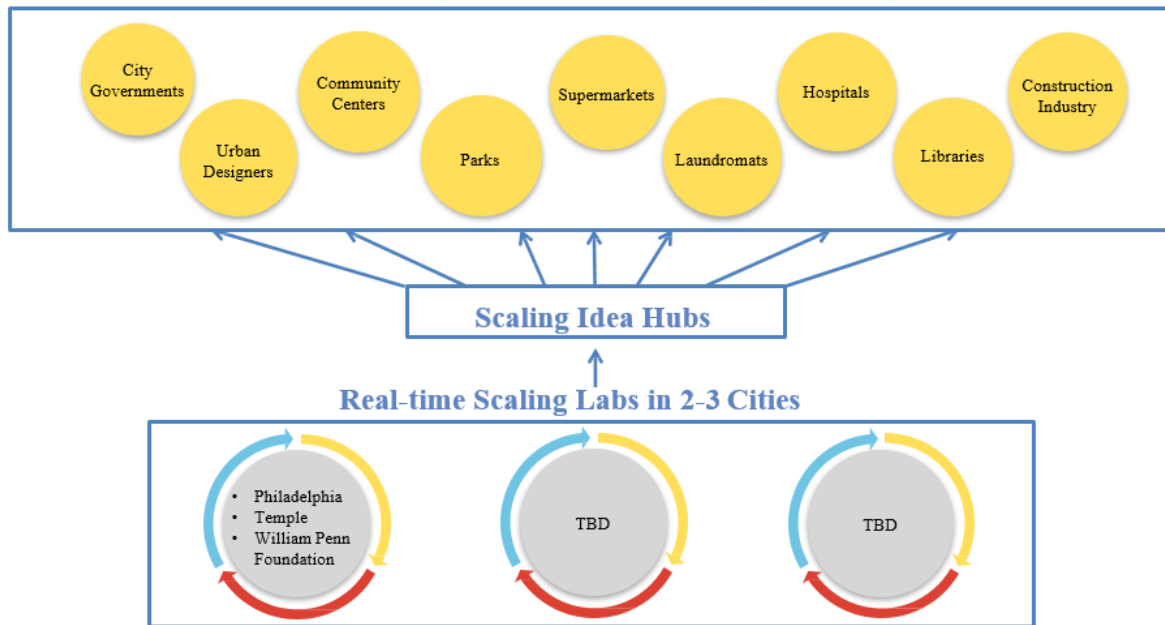
Sustainable Implementation of Learning Landscapes



TO CREATE SUSTAINABLE CHANGE IN PRACTICE AND TO ENSURE THAT URBAN PLANNING USES LEARNING SCIENCES FOR THE BENEFIT OF ALL CHILDREN



Sustainable Implementation of Learning Landscapes



5 Year Vision

Ultimate Outcome (Year 5)

- Sustainably-changed practice by city-based actors



Scaling Idea Hubs (Year 3 & 4)

- How to codify?
- What constituents to reach?
- How to sustainably change practice?



Real-time Scaling Lab (Year 1 & 2)

- What impact?
- What process?
- How to scale?

TO ADDRESS A NUMBER OF BIG QUESTIONS AT THE LEVEL OF INDIVIDUAL PROJECTS AND COMMUNITY INVOLVEMENT AND KNOWLEDGE ALONG THE WAY



1. Do Learning Landscapes help families engage and interact more with the public spaces?
2. Do Learning Landscapes lead to changes in caregiver attitudes and knowledge about learning?
3. Do Learning Landscapes alter caregiver-child discourse and behaviors in precisely the ways that foster learning outcomes?
4. How many exposures to Learning Landscapes are necessary to see changes in caregiver attitudes and knowledge about play and learning?
5. How many exposures to Learning Landscapes are necessary to change community interactions and knowledge around learning?

**IMAGINE A WORLD IN WHICH
CITIES COULD RECRUIT THE
OTHER 80% TO HELP CHILDREN
LEARN THE SKILLS NEEDED FOR A
CHANGING WORLD**



**HARNESSING THE PROMISE OF
LEARNING LANDSCAPES**



Thank you!