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Early Health & Early Learning “Pay for Success” Social Impact Finance

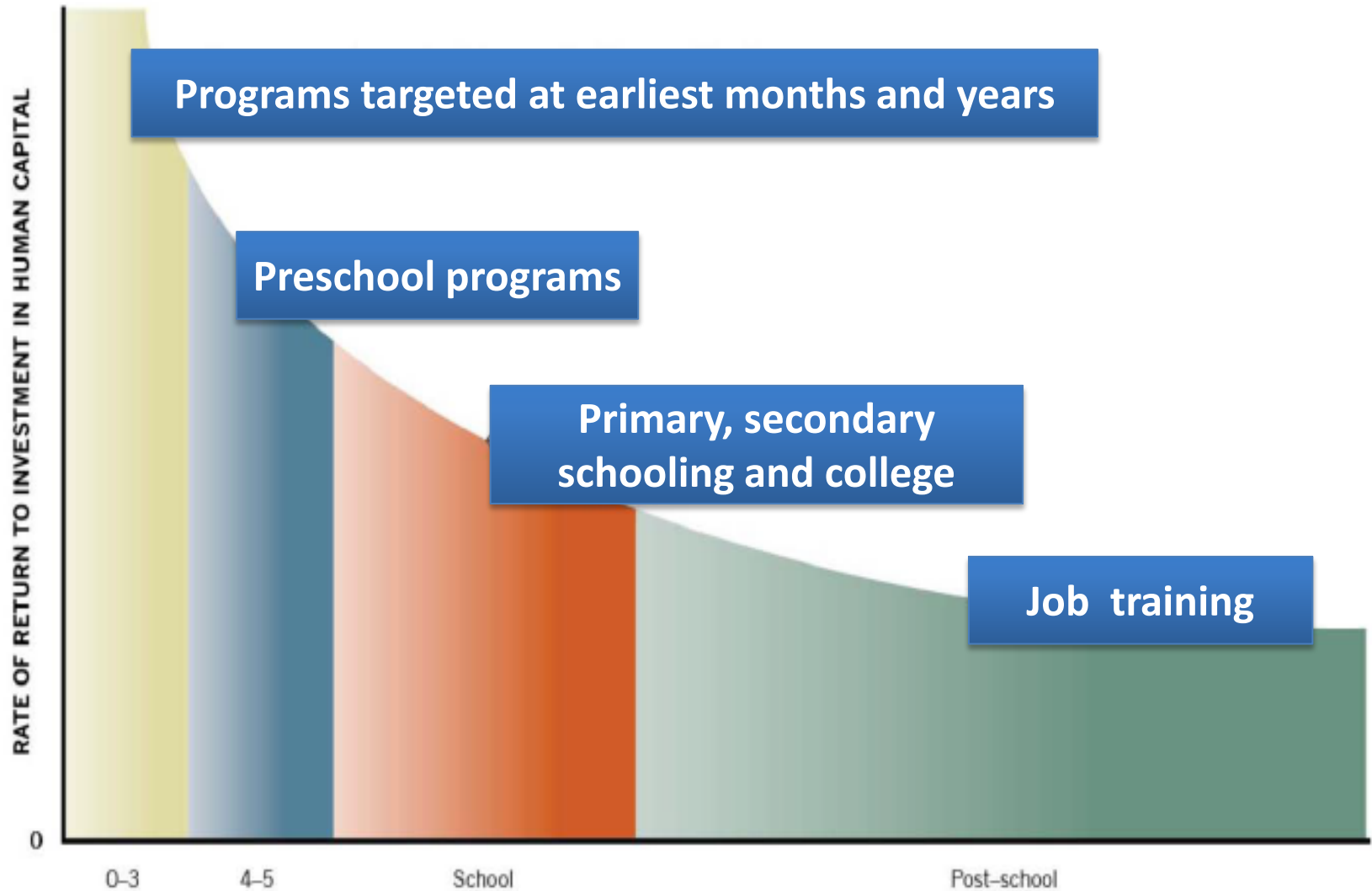
Roundtable on Population Health Improvement

HealthPartners Institute for Education and Research

**INET Human Capital & Economic Opportunity
Working Group
and
ReadyNation**

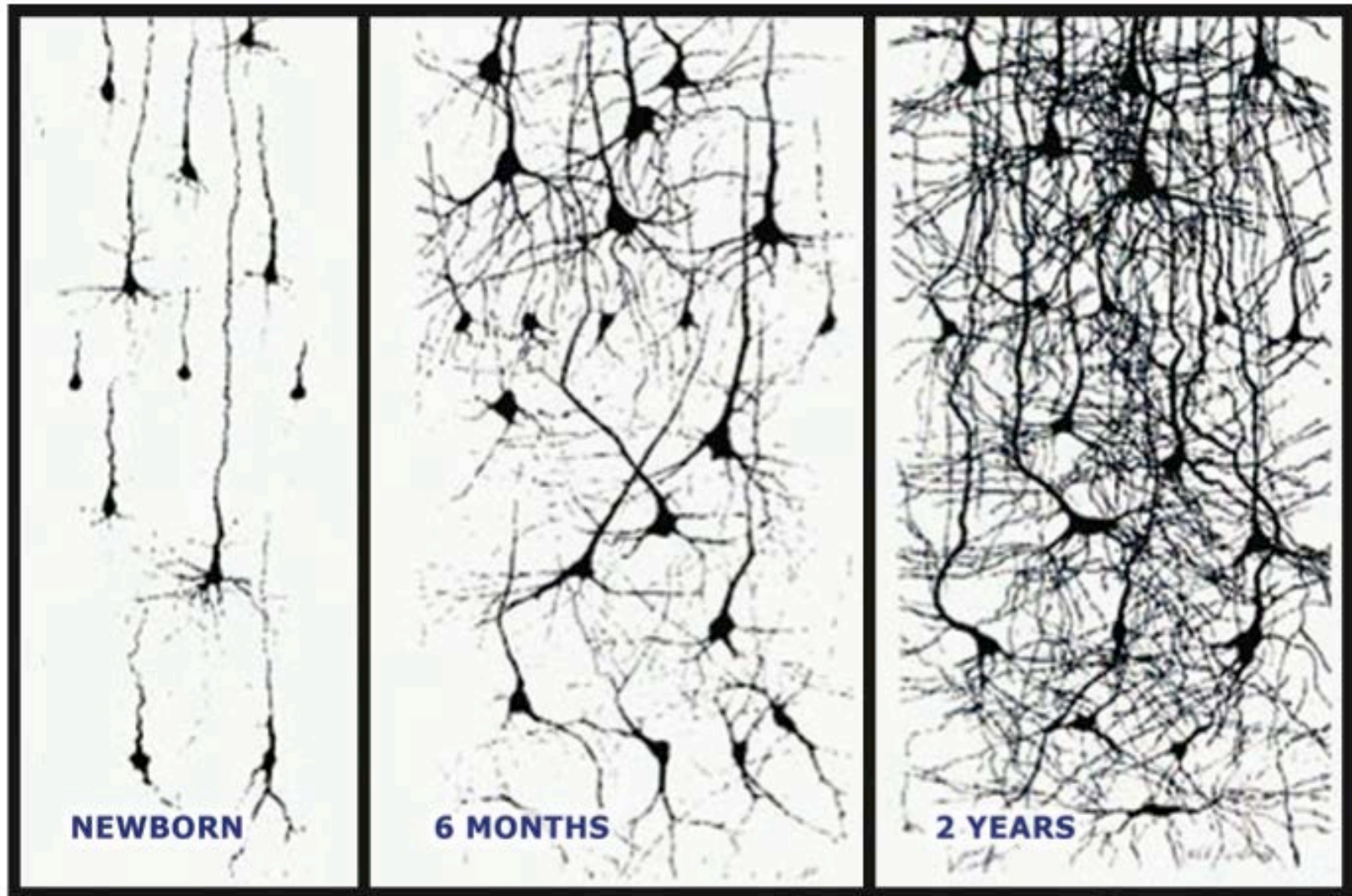
February 6, 2014

Investment Return Relative to Age

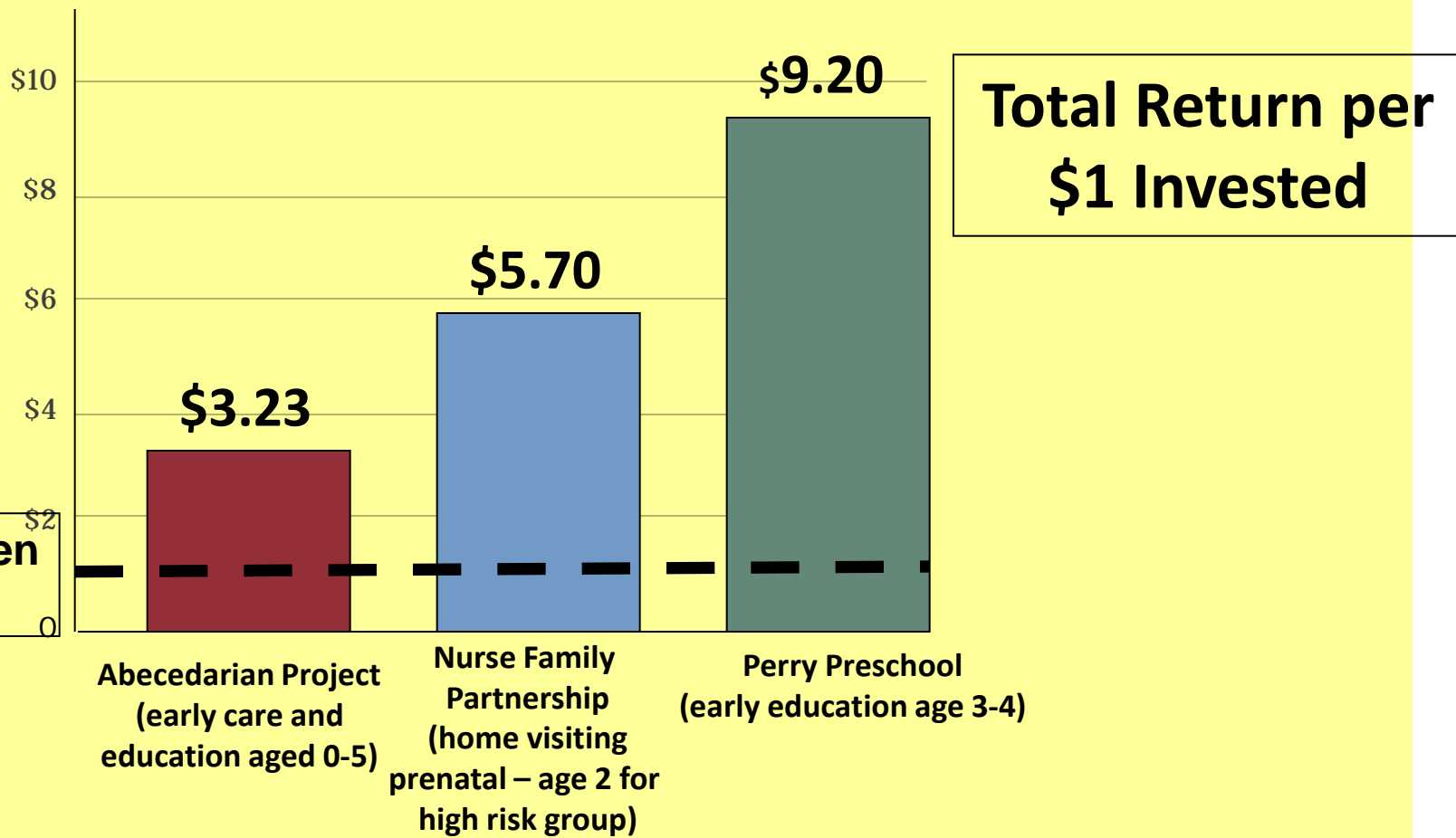


Source: James Heckman, Schools, Skills, and Synapses, *Economic Inquiry*, 2008

One of Many Foundation Elements – 700 Neurons per Second



Cost/benefit analyses show positive returns for proven early childhood strategies



Data Sources: Center on the Developing Child at Harvard University, Karoly et al. 2005, Heckman et al. 2009.

The cost-effectiveness of child health and of educational interventions are increasingly important

Avoidable annual costs exceed \$500 billion

- ✓ Violence (Cohen, 1998)
- ✓ School dropouts (Levin et al. 2007)
- ✓ Substance abuse, and mental health problems (O'Connell et al., 2009; Greenberg et al., 2003).

Health and Education in Early Childhood: Predictors, Interventions, and Policies. Arthur J. Reynolds, Arthur J. Rolnick and Judy A. Temple eds. Cambridge University Press 2014

<http://www.cambridge.org/us/academic/subjects/psychology/developmental-psychology/health-and-education-early-childhood-predictors-interventions-and-policies>

Quality early care and education improve adult health

Children in high-quality early education with strong parental involvement

- ✓ Are more likely to go to a doctor, receive appropriate screenings and immunizations, and receive dental care
- ✓ Learn about health and nutrition which can reduce obesity and malnutrition.
- ✓ Experience less abuse, neglect, and injury at home.

“Early Childhood Education: Pathways to Better Health. A Friedman-Krauss and S Barnett”, Preschool Policy Brief, NIEER, April 2013

<http://nieer.org/sites/nieer/files/health%20brief.pdf>

Nurse Family Partnership

- ✓ **56% reduction in emergency room visits for accidents and poisonings in the second year of the child's life**
- ✓ **50% reduction in behavioral problems when the children enter school.**
- ✓ **48% reduction in state-verified reports of child abuse and neglect by child age 15**
- ✓ **39% fewer healthcare encounters for injuries or ingestions in the first two years of life**
- ✓ **5 point increase in language scores on a test with a mean of 100 and standard deviation of 15 among 4-year-old children born to mothers with low psychological resources**

"Nurse-Family Partnership", Early Childhood, Social Programs That Work, Coalition for Evidence-Based Policy
http://evidencebasedprograms.org/wordpress/?page_id=57

Healthy Families

Healthy Families mothers receive bi-weekly home-visitation services that encouraged healthy prenatal behavior, offered social support, and provided a linkage to medical and other community services. An RCT study of the Healthy Families New York (HFNY) program found that:

- ✓ Low birth weight frequency was cut in half – LBW deliveries was significantly lower for the HFNY group (5.1%) than for the control group (9.8%) (AOR=0.43; 95% CI=0.21, 0.89).
- ✓ LBW risk was further reduced for mothers who were exposed to HFNY at a gestational age of ≤ 24 weeks (AOR=0.32; 95% CI=0.14, 0.74).

E. Lee, et al., “Reducing Low Birth Weight Through Home Visitation: A Randomized Controlled Trial,” *American Journal of Preventative Medicine* 36 (2009): 154–160 [http://www.ajpmonline.org/article/S0749-3797\(08\)00845-3/abstract](http://www.ajpmonline.org/article/S0749-3797(08)00845-3/abstract)

Abecedarian reduces heart disease risk

A long-term follow-up evaluation of children in the Abecedarian Project early care and education program finds that they have significantly lower prevalence of risk factors for cardiovascular and metabolic diseases in their mid-30s.

- ✓ The evidence is especially strong for males. The mean systolic blood pressure among the control males is 143, while only 126 among the treated
- ✓ One in four males in the control group is affected by metabolic syndrome, while none in the treatment group is

“Early Childhood Investments Substantially Boost Adult Health” F Campbell, G Conti, J. Heckman, S H Moon, R Pinto, E Pungello, and Y Pan. *Science*. forthcoming

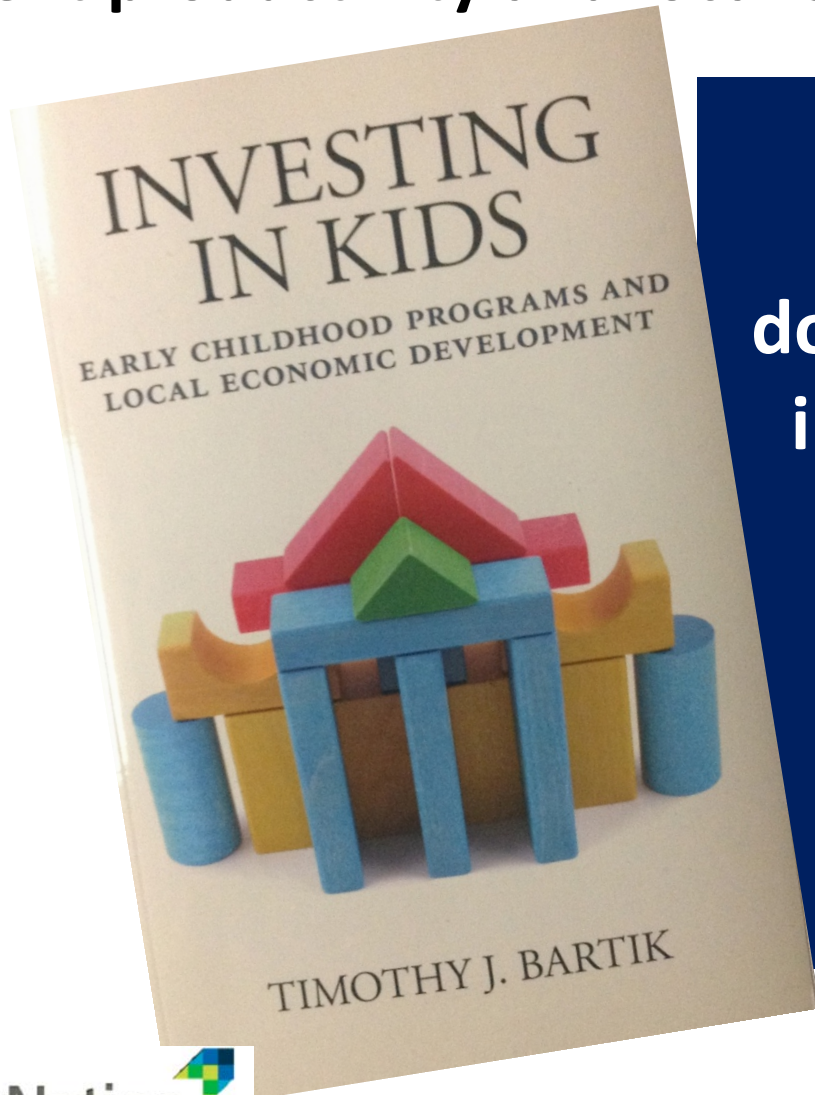
Medicaid Managed Care has mixed results, but...

An intervention for high-risk pregnant mothers produced a 1.26 to 1 return on investment.

This may be enough to pay for the intervention and pay back lenders who fund the prenatal care with interest.

“Searching for a business case for quality in Medicaid managed care.” S Greene, K Reiter, K Kilpatrick, S Leatherman, S Somers, A Hamblin. *Health Care Management Review*, 2008. 33(4), 350-360
http://journals.lww.com/hcmrjournal/Abstract/2008/10000/Searching_for_a_business_case_for_quality_in.9.aspx

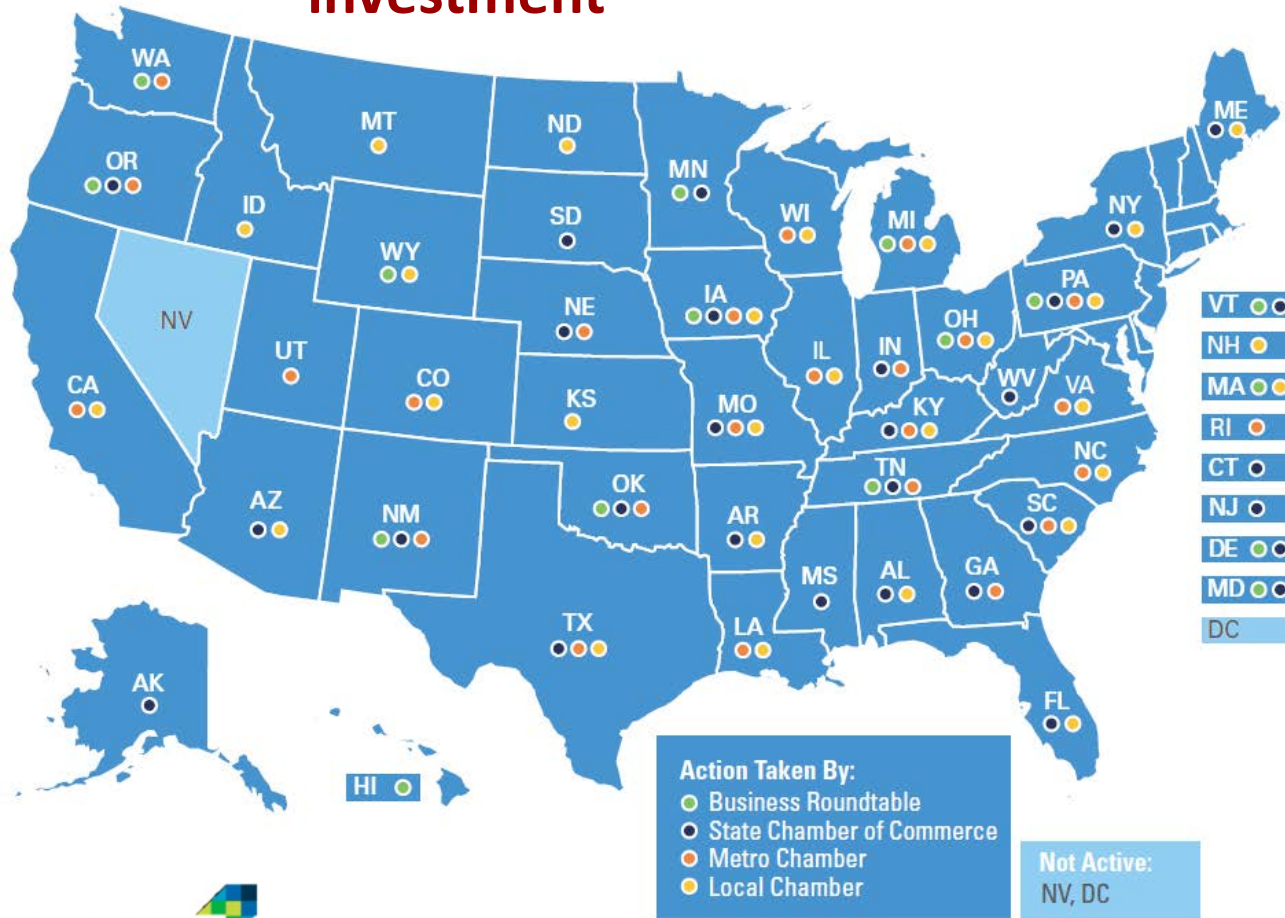
Business and local government are beginning to understand that early childhood investment strengthens parent productivity and local economies



Timothy Bartik at the Upjohn Institute, documents why investing in early childhood raises regional per capita income as well as or better than standard infrastructure and tax-concession strategies

Business now “gets” early childhood

After years of effort, in almost every state in the US, Business Roundtables and Chambers of Commerce now support early childhood investment



Experts are realizing that we don't have to wait 15 years to begin to earn high returns on early childhood investments...

- ❑ Low birth-weight births cost can as much as \$100,000. Normal births cost about \$5,000. The return on early health prenatal programs is evident within days.
- ❑ Special-ed children cost about \$25,000 per year. Regular-ed cost about \$12,000. Children are assigned to special-ed usually by 2nd grade. The return on pre-k programs is evident within 36 months.

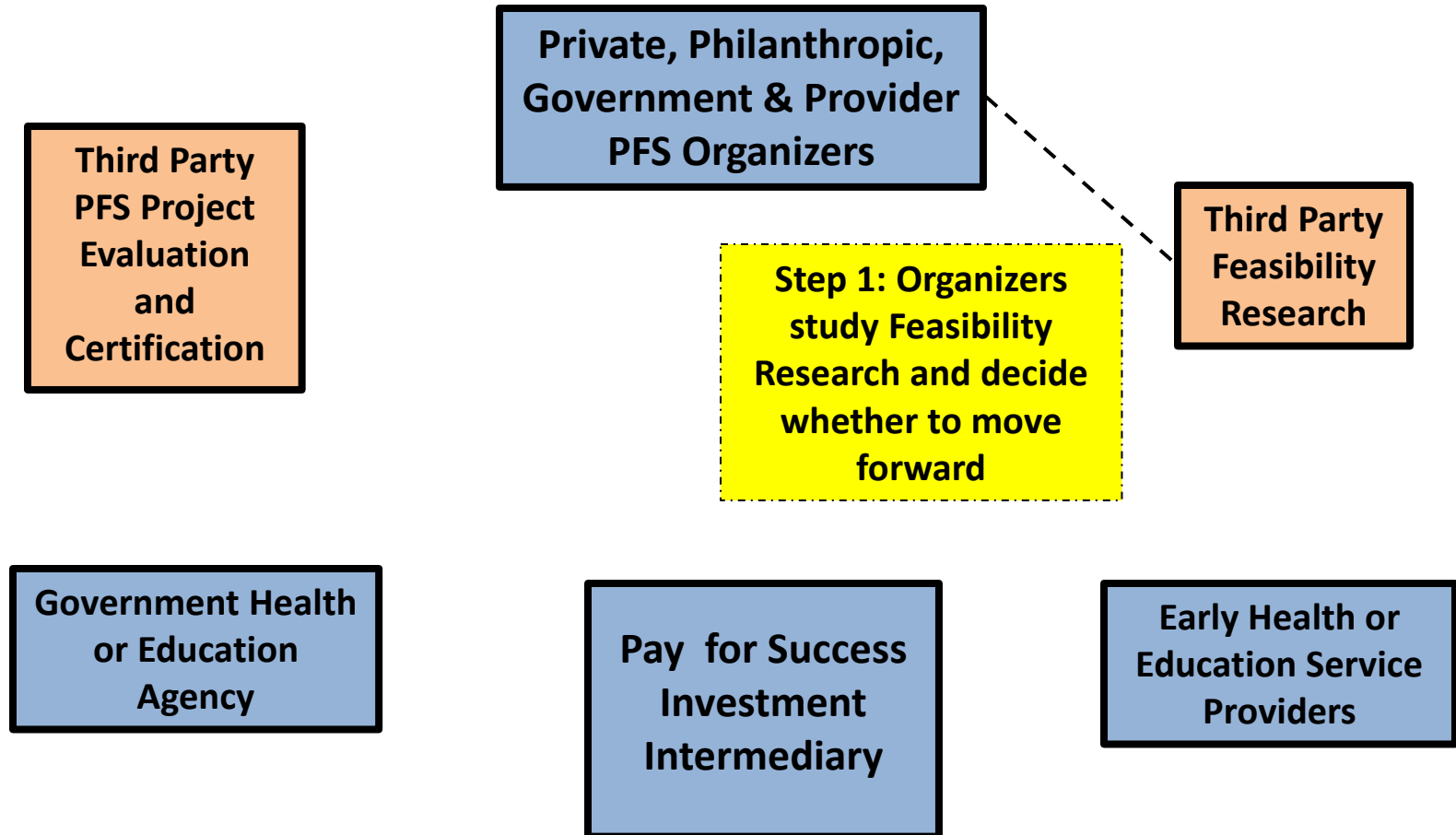
“Pay for Success” Social Impact Finance

- “Pay for Success” refers to performance-based contracting between government and providers of social services arranged by an intermediary. Government pays when results are achieved as opposed to providing up-front and on-going payments for services.
- “Performance” has two meanings -- “cost avoidance” and “outcome improvement”. Cost avoidance refers to actual reductions in governments operating costs that are the result of an intervention. Outcome improvement refers to measured changes in outcomes in desired directions that are the result of an intervention.

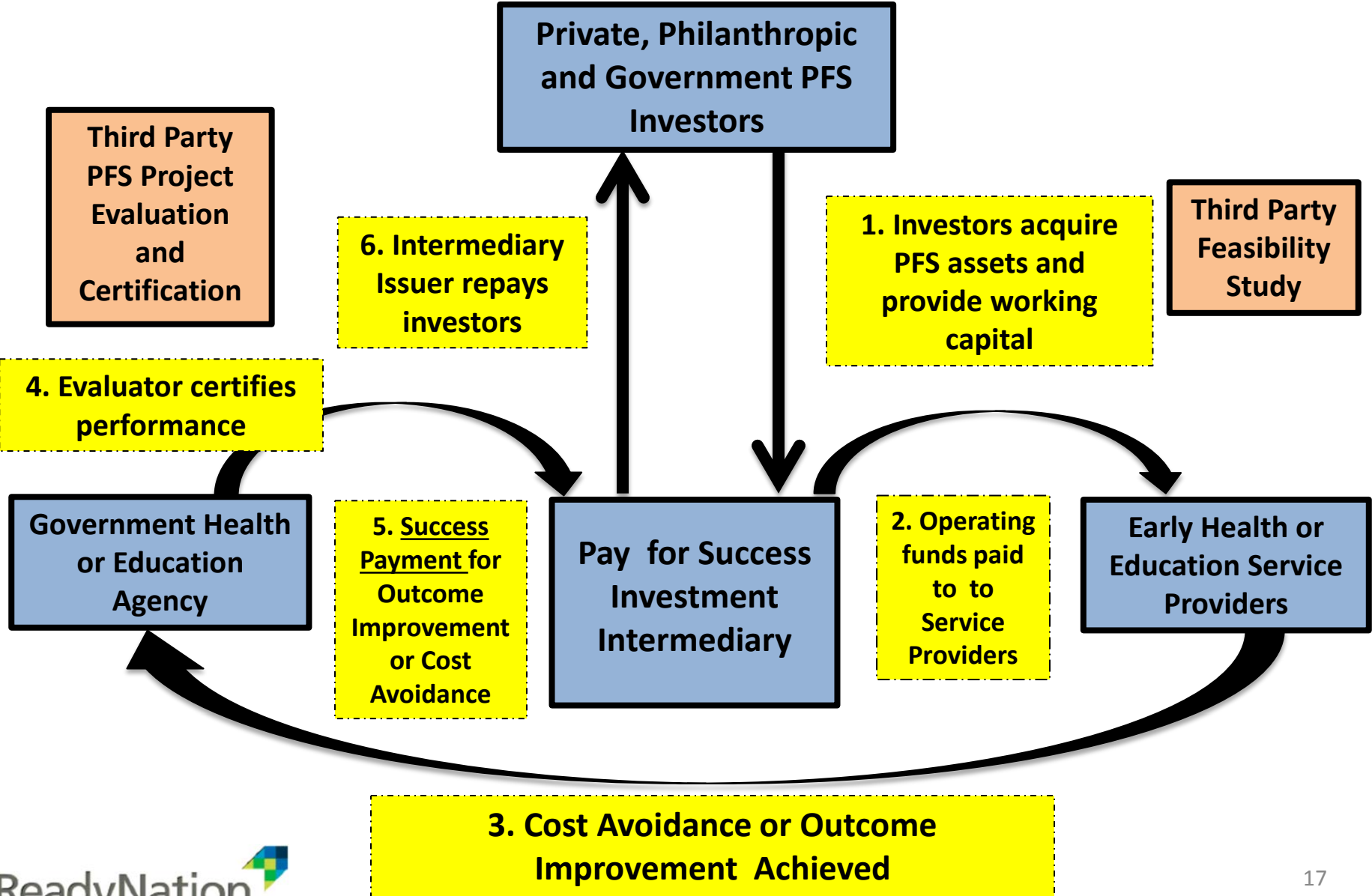
Three Biggest Challenges

- (1) Obtaining **sound statistical research** that firmly establishes an economic linkage between an intervention and an early childhood benefit,
- (2) Devising **contracts between the parties** which capture the benefit monetarily and which all parties are willing to sign, and
- (3) And, **monetizing the returns** within a timeframe acceptable to investors.

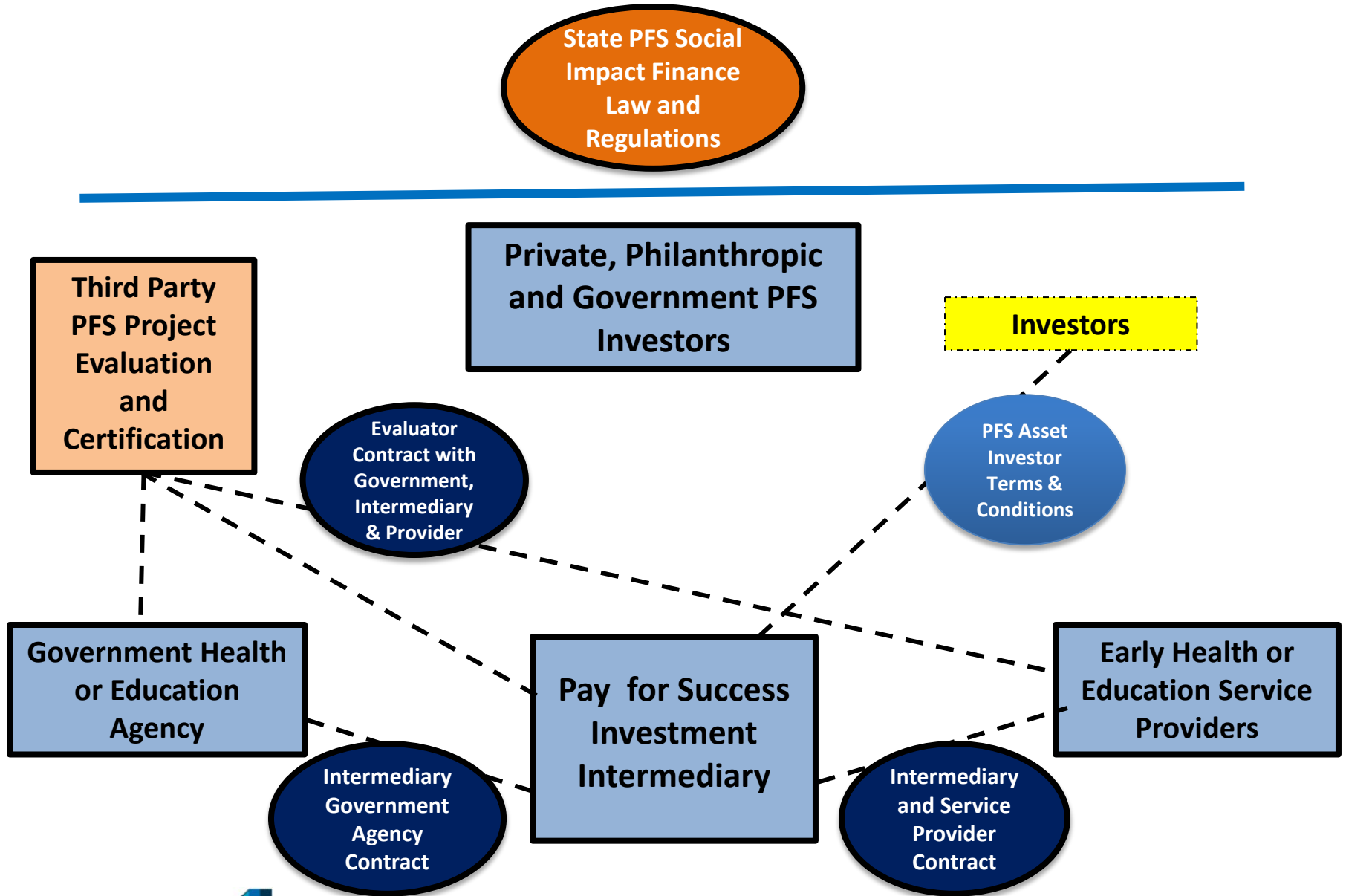
Main Participants in a Pay for Success Project



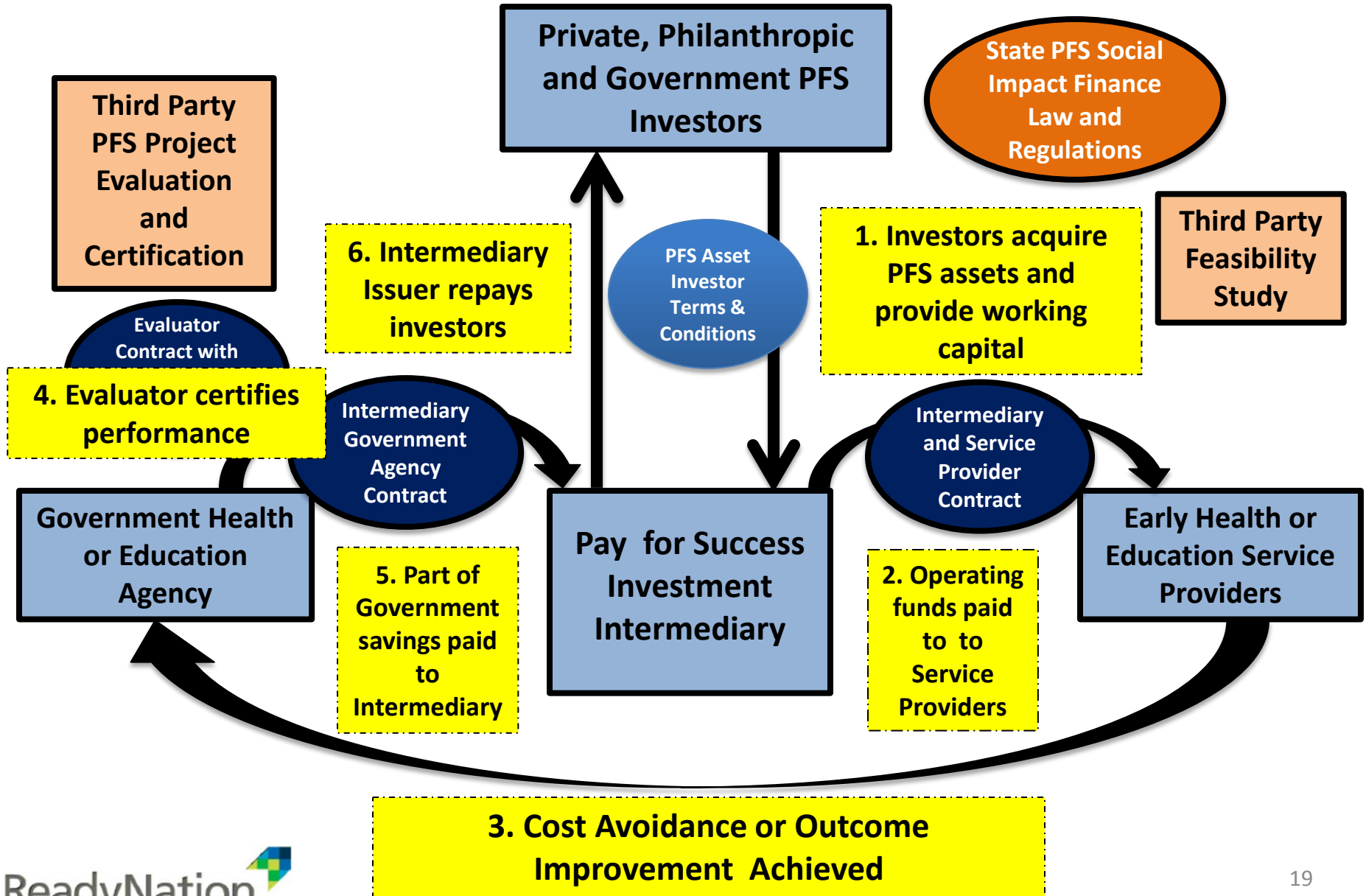
Flow of Funds in a PFS Project (arrows)



PFS Statute and Contract Agreements (ovals)



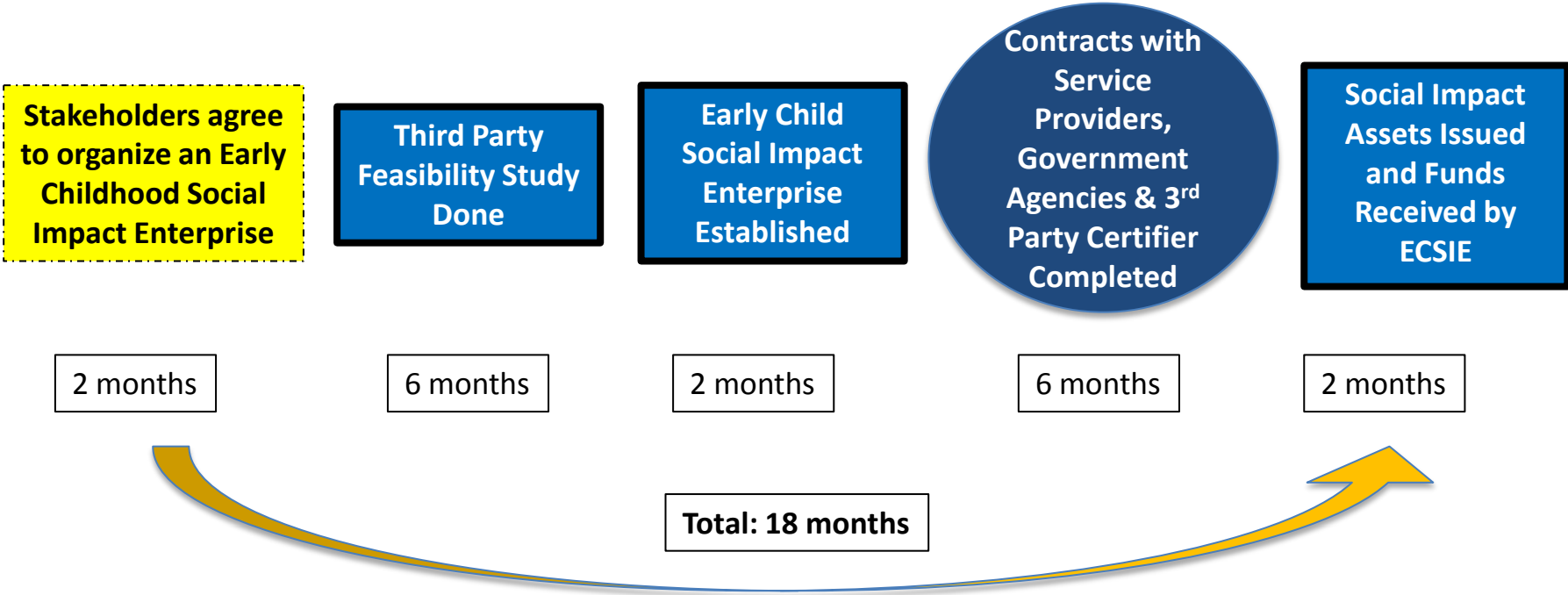
Putting it all together -- A PFS Project



Establishment and Funding Time Line

State Law and Regulation Enactment: Unknown

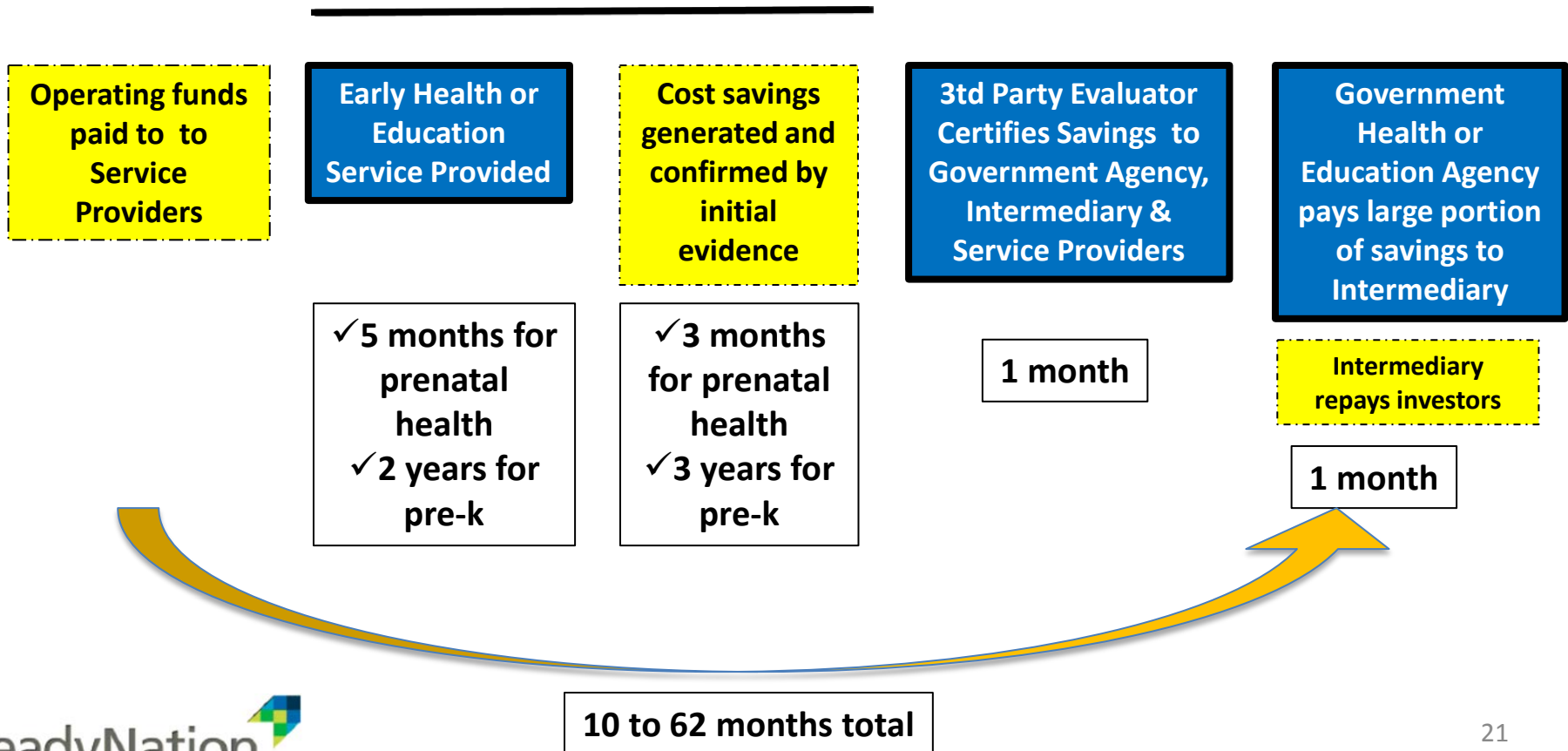
Establishment and Fundraising Phase: 18 Months



Intervention Service and Investment Success Time Line

Intervention Service Delivery and Initial Success Indication

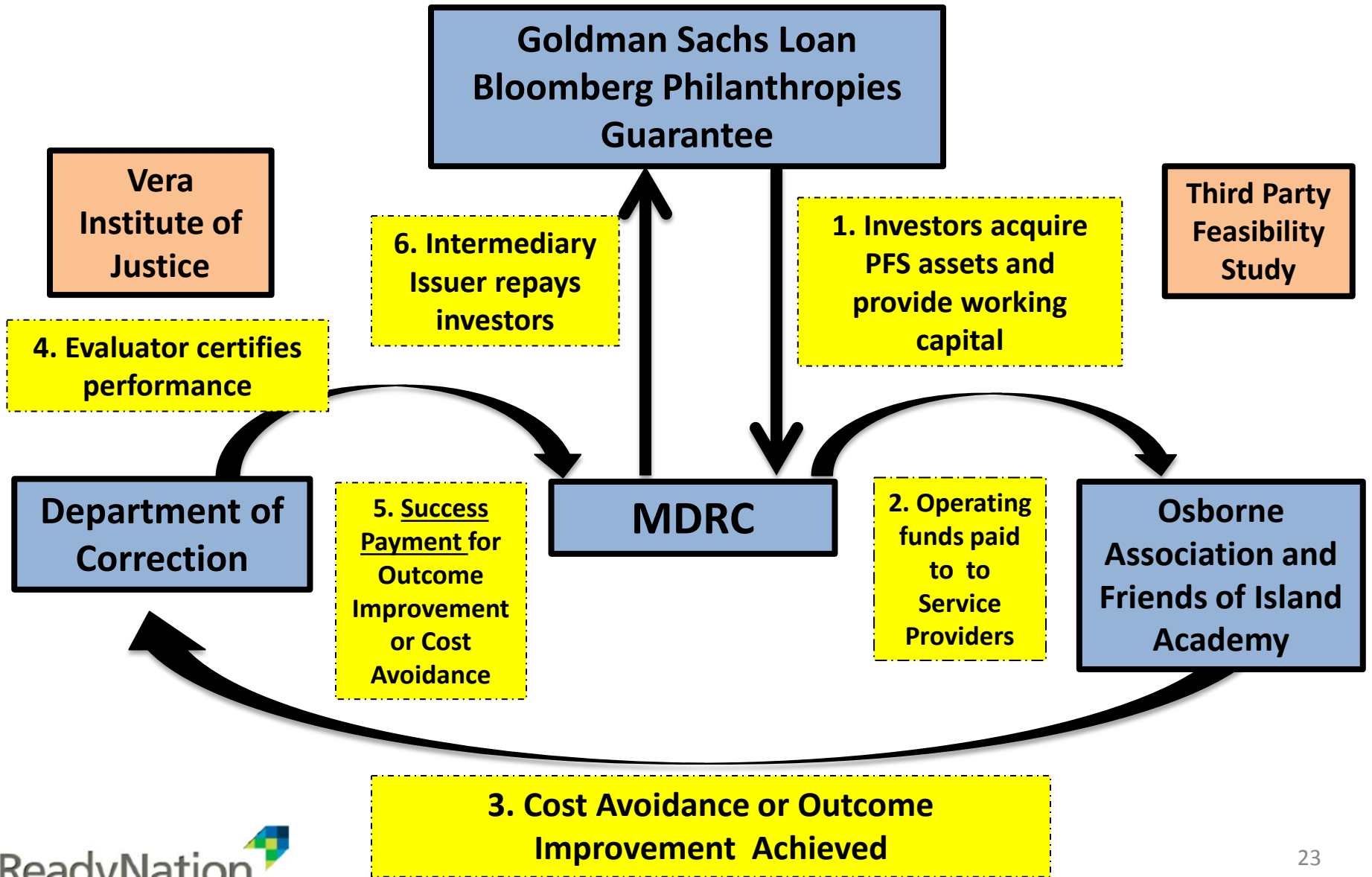
- 8 months for prenatal (5 mo average prenatal + 3 mo postpartum)
- 60 months for pre-k (2 yrs pre-k, 3 yrs k-2nd grade when 90% of special-ed assignments completed)



Rikers Island: Addressing NYC Adolescent Incarceration

1. Goldman Sachs funds the project's delivery and operations through a \$9.6 million loan to MDRC;
2. Bloomberg Philanthropies provides a \$7.2 million grant to MDRC to guarantee a portion of the investment;
3. MDRC oversees the day-to-day implementation of the project and manages the Osborne Association and Friends of Island Academy, the two non-profit service providers that deliver the intervention;
4. The Vera Institute of Justice, an independent evaluator, determines whether the project achieves the targeted reductions in re-incarceration;
5. The Department of Correction pays MDRC based on reduced re-admissions and the associated cost savings and MDRC then pays the private investor.

Rikers Island: Addressing NYC Adolescent Incarceration



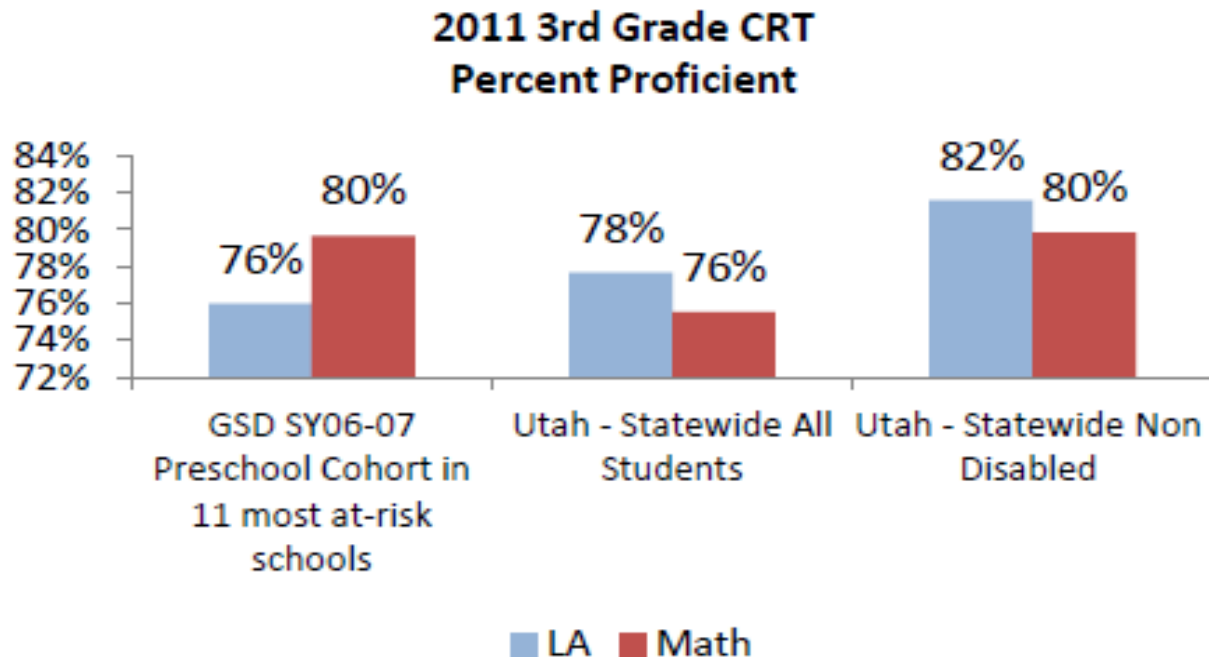
Early education research shows that public school elementary 3rd grade achievement gaps and special education assignment rates of socially and economically disadvantaged children can be significantly reduced by providing the children quality prekindergarten (pre-k) educations.

Voices for Utah Children study shows that Granite City public school special-ed cost avoidance resulting from the lower special-ed assignment rates will be large enough to pay for the pre-k sustainably using “pay for success” social impact finance.

http://www.readynation.org/uploads/20111025_GraniteSchoolDistrictReport.pdf

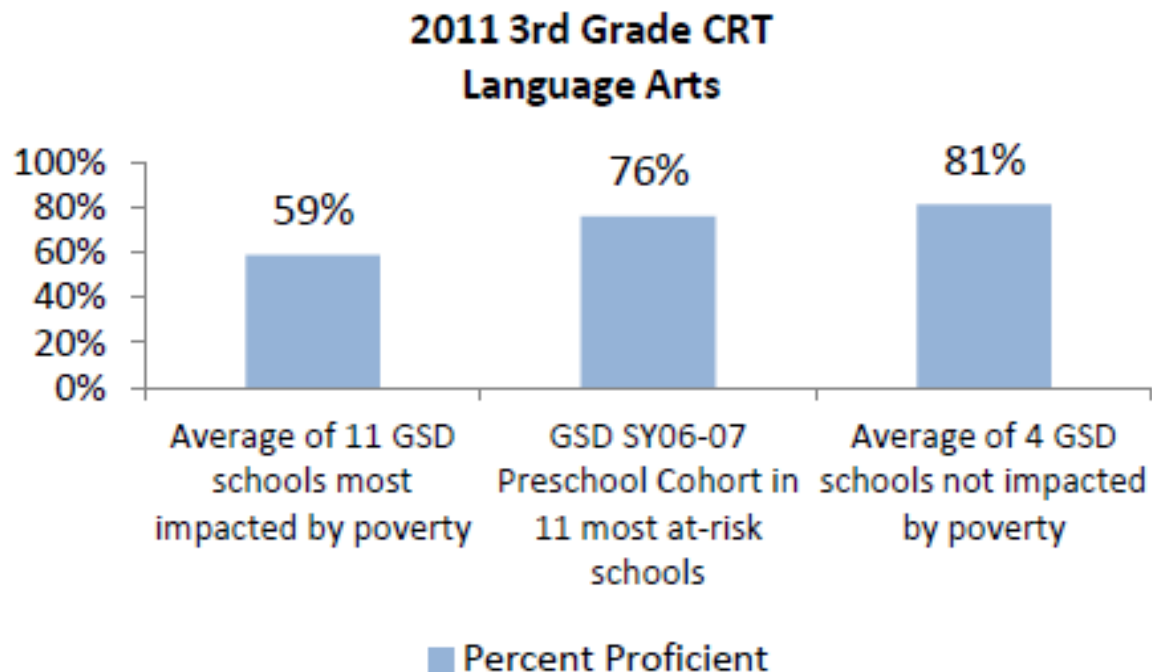
Salt Lake's Granite Preschool Program has been successful in closing the achievement gap between low-income kids and all other Utah children

The 2006 cohort of at-risk children scored similarly in 3rd grade Language Arts (LA) as all children in the state and outperformed all children in the state in Math. The gap with respect to children without disabilities statewide was 6 percentage points in LA and the achievement gap in Math was eliminated.



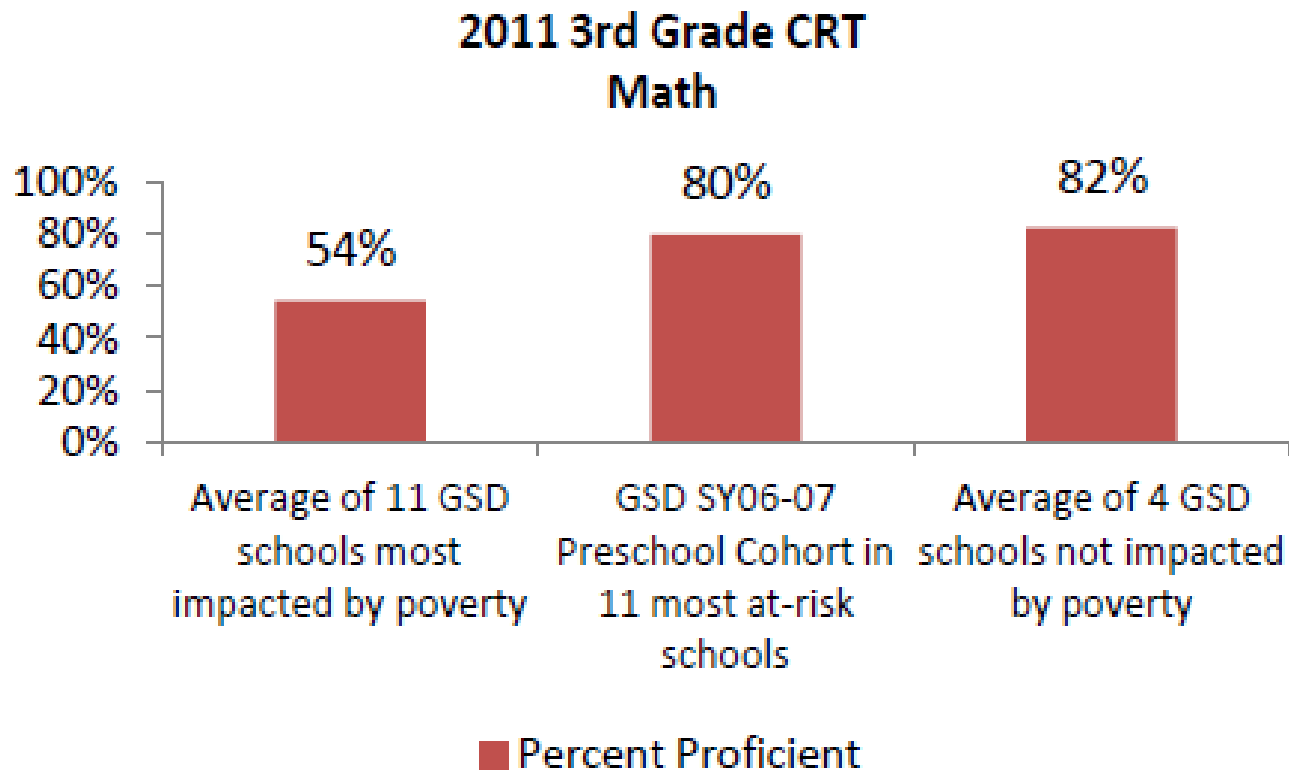
The achievement gap in Language Arts was reduced from 22 percentage point to 5 points

The achievement gap between 3rd grade students in the 4 schools least impacted by poverty (28% of students eligible for free and reduced lunch) in the district and the 11 schools most impacted by poverty (80% of students eligible for free and reduced lunch) in LA was reduced from 22 percentage points to 5 points.



The achievement gap in Math was effectively eliminated.

The achievement gap in Math was reduced from 28 percentage points to 2 points.



Scaling Pre-K for Low-Income Kids in Salt Lake City -- 1

- ❑ **Goldman Sachs** makes a \$4.6 million, 5% loan to United Way of Salt Lake
- ❑ **J.B. Pritzker** makes a \$2.4mm 5% subordinated loan to United Way of Salt Lake, reducing risk to the senior lender if the preschool program proves to be ineffective
- ❑ **United Way of Salt Lake** is the “intermediary” and oversees the implementation of the project and is also responsible for managing repayments to the private investors.

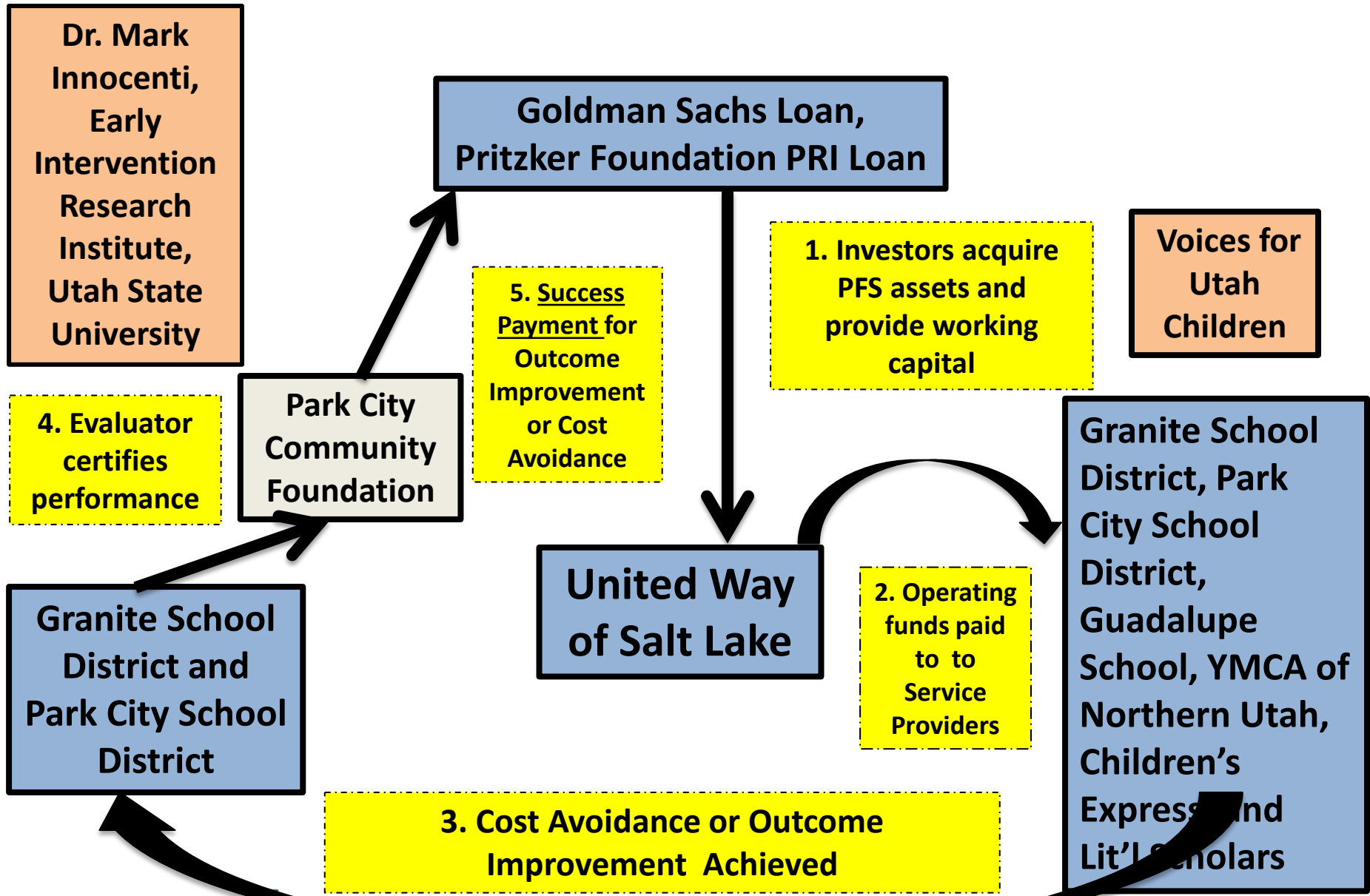
Scaling Pre-K for Low-Income Kids in Salt Lake City -- 2

- ❑ **Voices for Utah Children** provides research and analytic support
- ❑ **Granite School District and others** provides the preschool program to low-income 3 and 4 year olds
- ❑ **Early Intervention Research Institute**, Utah State University, is the “third-party evaluator”
- ❑ **Park City Community Foundation** acts as the Performance Account Manager, providing an independent “performance account” to hold repayment funds

Scaling Pre-K for Low-Income Kids in Salt Lake City -- 3

- ❑ **After initial funding**, subsequent investments will be made based on the availability of repayment funds from public entities that are realizing cost savings as a result of the program.
- ❑ **Through 6th grade**
 - ✓ **Success payments**, equal to 95% of special-ed cost avoidance, will be used to pay 5% annual interest and repay senior and subordinate debt principle.
 - ✓ **Success fees**, equal to 40% of special-ed cost avoidance, will be paid to investors after debt principle has been repaid.
- ❑ **After 6th grade**, 100% of all special-ed cost avoidance will be retained by Utah

Scaling Pre-K for Low-Income Kids in Salt Lake City –4



To learn more about “pay for success” finance...

- ✓ **Go to ReadyNation.org**
- ✓ **Tab to Working Groups, then Social Impact Finance**
- ✓ **Click on “Early Childhood ‘Pay-For-Success Social Impact Finance’**



ReadyNation



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