

# *Early Childhood Systems*

*ECPC Leadership Institute  
Early Childhood Personnel Center  
University of Connecticut Health Center  
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US Department of Education*

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April, 2017*

# *Presentation Overview*

- *Part I*                      *The New Focus*
- *Part II*                      *Why Now? Using Research*
- *Part III*                      *Consequences of New Sciences:  
Thinking Differently*
- *Part IV*                      *Consequences of New Sciences:  
Acting Differently*
- *Part V*                      *Some Huge Challenges*
- *Part VI*                      *Next Steps*

*Part I:*  
*The New Focus*

# ECE is HOT!

- *Media attention is soaring*

Politics & Policy

## The Heckman Equation: Early Childhood Education Benefits All

## Forum hopes to improve early childhood development in Nipawin

DEVAN C. TASA / PARKLAND REVIEW  
APRIL 11, 2017 03:43 PM

Mail & Guardian NEWS OPINION ARTS & CULTURE BUSINESS EDUCATION  
AFRICA'S BEST READ

EDUCATION

## Early learning = equality and jobs

24 Mar 2017 00:00 Eldridge Moses, Servaas van der Berg

Albuquerque Journal

## Academic studies look at long-term effects of pre-K

By T. S. Last / Journal Staff Writer  
Published: Friday, April 14th, 2017 at 12:02am  
Updated: Thursday, April 13th, 2017 at 9:27pm

thestar.com

Opinion · Editorials

## Increase funding for a national child care program: Editorial

Experts say Ottawa is planning to spend \$500 million a year for the next 10 years to build a child care network across the country. As much as that is, it's far from the 1 per cent of GDP experts say is necessary to build a quality system.

CHANNEL NEWSASIA NEWS TV CONNECT

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## New plan aims for 20,000 early childhood educators by 2020

Posted 01 Oct 2016 12:00 Updated 02 Oct 2016 00:45

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## Early Learning Key to Success of Children and Quality of Life for All: Op-Ed

By Mark Shriver, Contributor | April 6, 2017, at 11:22 a.m.

# *Congress Gets It: Tons of Legislation!*

- ***2016 Omnibus Appropriations Bill***

- \$570 million increase in Head Start funding, for a total of \$9.2 billion to Head Start
- \$135 million invested in Early Head Start, including Early Head Start-Child Care Partnerships
- Increase of \$326 million for the Child Care Development Block Grant
- \$250 million for Preschool Development Grants to support states in expanding access to high-quality pre-K in high-need communities
- \$500 million increase to Title I of ESEA
- \$368 million for IDEA Preschool Grants, and \$458 million for IDEA Part C serving infants and families with disabilities

# *States Get It: New Pre-K Funding*

- *Nationwide, state funding for pre-k increased by \$755 million, to total of \$6.3 billion*
  - 12% increase in state investment in pre-k programs over FY 2015-2016
  - Increase builds on 12% funding increase from prior year
- *The FY 2018 Executive Budget continues the progress made to strengthen educational outcomes and increase access to high-quality learning across New York State*
  - \$800 million investment in prekindergarten to expand high-quality half-day and full-day prekindergarten for 3 and 4-year-old children in high-need districts
  - Preference for these funds will be given to the few remaining high-need school districts currently without a prekindergarten program
  - Builds upon the State's prekindergarten program for three- and four-year-old students included in the FY 2016 Enacted Budget
- *Of the 44 states (plus DC) funding pre-k programs, 22 states and DC increased their total investment in pre-k in 2015-2016*

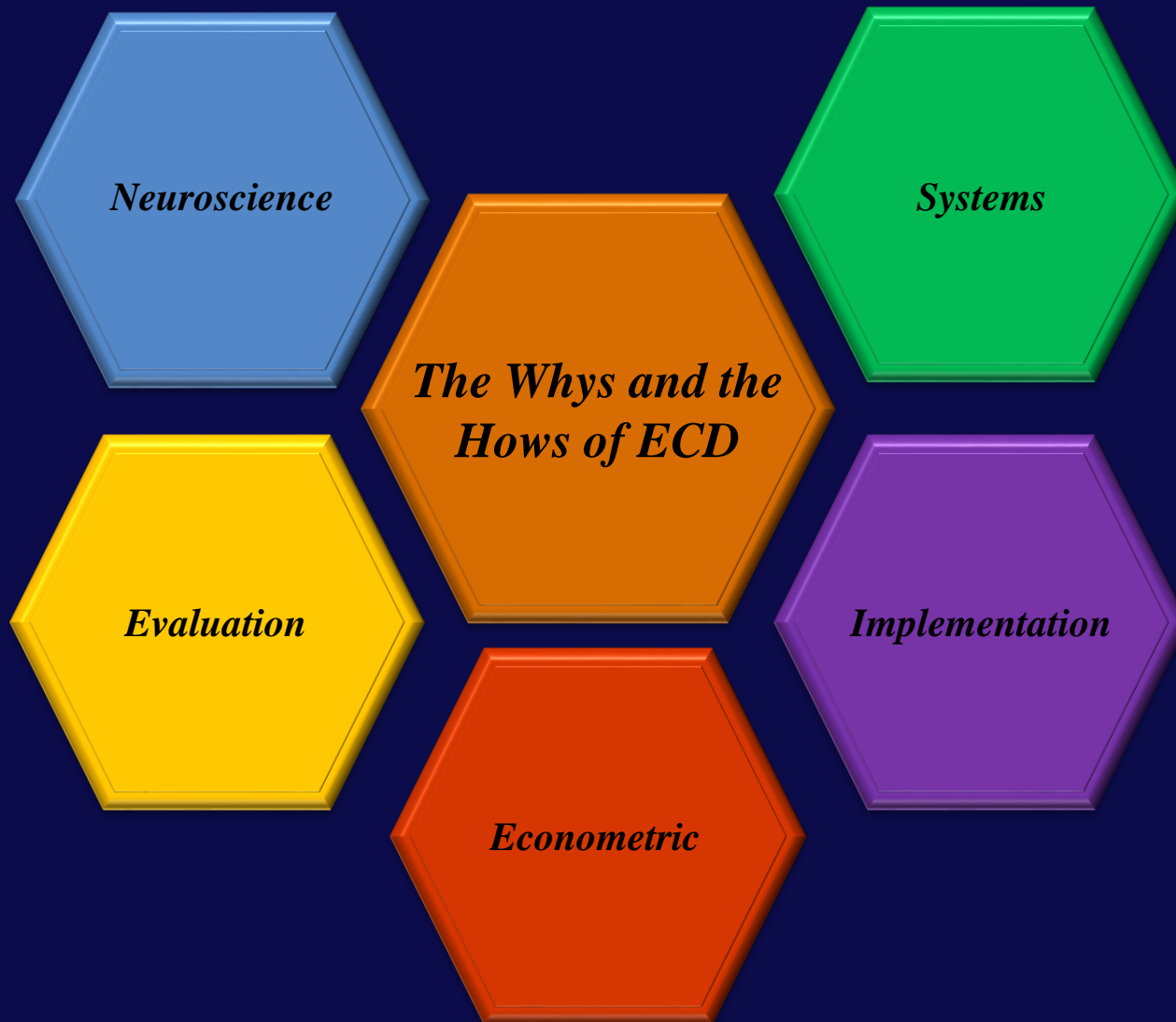
# *Bottom Line: Time is Ripe*

- *Increasing media attention*
- *Increasing policies and laws*
- *Increasing investments by public and private sectors*
- *Early childhood is front and center on the educational agenda!*

*Part II:*  
*Why Now?*  
*Using Research*



# *ECD Research and Sciences*



# Neuroscience

- ***The early years are THE formative period of development***
  - Young children's brains grow to 80% of adult size by age 3 and to 90% by age 5
  - Young children grow faster and learn more in their early years than in any other period of life
    - Skills that develop in the early years impact later success in school, work, and community
  - Young children are the most vulnerable in the early years
    - As brain matures, it becomes much more difficult to change
    - Without consistent nurturing and protective stimuli, the brain does not form properly, and children are subject to significant, and sometimes insurmountable, deficits

# Evaluation Science

- *High-quality early childhood care and intervention can prevent these negative effects from taking hold and have powerful benefits*
- *Three scientifically robust and well-known studies of early childhood education have demonstrated which variables matter:*
  - Class size
  - Teacher qualifications
  - Teacher-child ratios
  - Curriculum
- *Strongest effects of high-quality care are found for children from families with the fewest resources and who are under the greatest stress*

	<p style="text-align: center;"><b><i>Perry: Treatment Group</i></b></p>	<p style="text-align: center;"><b><i>Abecedarian: Treatment Group</i></b></p>	<p style="text-align: center;"><b><i>Chicago: Treatment Group</i></b></p>
<p style="text-align: center;">Main Findings</p>	<ul style="list-style-type: none"> <li>• Higher rate of high school completion</li> <li>• Higher rate of employment at age 40</li> <li>• Higher annual earnings</li> <li>• Higher scores on cognitive/language tests during early childhood, on school achievement tests between ages 9 and 14, and on literacy tests at ages 19 and 27</li> <li>• More likely to own their own homes</li> <li>• More likely to have a savings account</li> <li>• Significantly fewer arrests, especially for violent crimes, property crimes, or drug crimes</li> <li>• Less likely to need treatment for mental health issues</li> </ul>	<ul style="list-style-type: none"> <li>• Higher cognitive test scores from toddler years to age 21 (gap narrowed over time, but remained significant)</li> <li>• Higher academic achievement in both reading and math from the primary grades through young adulthood</li> <li>• Completed more years of education and were more likely to attend a four-year college</li> <li>• Mothers whose children participated in the program achieved higher education/employment status than mothers whose children were not in the program— results especially pronounced for teen moms</li> </ul>	<ul style="list-style-type: none"> <li>• Preschool participation predicted increased cognitive performance at school entry</li> <li>• Preschool participants required special education at lower rates</li> <li>• Preschool participants performed better on reading/math tests through follow-up as young adults</li> <li>• Parents of preschool group remained more involved in children’s schooling</li> <li>• Lower rates of juvenile arrest</li> <li>• Lower rates of daily smoking and lack of health insurance</li> <li>• Cost-benefit analysis conducted at age 26 found a \$10.83 return on each dollar invested in the program</li> </ul>

# Econometric Science

- **Investments in high-quality programs produce economic results**

<i>Program</i>	<i>Dollars saved per \$1 spent</i>
Perry Preschool	\$17.07
Abecedarian	\$2.50
Chicago Parent-Child Program	\$10.83

- **These savings are due to a reduction in social costs for incarceration, welfare dependence, teen pregnancy, referral to special education, and reduced grade retentions**

# Systems Science

- *Contends that if you separate the parts from the whole, you are reducing the ability to achieve goals*
- *Applies to early childhood because there are so many moving parts that must be considered together:*
  - Head Start, Child Care, Family Child Care, Pre-school, Nursery School, Pre-kindergarten, Home Visiting, Parenting Support and Education
- *Applies to early childhood because we have not paid attention to the infrastructure*

# *In ECE, A SYSTEM is: Programs and Infrastructure*

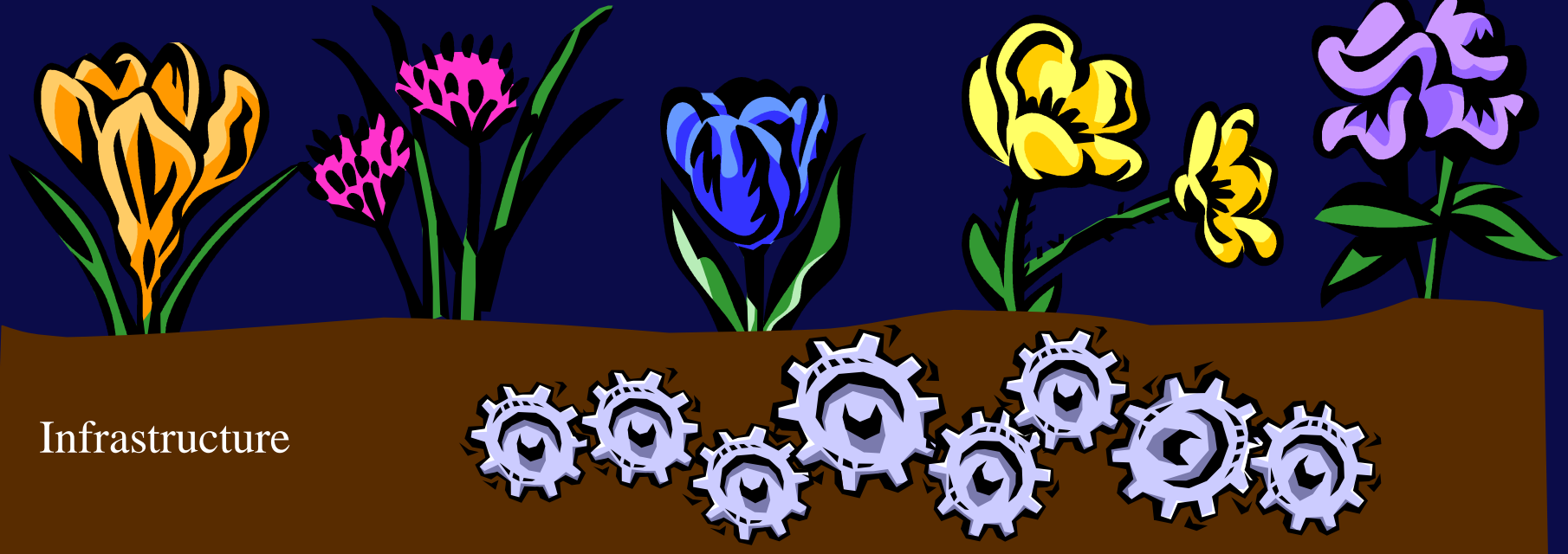
*Home  
Visiting*

*Child and  
Family Child  
Care*

*Pre-Kindergarten*

*Kindergarten*

*K-3*



Infrastructure



# *Gears: Need to work in all areas to move the infrastructure*

*Quality Programs*

*Governance Entities*

*Parent Engagement and Community Outreach*

*Regulations*

*Financing Mechanisms*

*Professional Development Capacity and Professional Certification*

*Guidelines and Ongoing Formative Assessment Mechanisms*

*Linkages to Schools and Community Health Settings*

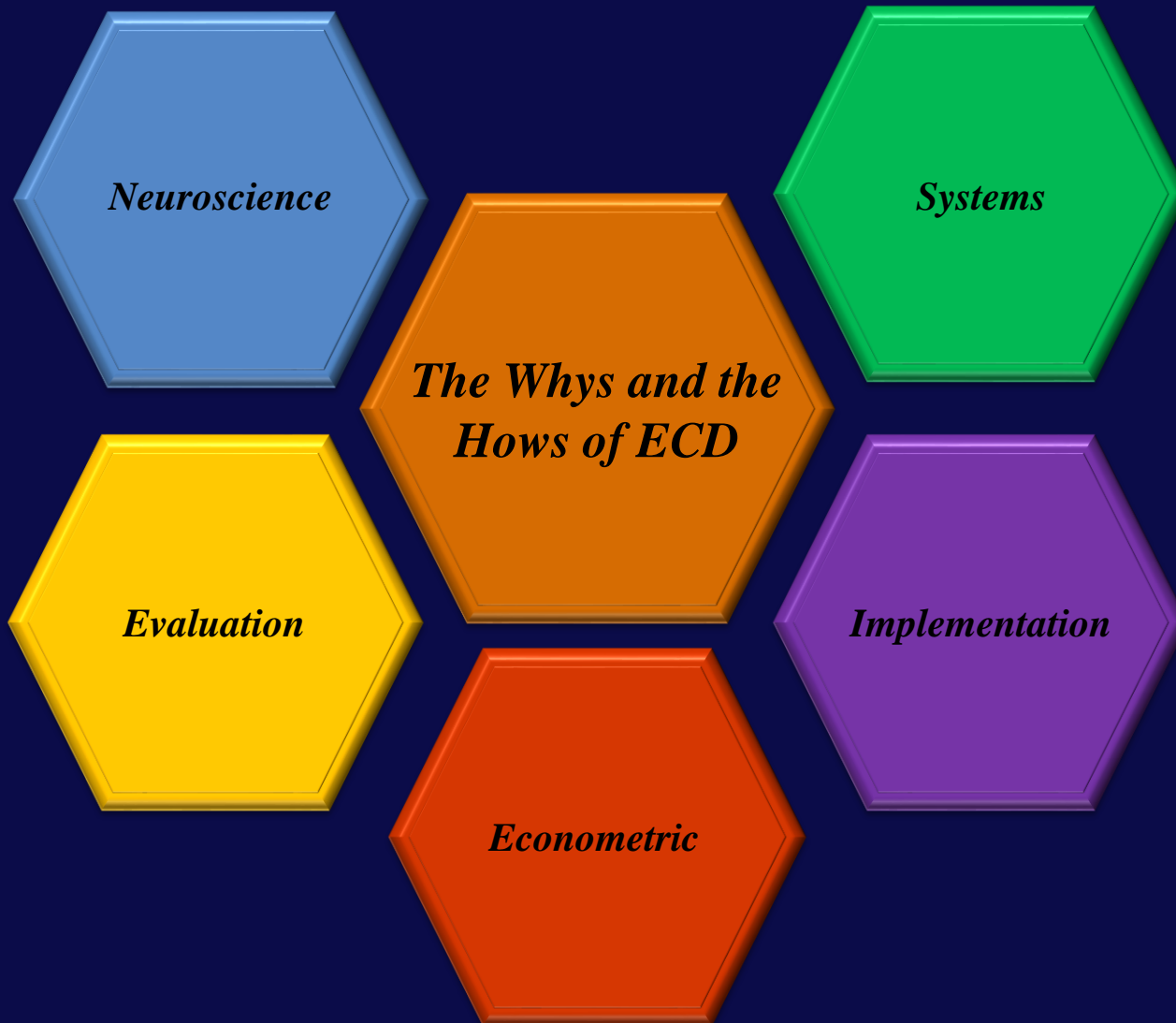




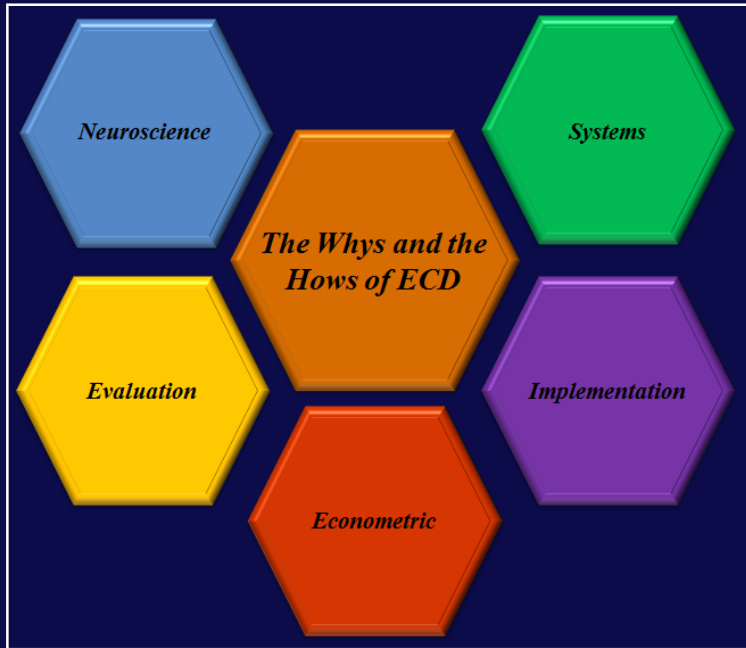
# *Implementation Science*

- ***Implementation science strives to integrate research into policy and practice by investigating:***
  - Bottlenecks that impede effective implementation
  - Strategies to foster timely and effective implementation of policies (began in health policy)
- ***Takes ECE research and links it to practice***
  - What do we know about interactions between health, education, and nutrition?
  - What do we know about how to link play and standards?
  - How do we keep DAP in light of assessment demands?

# *ECD's Many Sciences*



*Part III:*  
*Consequences of New*  
*Sciences:*  
*Thinking Differently*

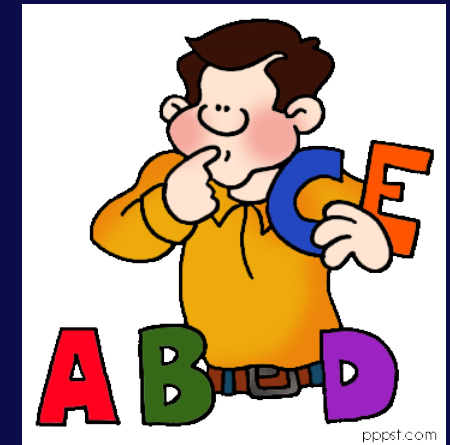
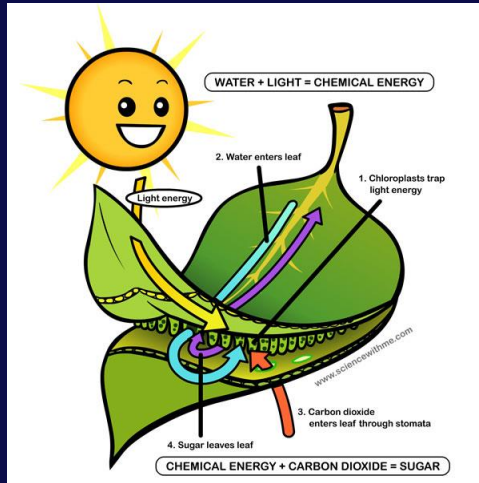


*Children as  
Competent  
Learners*

*Children as  
Rights  
Bearers*

*Children in  
a Holistic  
Context*

# Children as Competent Learners



# *Children as Rights Bearers*

- *Changing rationales for serving children*
- *1960-1970s: Social and moral rationale*
  - To help elevate poor children out of poverty
- *1970s-1980s: Women's employment rationale*
  - To get women into the workplace
- *1990-2000s: Economic investment rationale*
  - To promote economic productivity of society
- *2010s: Rights rationale*
  - To promote children's rights as humans

# *Children as Rights Bearers*

- *Children have entitlements:*

- Safety
- Protection
- Education
- Health and Nutrition
- Equality
- Environment

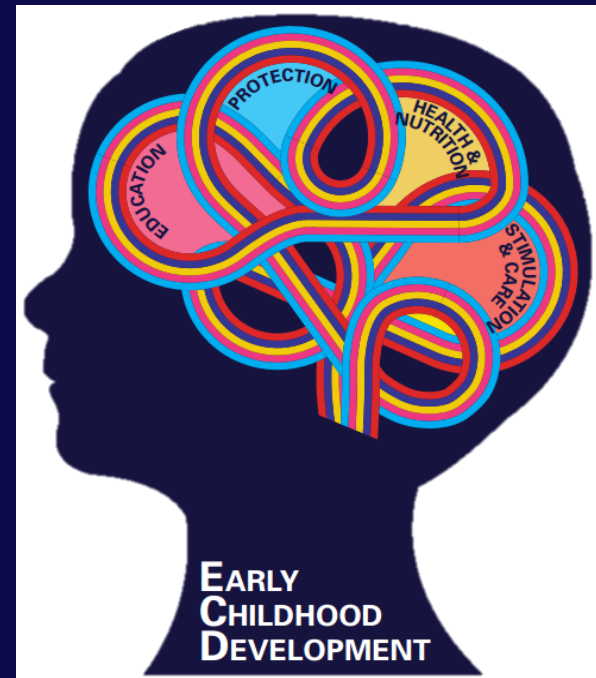




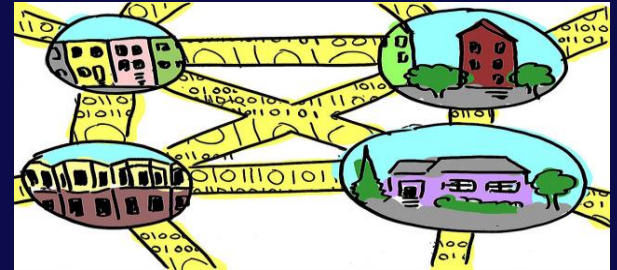
# *Children in a Holistic Context*

- *Early childhood interventions must encompass all of the sectors the impact early childhood*

- Education
- Protection
- Health and nutrition
- Stimulation and care



# *Children in a Holistic Context*



# *Thinking Differently*

*Children as  
Competent  
Learners*

*Children as  
Rights  
Bearers*

*Children in  
a Holistic  
Context*

*Part IV:*  
*Consequences of New*  
*Sciences:*  
*Acting Differently*

# *Acting Differently*

Children as  
Competent  
Learners



Optimize  
Learning  
Environment

Children as  
Rights Bearers



Realize Service  
Obligations to  
Young Children

Children in a  
Holistic Context



Create an  
Integrated  
System

# *Acting Differently*

**Children as  
Competent  
Learners**



**Optimize  
Learning  
Environment**

**Children as  
Rights Bearers**



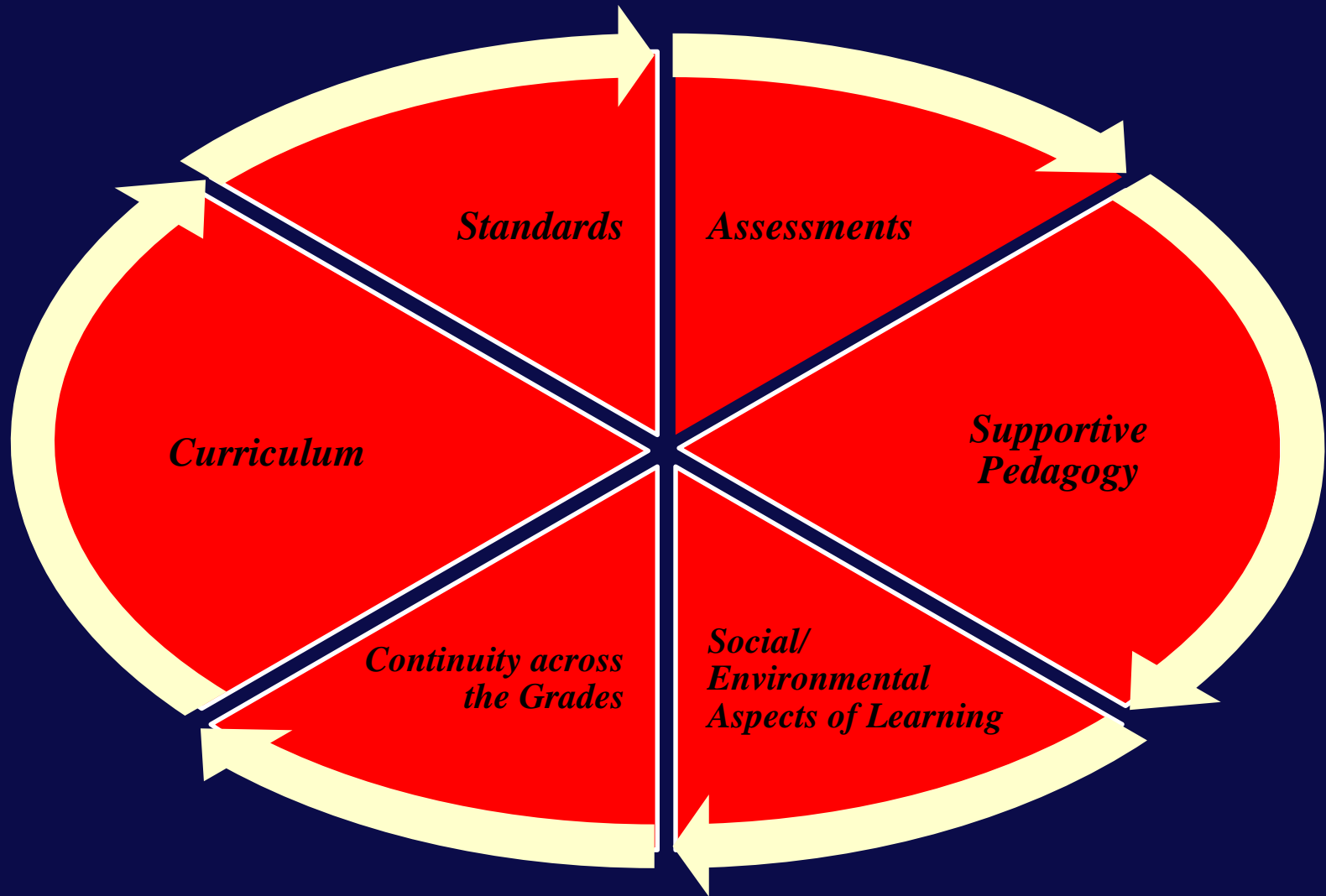
**Realize Service  
Obligations to  
Young Children**

**Children in a  
Holistic Context**



**Create an  
Integrated  
System**

# *From the Systems Sciences: Think About a Learning Sub-System*



# *Optimize Learning Environment by Creating a QUALITY Learning Sub-System*

- *Seeing this in different efforts*
  - Standards, curriculum, and assessment alignment efforts
  - P-3 represents those who focus on transitions
  - Transition and continuity
  - Two-generation programming
  - Integrated, high-quality learning, both at the individual program level and increasingly within communities (Boston)

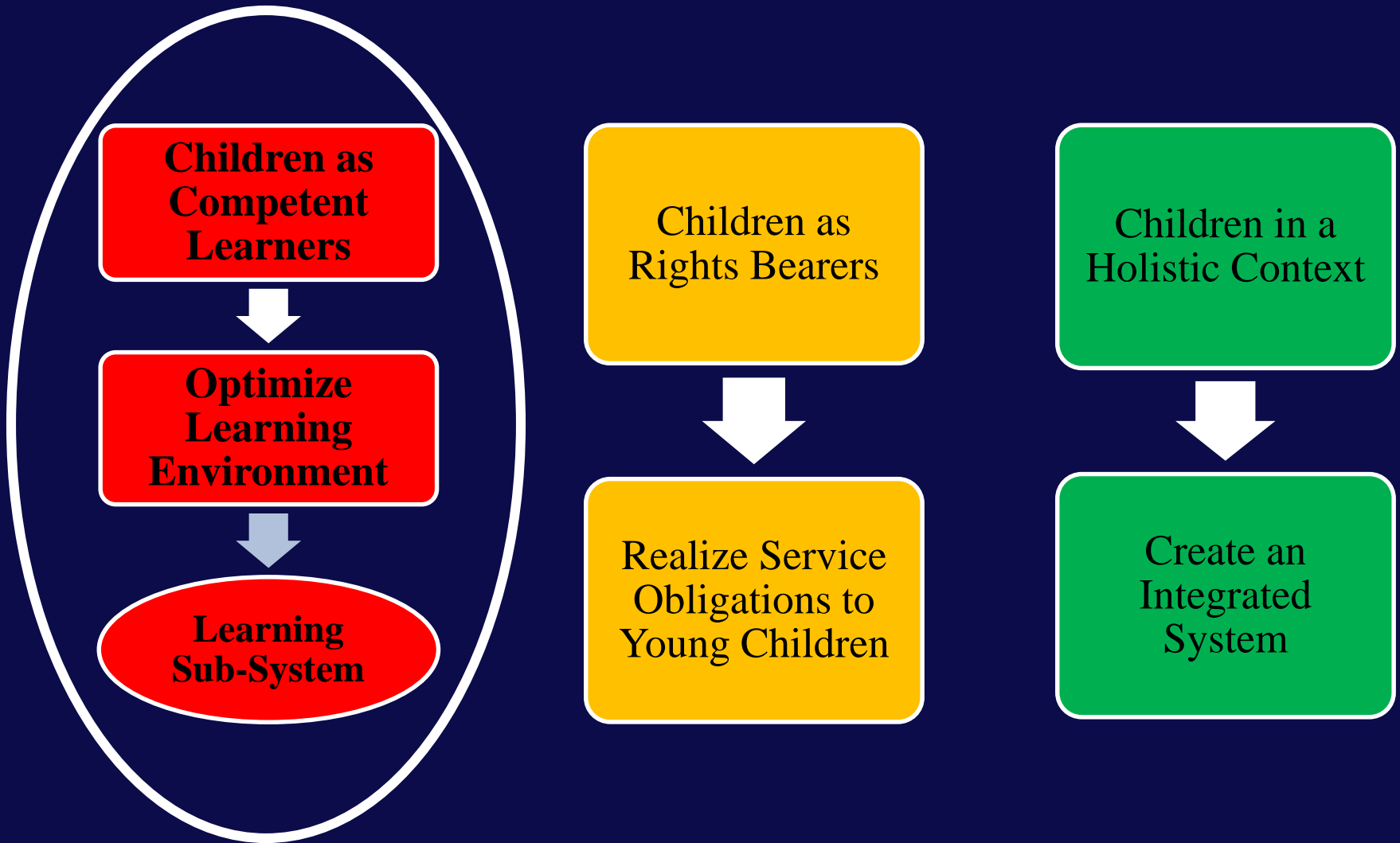


# *Optimize Learning Environment by Creating a QUALITY Learning Sub-System*

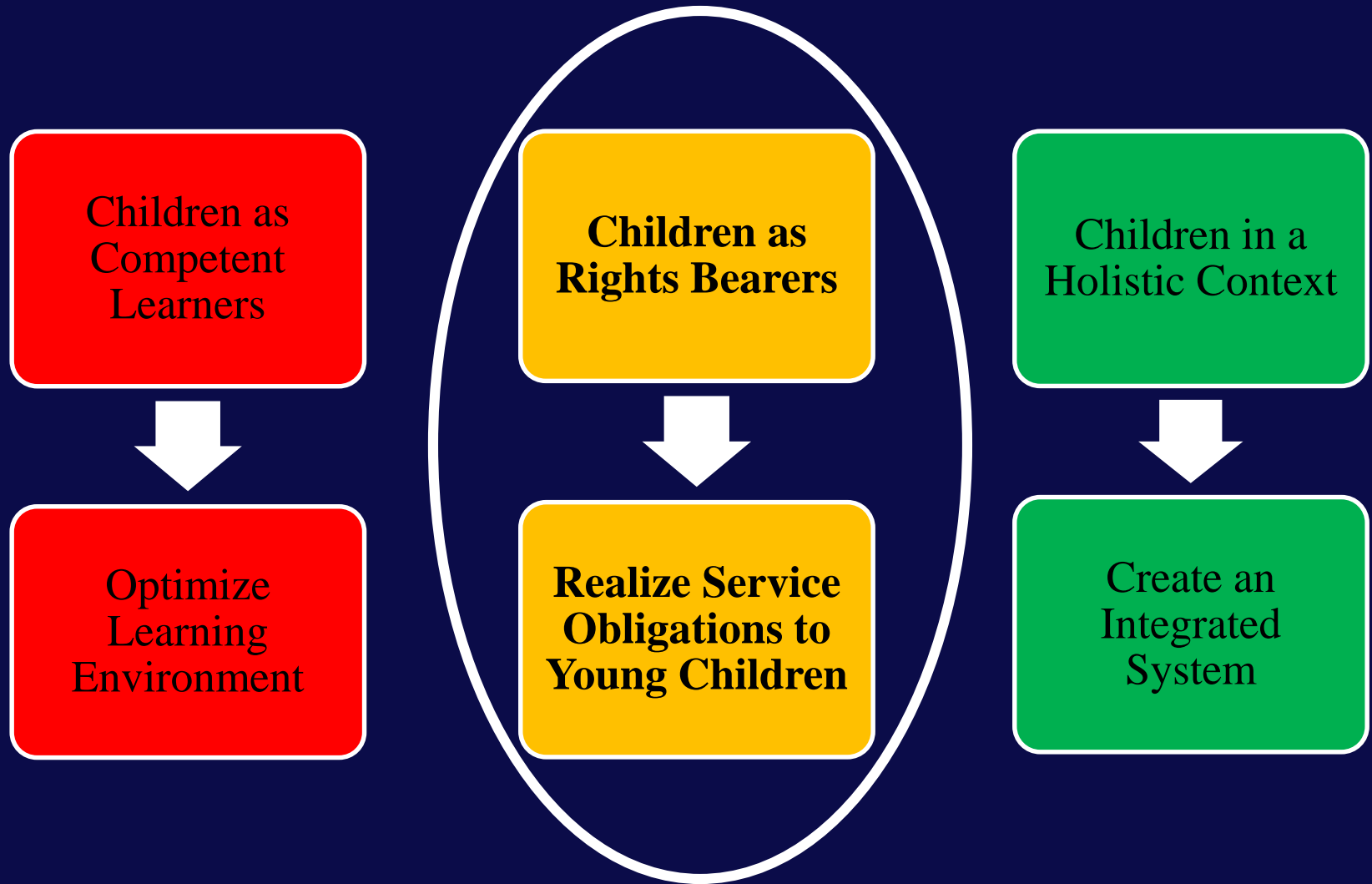
- *Not perfect*

- Not sufficiently inclusive (DLLs, CWD, and high/multiple risk populations)
- Too “schoolified” (too much focus on outcomes)
- Too much/too little technologically reliant
- Services for young children are not of consistent or high quality
  - Only 7 states met all 10 of NIEER’s quality benchmarks in 2015

# *Implications for Acting Differently*



# *Implications for Acting Differently*



# *Service Obligations to Children*

*Title I*

*IDEA*



*Head Start*



**PROGRAMS**

*CCDF*



*Educare*



*Preschool*



# *Service Obligations to Children*

*Health, Mental Health, Nutrition*

*ECD Programs*



*Environment*



**SERVICES**

*Protective Services*



*Home Visiting*



*Community Development*



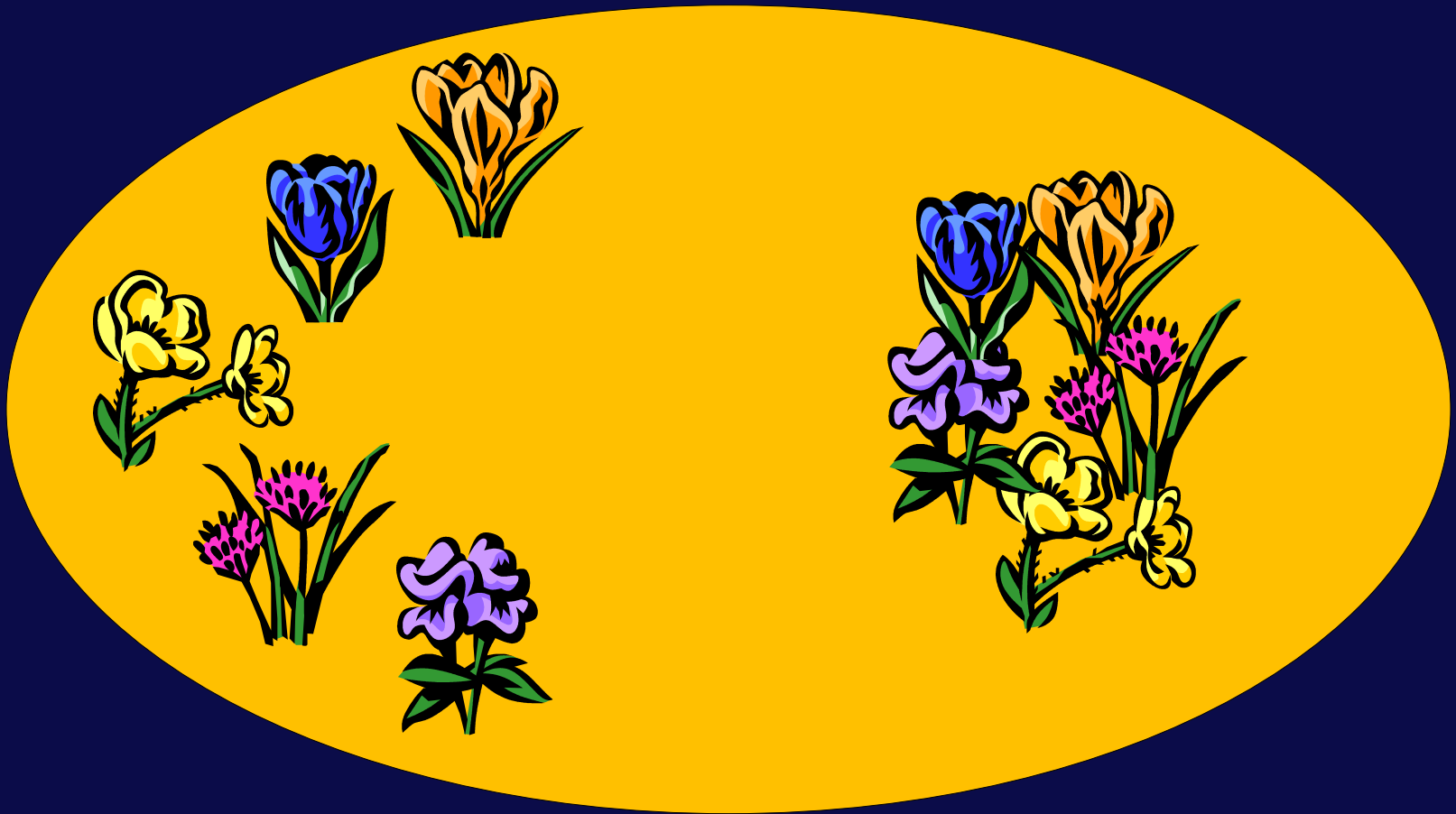
# *Children as Rights Bearers: Realize Service Obligations to Young Children*

- *Governments are increasingly acknowledging their role in early education by expanding existing programs and services in an effort to make them more prevalent and more equitably distributed*
  - Universal Pre-kindergarten
  - Home visiting
  - Expansions of services to infants and toddlers
  - Movement toward early childhood mental health expansion
  - Movement toward universal health care
  - Increased focus on nutrition
  - Sustainable development goals, with focus on social protection and environment

## *Children as Rights Bearers: Realize Service Obligations to Young Children*

- *Expansion is happening, albeit not perfectly*
  - Somewhat chaotically
  - May not be addressing all ages of children in all domains of development
  - Quite uneven expansion in the United States, as compared with other countries
  - Using very diverse funding streams and strategies

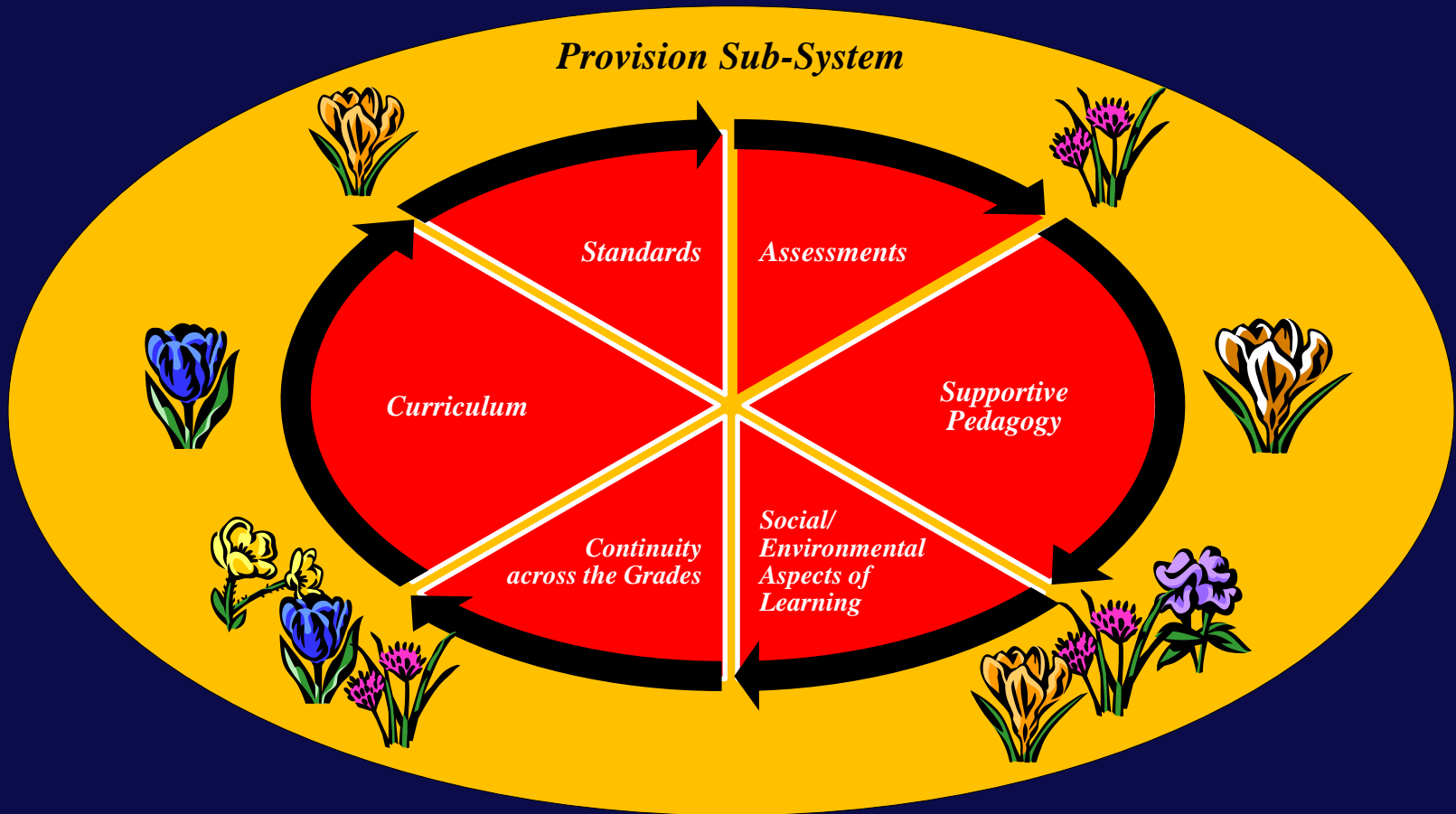
*Children as Rights Bearers:  
Realize Service Obligations to Young Children*



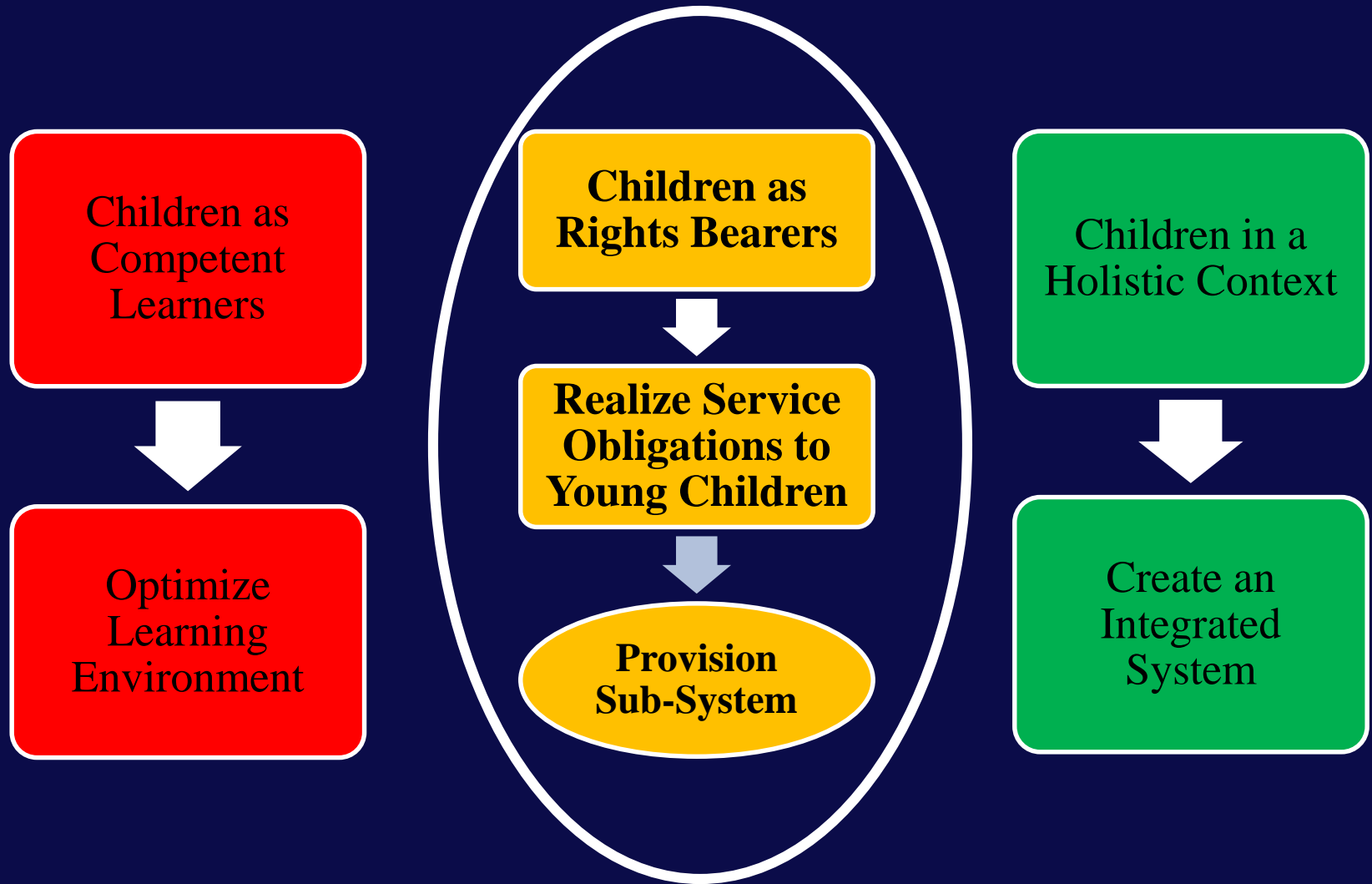
*Movement toward producing greater integration*



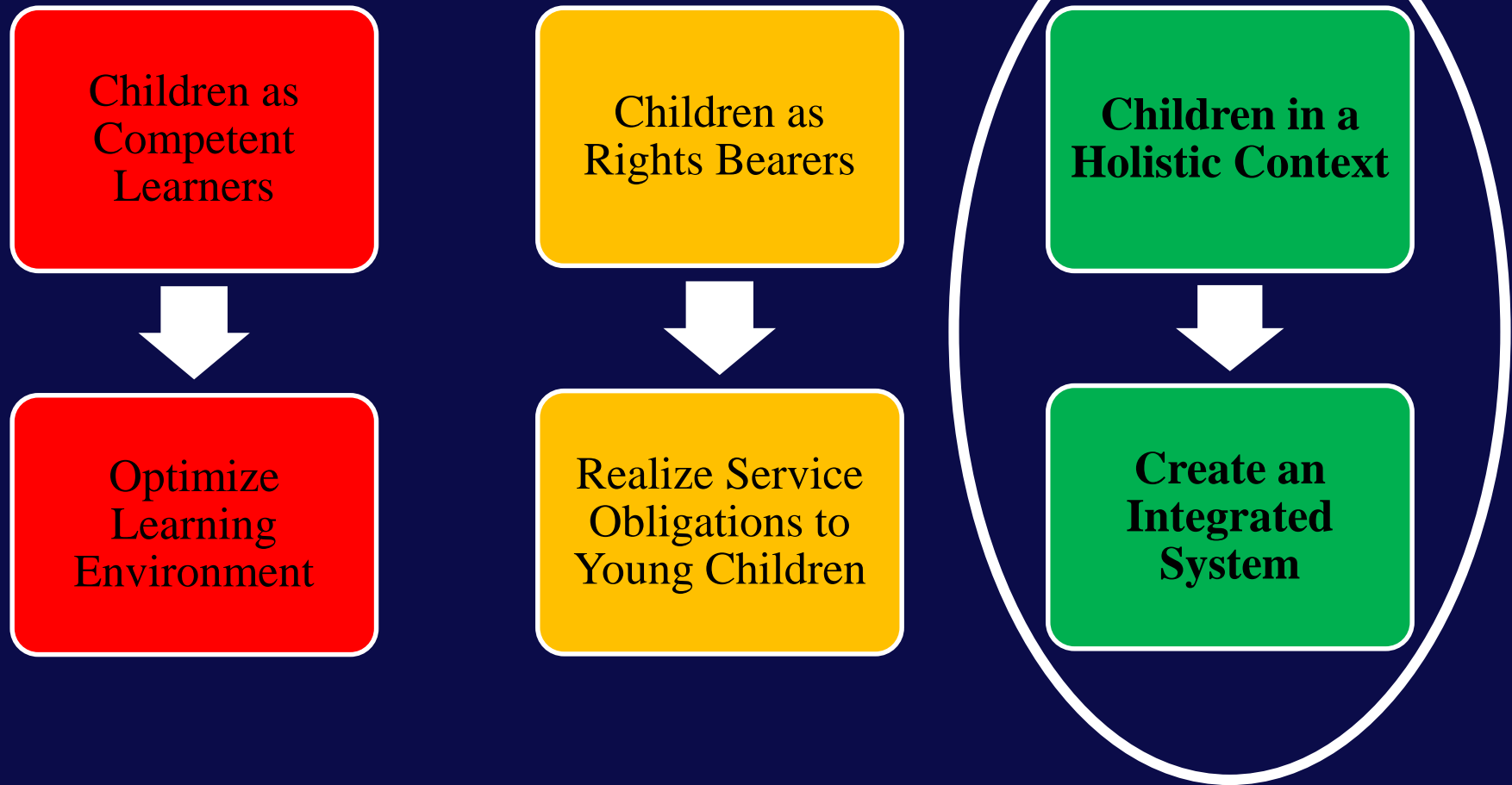
# *Provision Sub-System*



# *Implications for Acting Differently*



# *Implications for Acting Differently*



# *Programs/Services Can't Do It Alone Need an Infrastructure*

*System = Programs/Services + Infrastructure*

*Home  
Visiting*

*Child and  
Family Child  
Care*

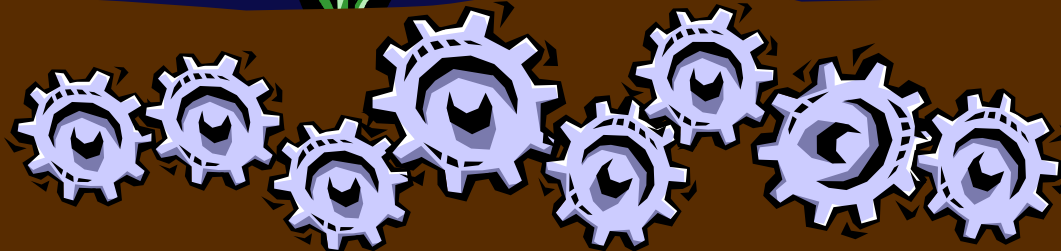
*Pre-Kindergarten*

*Kindergarten*

*K-3*



*Infrastructure*





# *Gears: Need to work in all areas to move the infrastructure*

*Quality Programs*

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*Parent Engagement and Community Outreach*

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*Financing Mechanisms*

*Professional Development Capacity and Professional Certification*

*Linkages to Schools and Community Health Settings*

*Guidelines and Ongoing Formative Assessment Mechanisms*

# *Children in a Holistic Context: Create the Infrastructure*

- *Doing this:*

- QRIS

- Regulations

- New standards

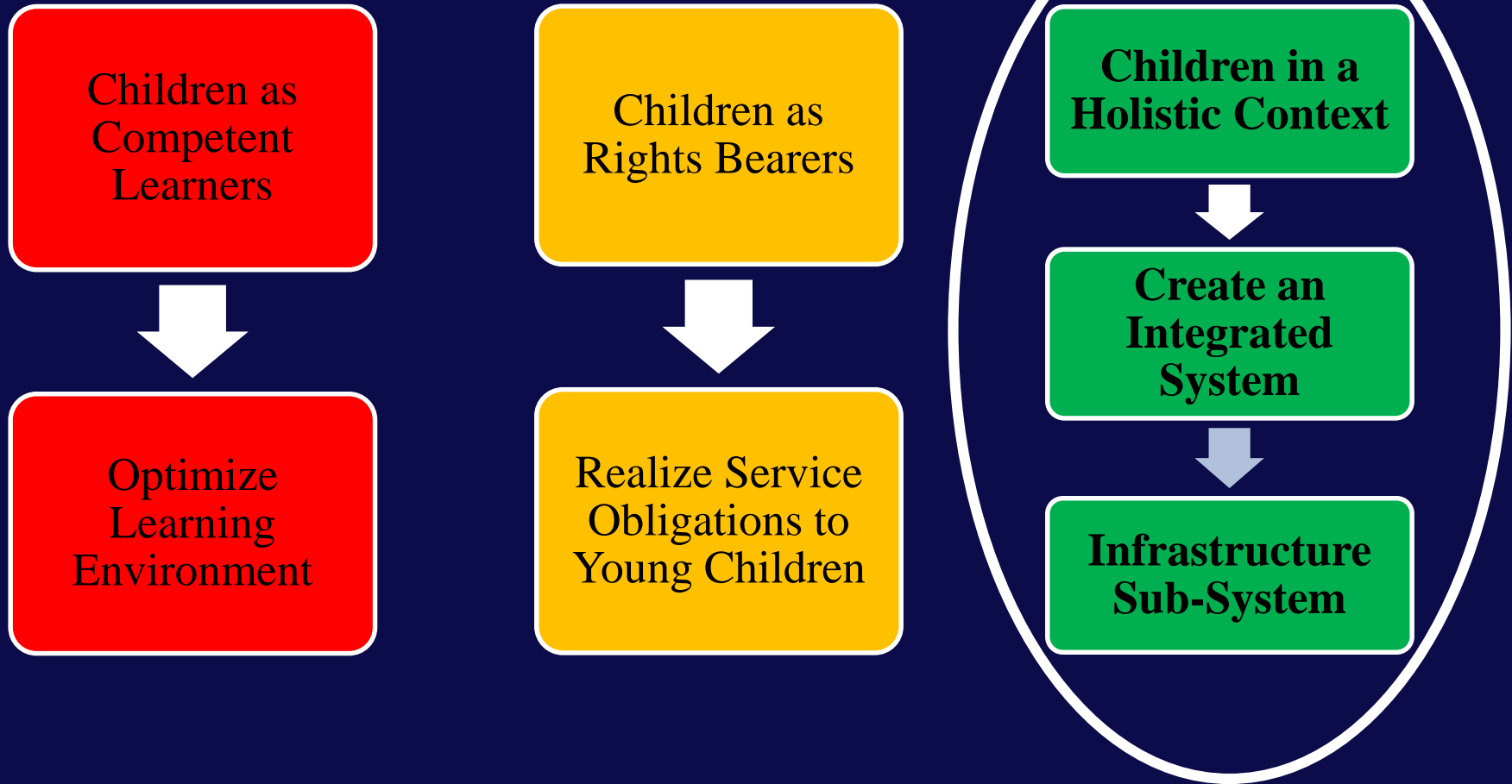
- New data systems

- Professional development



*Infrastructure*  
*Sub-System*

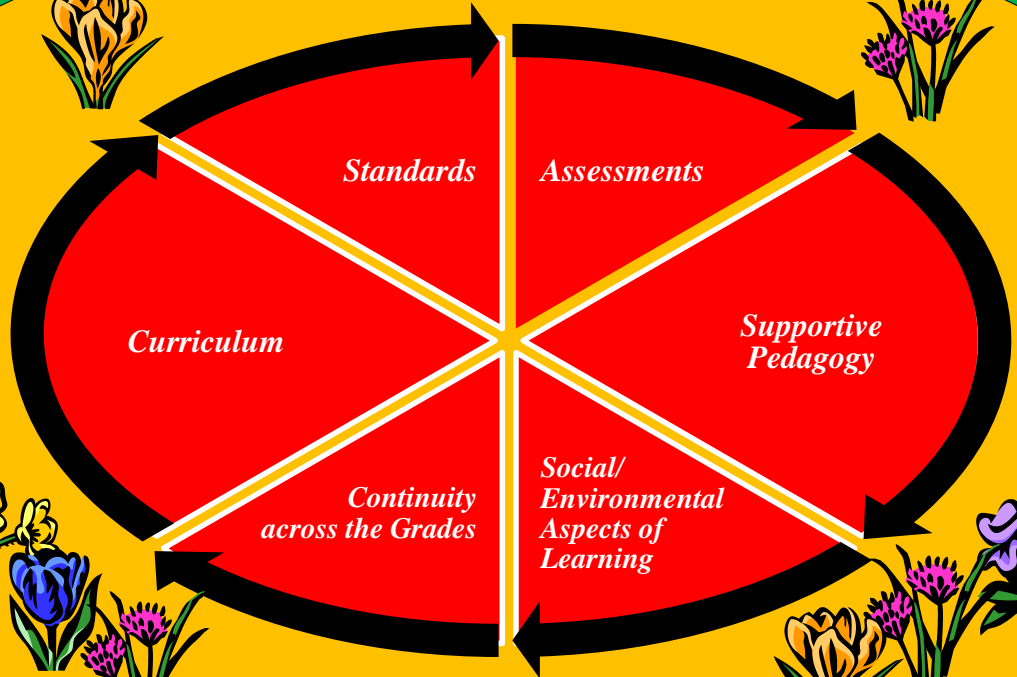
# *Implications for Acting Differently*





*Infrastructure Sub-System*

*Provision Sub-System*



*Part V:*  
*Some Huge*  
*Challenges*

# *The Challenges*



- *Quality*



- *Equality/Equity*



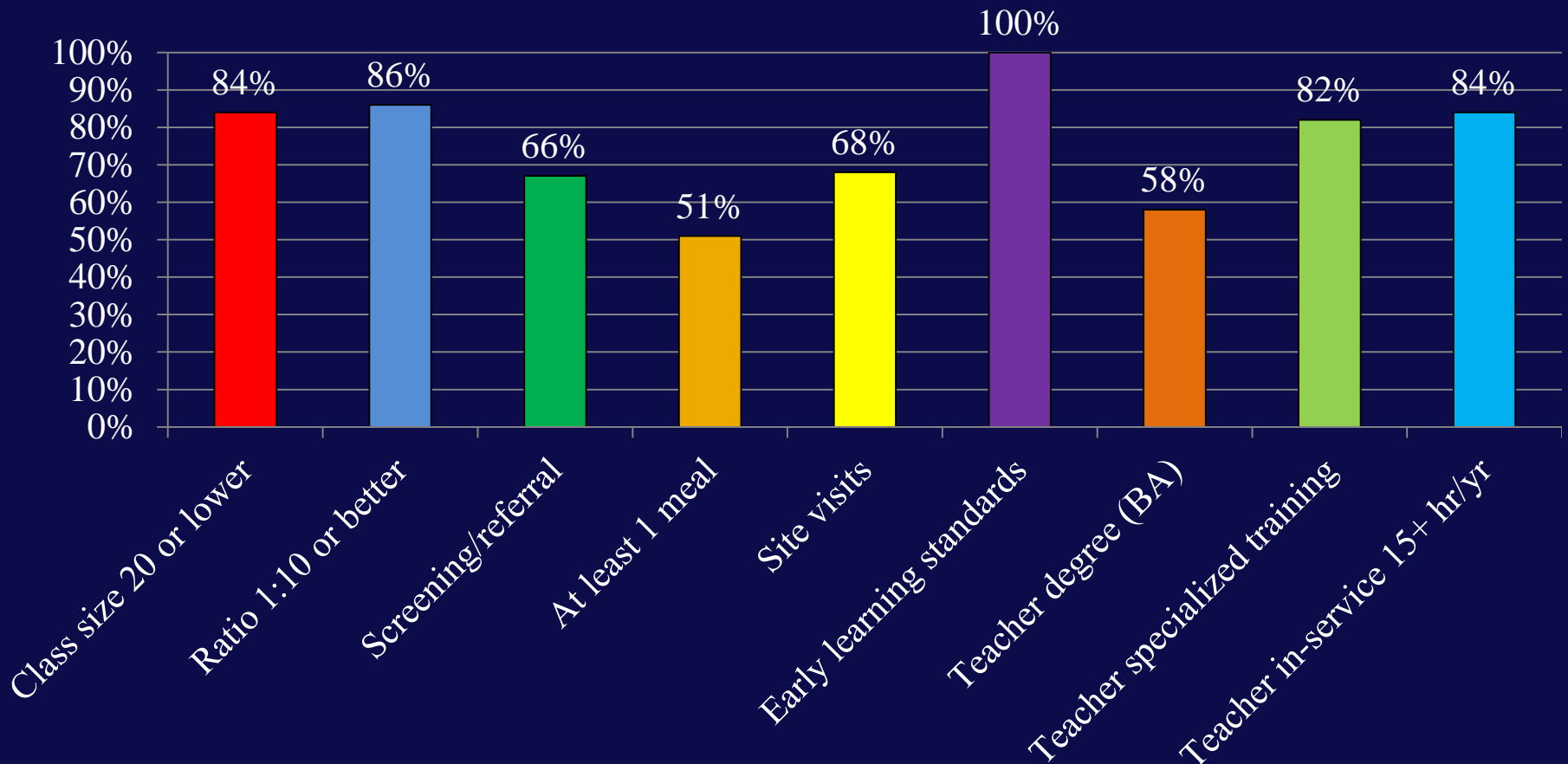
- *Sustainability*

# *The Quality Challenge*

- *Services for young children are not of consistent or high quality*
  - As of 2015:
    - Only 7 states meet all 10 benchmarks for quality standards
      - Benchmarks take into account teacher qualifications, class size, student/teacher ratio, and development/use of learning standards
    - However, in 2015, quality standards did meet a new high
      - Six programs gained a benchmark and no programs lost benchmarks
      - Nebraska now requires that programs provide at least one meal per day and Missouri began requiring all teachers to receive at least
      - 15 hours per year of professional development
      - West Virginia and Mississippi are in the rankings for the first time

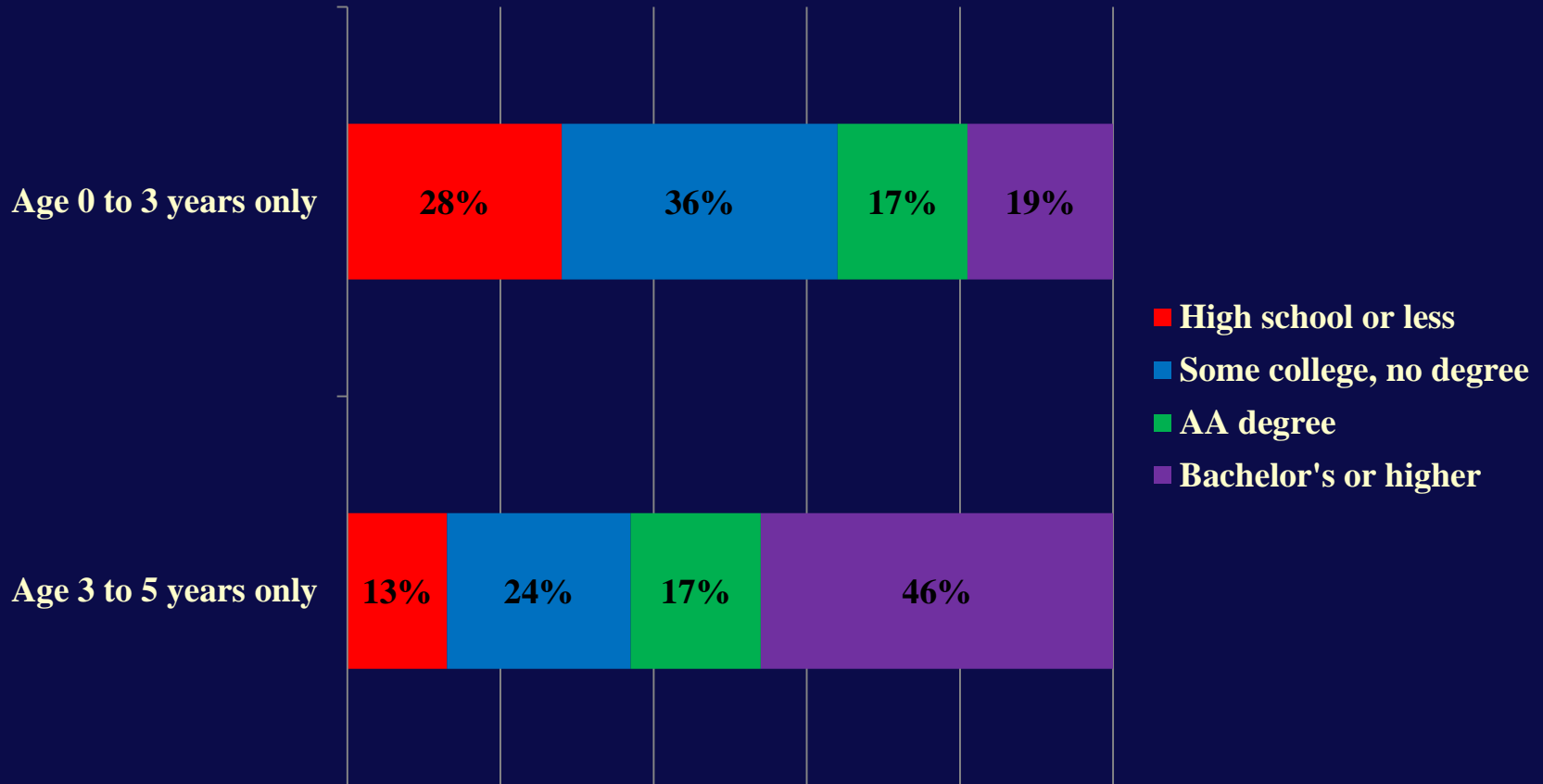
# The Quality Challenge

Percent of State Pre-K Programs Meeting NIEER Quality Benchmarks 2015



# The Quality Challenge

**Educational Attainment of Center-Based Teachers and Caregivers by Age of Children Served**



# *The In/Equality Challenge*

- *Not all children have access to preschool*
- *In the U.S., 61% of all 4-year-olds and 35% of all 3-year-olds are enrolled in preschool*

# The In/Equality Challenge

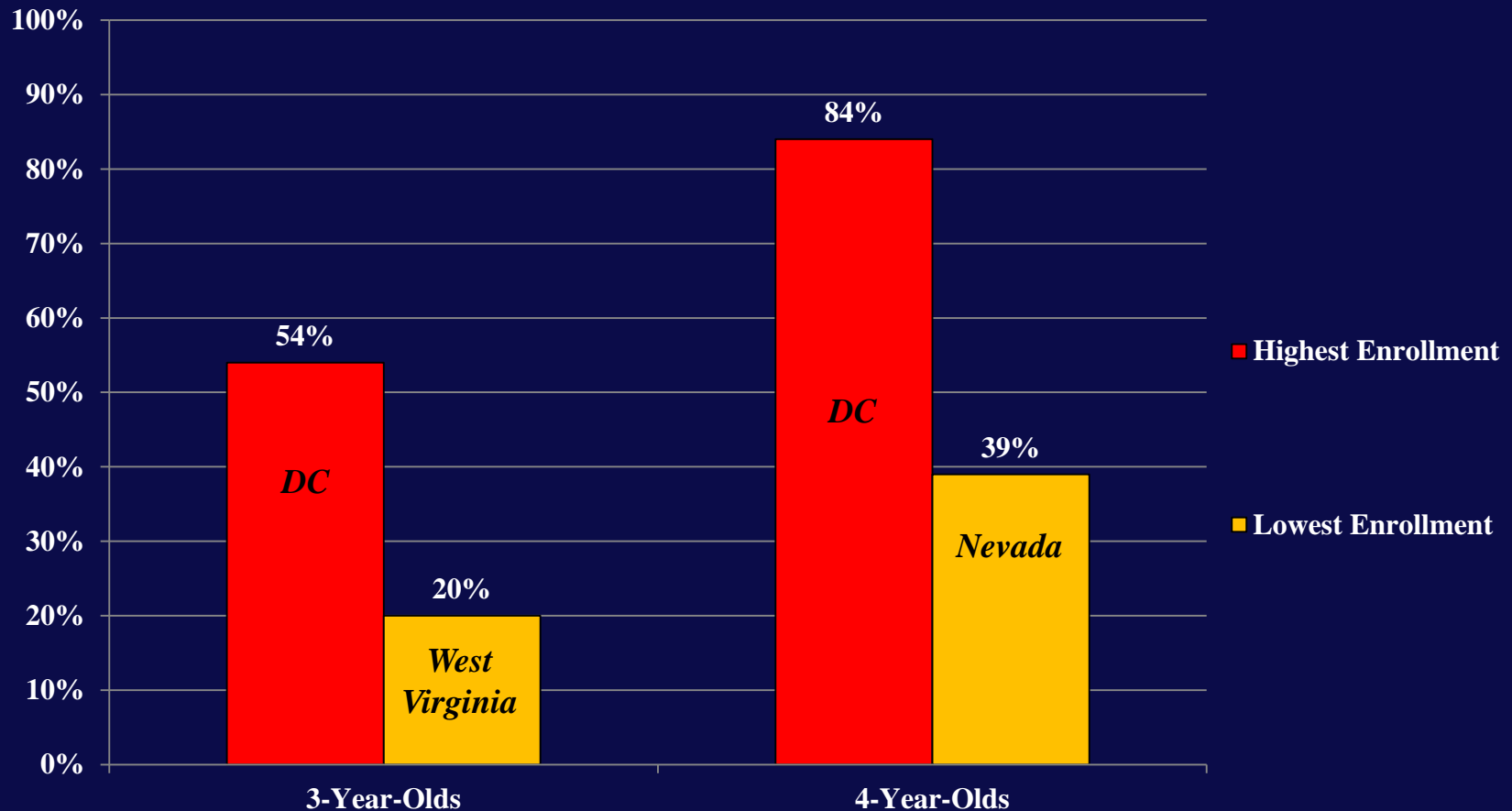
- *Preschool enrollment in the U.S. pales in comparison to that in other developed countries*





# The In/Equality Challenge

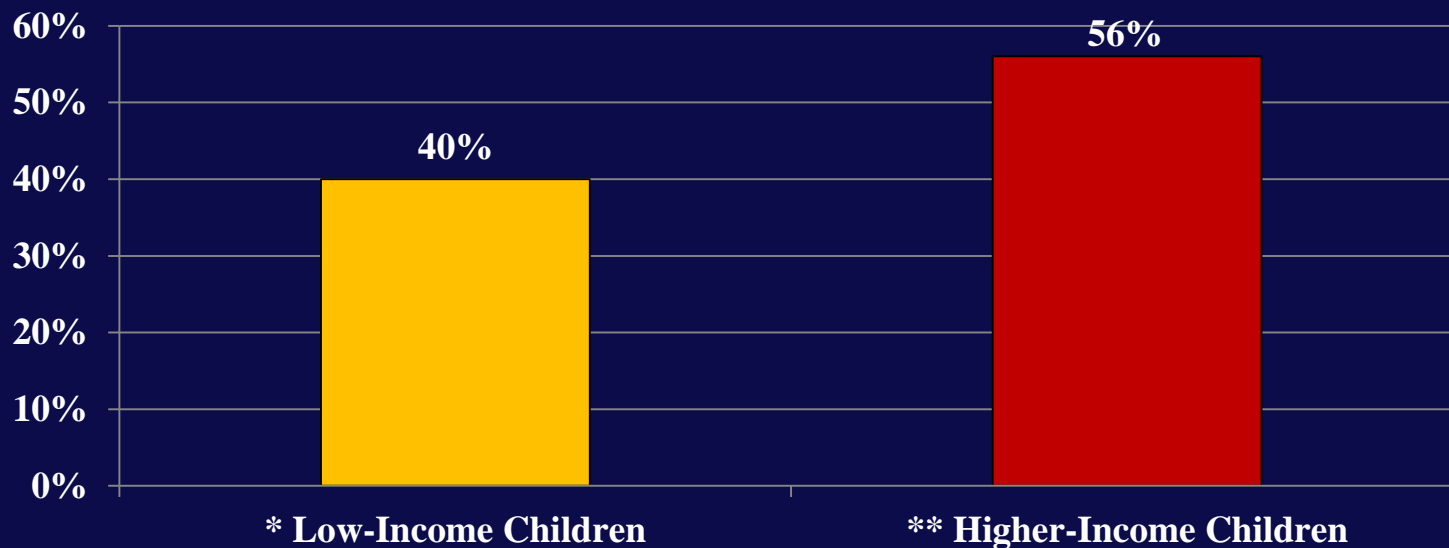
- *Disparities exist by geographic locale*



# *The In/Equality Challenge*

- *Disparities exist by income*

Percent of Children Ages 3 and 4 Enrolled in Preschool, by Income



- *40% of 3- and 4-year-olds in low income (at least 200% of poverty level) families are enrolled in preschool, compared with 56% of children those ages in more affluent households*

# *The Challenge of Sustainability*

## • *Finance*

- Revenues from the federal government are inconsistent and not guaranteed
- Long-term fiscal planning is almost non-existent
- Revenue generation strategies are multiple, but not systemically planned
- Financing schemes tend to focus on quantity, not quality
- The durability of state investments also vary
  - Funding decisions are highly inconsistent and episodic

# *The Challenge of Sustainability*

## • *Governance*

- Because there are so many disparate funding streams, no single entity governs early childhood at the federal or state level
- Federal level has funding in Departments of Education, Health and Human Services, Agriculture, Labor, with 72 separate programs
- State level, equal variety
- Programs are constantly changing

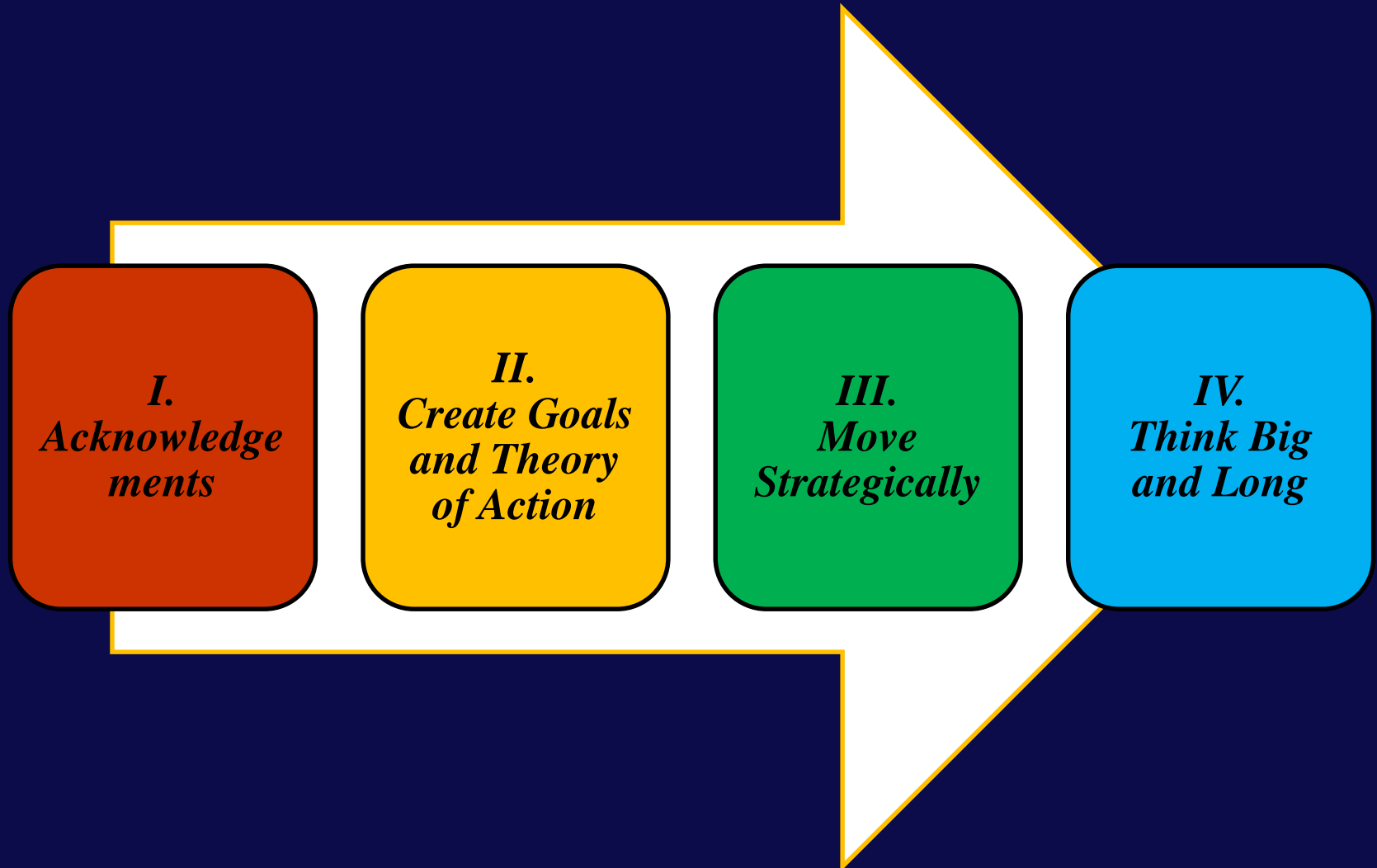
# *The Challenge of Sustainability*

- *ECE is NOT K-12*

	<i>Pre-K/ECE</i>	<i>K-12</i>
<i>Governance</i>	Nothing formalized	State Boards of Ed. Local Boards of Ed.
<i>Finance</i>	Multiple, chaotic funding (72 federal streams)	Guaranteed tax base
<i>Professional Certification</i>	None universally required	Required to teach
<i>Regulation</i>	Base is state required; all else is voluntary	Required accreditation

*Part VI:*  
*Next Steps*

# *Four Strategies*



# *Step I: Acknowledgements*

- *Four acknowledgements:*

1. Hard to work on all systems at once

- Can't keep track
- So many demands on states
- So many people and projects demanding time, energy, and effort
- Worry: capacity drain

2. No comprehensive picture

- Everybody working on separate parts
- Same general goal, but the goal for each little peg is paramount—demands for programs to be sustained
- Functioning without understanding what we are producing—ironic in an age of such increased technology
  - But nobody sees the picture as a whole



# *Step I: Acknowledgements*

- *Four acknowledgements, continued:*

3. No research paradigm

- To guide comprehensive analysis
- Systems research and implementation research are very good as conceptual guides—very hard to evaluate

4. No actionable frame

- Not clear where to begin, where to end
- No universal pathway to follow
- Implementing a program is easy

# *Step II: Create Goals/Theory of Action*

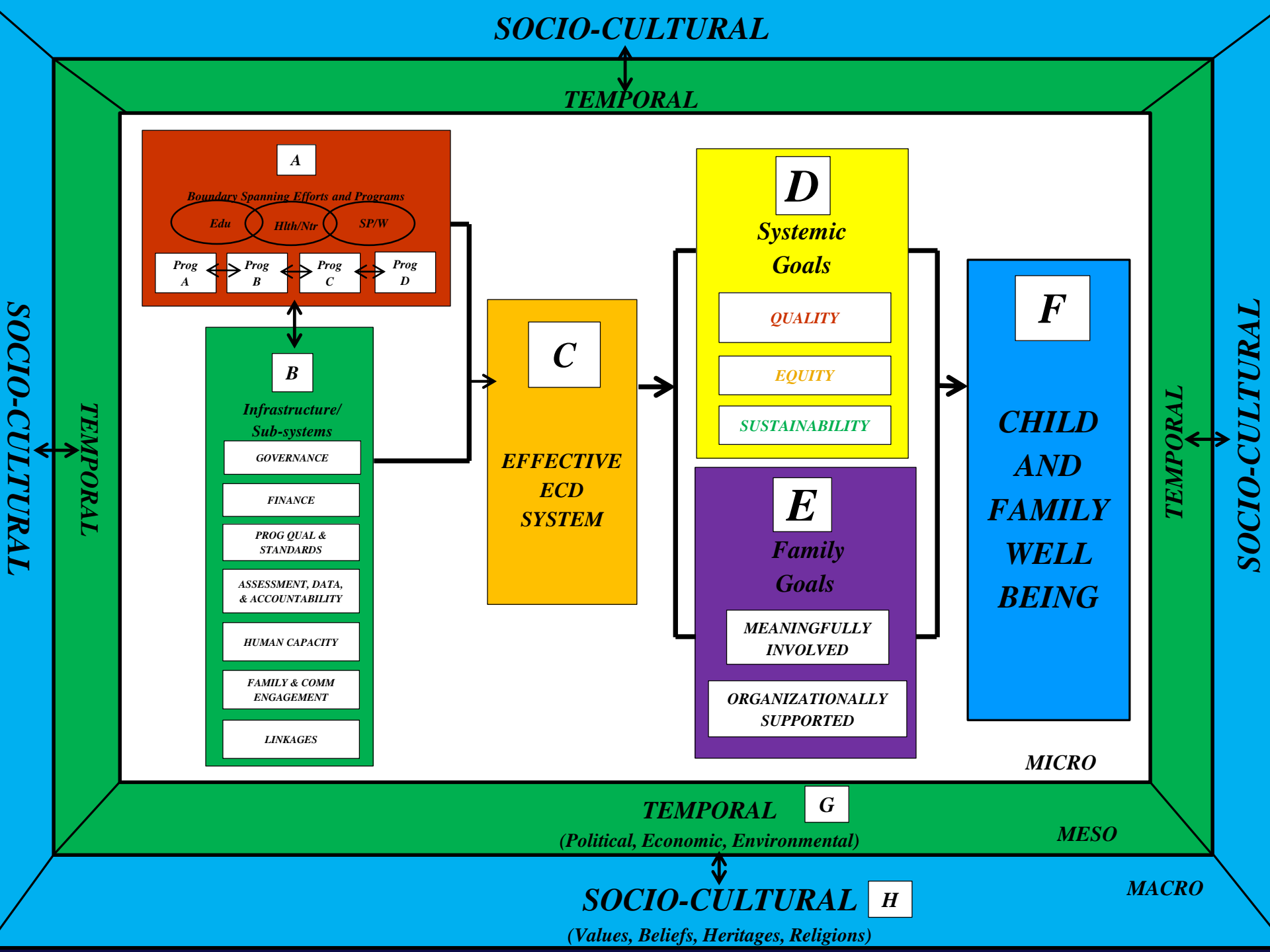
*D*

*Systemic  
Goals*

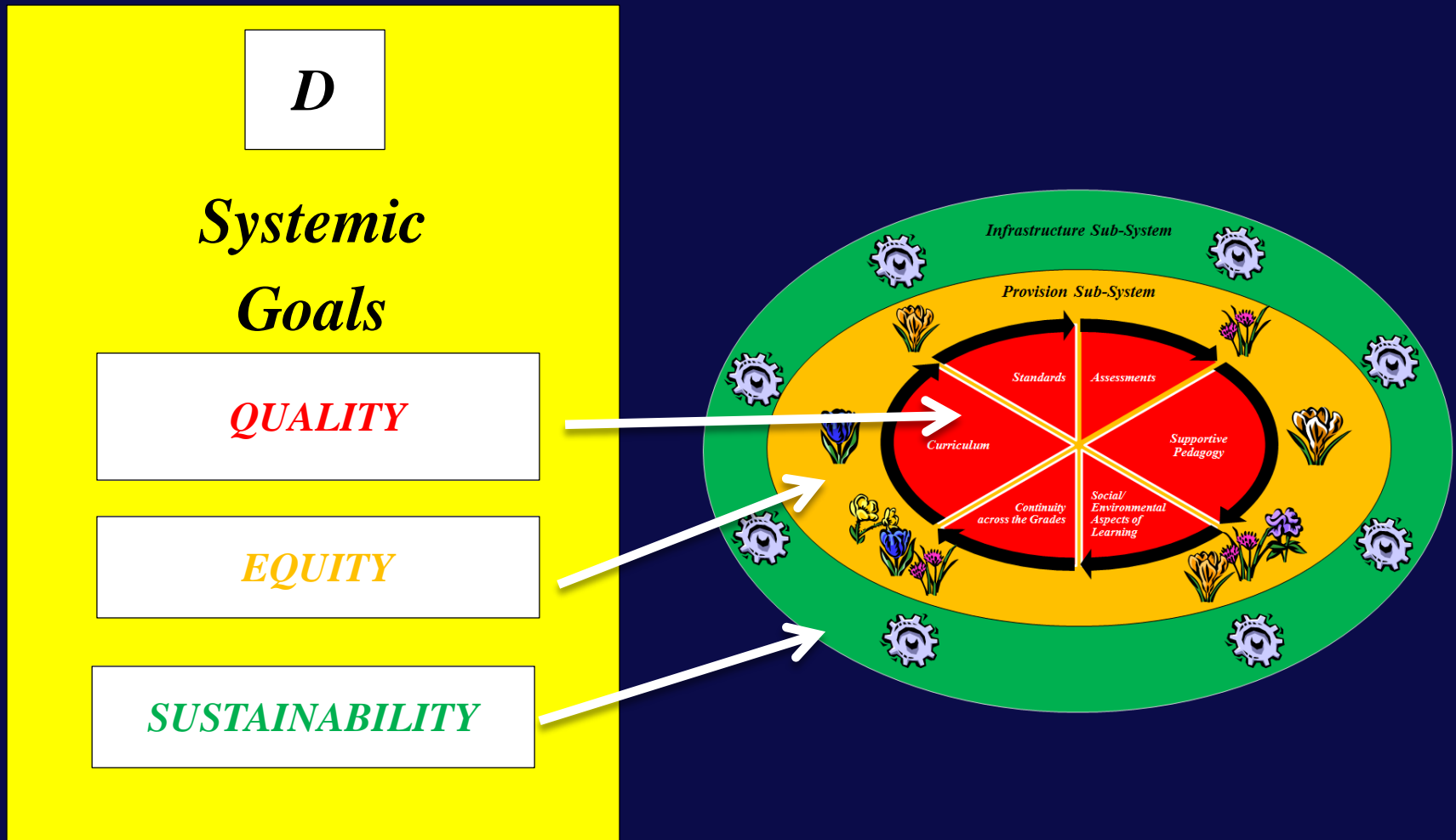
*QUALITY*

*EQUITY*

*SUSTAINABILITY*



# Step II: Create Goals/Theory of Action

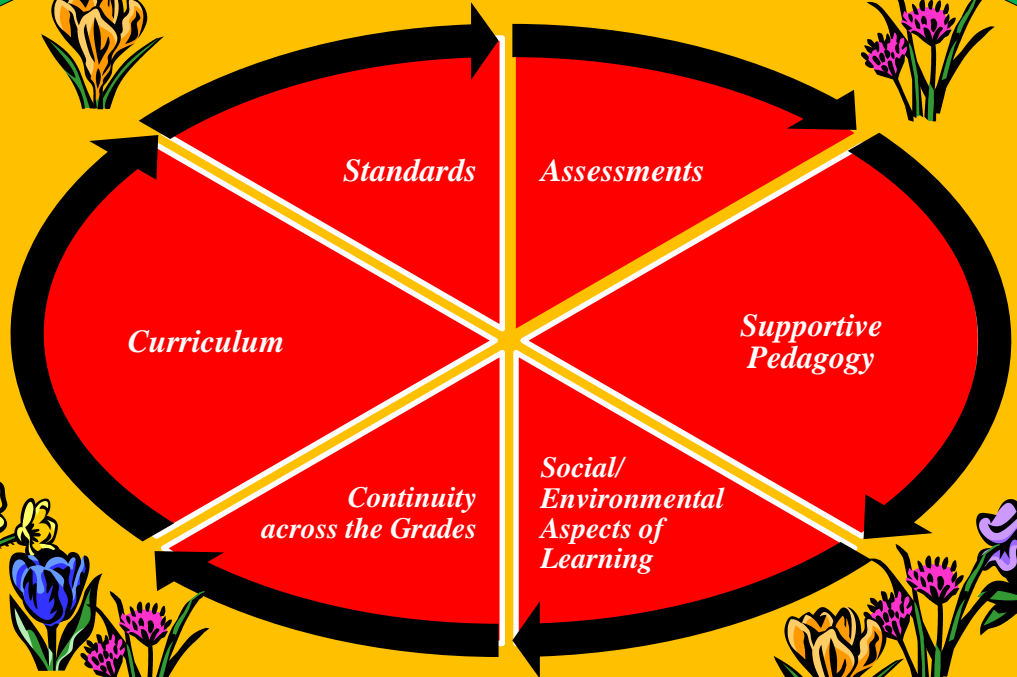


# *Step III: Move Strategically*

- *Lots of options for each of us and for each of the institutions in which we work*
- *Question is how to decide where to focus*
  - Consider strengths/weakness/unique capabilities
  - But need to consider the total context
- *We hope for an integrated system perspective*
  - The embedded ovals are one little heuristic that will help us move forward

*Infrastructure Sub-System*

*Provision Sub-System*



# *Step IV: Think Big and Long*

- *Envision the ideal*
- *Think about the short- and long-term tomorrows (they get here fast)*
- *Reach out to families and communities and join them in creating and realizing the vision*
- *Think Differently:*
  - Think Systems AND Sub-systems



Think different.



# *Think Different*

- *Steve Jobs to John Sculley:*
  - “Do you want to spend the rest of your life selling water, or do you want a chance to change the world?”
- *They did revolutionize six industries:*
  - Personal computers, animated movies, music, phones, tablet computing, and digital publishing

*“The people who are  
crazy enough to think  
they can change the world are the  
ones who do.”*

» *Apple’s “Think Different” Commercial 1997  
Foreword to Walter Isaacson’s book, Steve Jobs*

