

Pathways to Graduation

*Data-Driven Strategies for Differentiated
Graduation Rate Improvements*

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Pathways to Graduation

Why “Pathways” to Graduation?

The Myth

- Progression through high school is a seamless and straight-forward 4-year process



Graduation Requirements

- Seat time
- Credit accumulation
- State and Federal testing



The notion of a common experience of 4-year high school graduation obscures a significant and urgent crisis

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Why “Pathways” to Graduation?

The Reality

- The US faces a crisis in the number of students who fall “off-track” in high school and fail to graduate



Contributing Factors

- Significant academic needs
- Lack of youth development and social supports
- Few proof points of success



- Current graduation rates at or below 60% are unacceptable, yet...
- ... “off-track” students often graduate at rates below 25%



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Why “Pathways” to Graduation?

The Need

- Efforts to improve US graduation rates require significant differentiation in solutions that target diverse student needs



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Prevention

- Prevent students from falling “off-track”

Intervention

- Intervene with **at-risk students** before they fall off-track (through use of leading or early indicators)

Recuperation

- Reengage students and accelerate completion of graduation requirements

Recovery / Re-Enrollment

- Target drop-out populations for re-enrollment

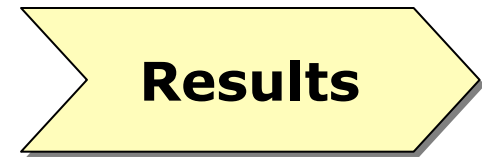
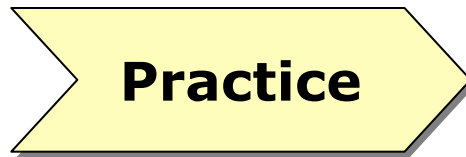


What can school districts do better to ensure that they provide effective options for all students across a broad spectrum of need?



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Data-Driven Analyses Dispel “Myths,” Support Hypotheses, Identify New Findings and Facilitate Fact-Based Decision-Making



What is the problem?

What works?

What strategies are required?

- **Define and size key populations**
- **Identify segments of both at-risk and off-track students**
- **Characterize progression towards off-track and dropout**

- **Evaluate existing options for:**
 - Quantity
 - Quality
 - Cost

- **Define and implement strategies:**
 - Optimize portfolios
 - Prioritize investments
 - Establish quantifiable outcome targets

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District Analyses Are Based on Core Elements

Distinction Between Two Key Populations

- **At-risk populations:** identified by early indicators that predict likelihood to fall off-track
 - Require preventive and intervention strategies
- **Off-track populations:** defined by distinct student segments that are significantly off-track towards graduation
 - Require differentiated strategies for recuperative and recovery / re-enrollment options

Ensuring Use of the Most Leveraged "Risk Factors"

- **Is it predictive of dropping out of high school?**
 - Evaluate the graduation rate of students who demonstrate a given risk factor
- **Is it comprehensive in identifying many dropouts?**
 - Measure the percent of total dropouts who demonstrate any given risk factor



How does this data help define actionable strategies?

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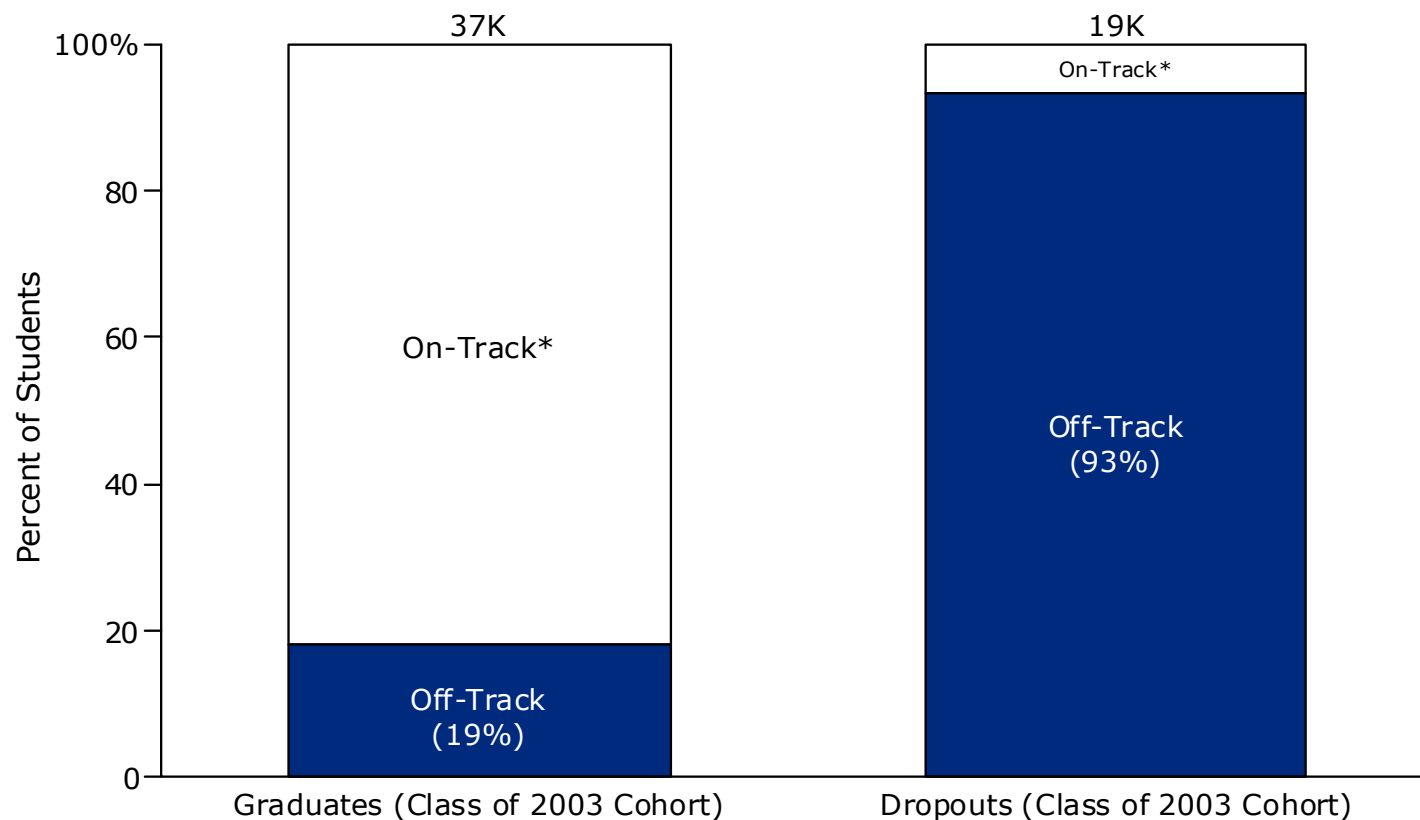
Efforts in NYC, Boston and Chicago – All Districts with Graduation Rates At or Below 60% – Highlight Common Findings

- **The size and scale of at-risk and off-track populations – ultimately, the dropout crisis – are bigger than expected**
- **The dropout crisis is driven primarily by students who fall off-track towards completing graduation requirements**
 - At-risk: students most likely to fall off-track
 - Off-track: students 2+ years behind graduation requirements
- **Early identification of students at greatest risk is feasible**
 - Most can be identified in 8th or 9th grade; however, earlier identification (e.g., before 8th grade) is less comprehensive
- **9th grade performance matters – a lot**
- **At-risk & off-track populations are distinct and NOT homogeneous**
 - Individual segments require differentiated strategies and solutions
- **Proof points of success exist, many with common design elements**

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93% of NYC Dropouts Have a History of Being “Off-Track” – Only 19% of Off-Track Students Graduate from High School

Graduates and Dropouts by Off-Track Status, Class of 2003 Cohort

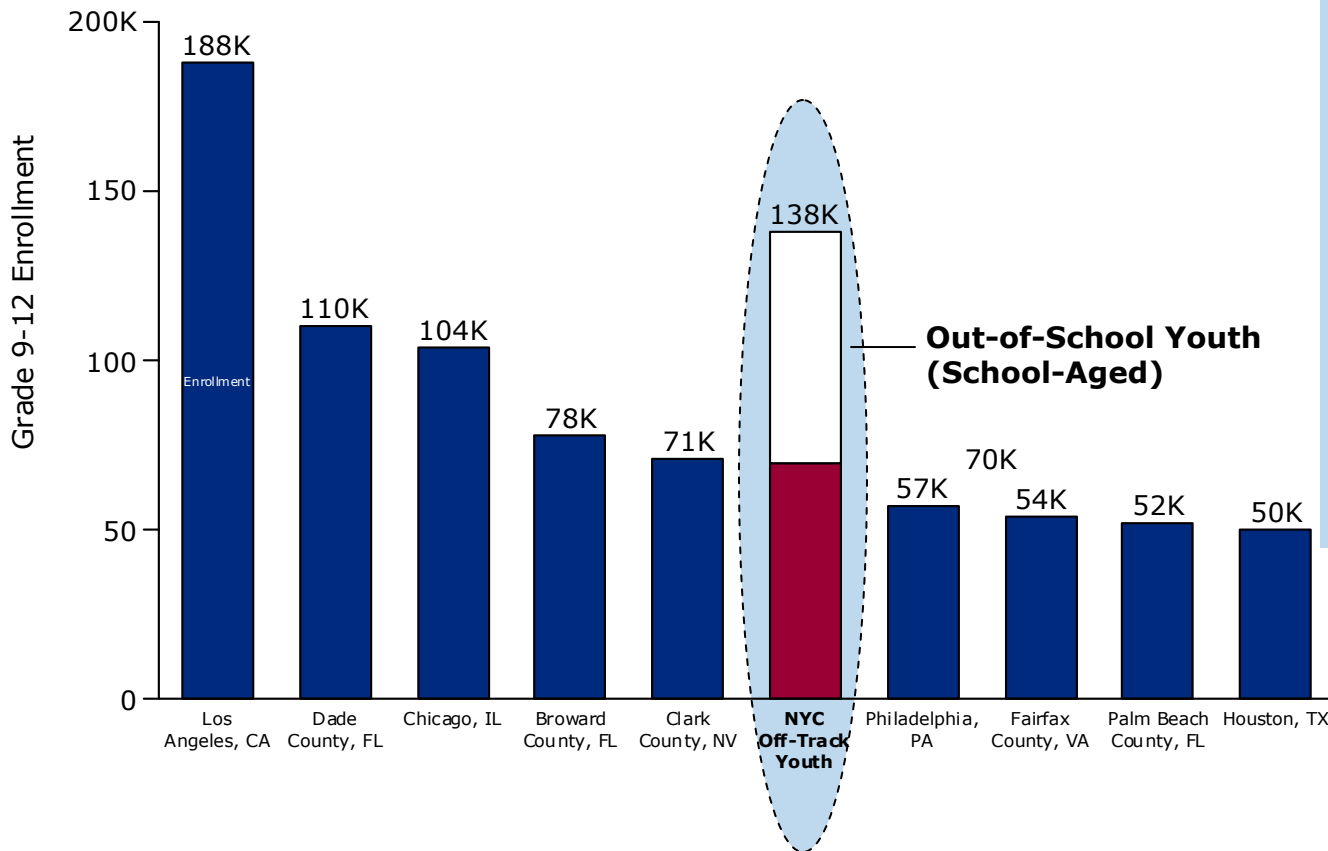


Note: * On-Track defined as students who are not at least two years off-track towards graduation, as measured by age and proximity to graduation (credit accumulation)
Source: NYC DOE Multiple Pathways Strategy - Summary Findings (2006)

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NYC's Off-Track High School Population Is Bigger Than All But Five Other US School Districts

Grade 9-12 Enrollment by Public School District, 2003



- In Chicago, over 100,000 students (incl. dropouts) fall into the category of at-risk or off-track
- Boston's ~9,000 at-risk students represent over 40% of high school enrollments

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“At-Risk” Indicators: 75% of Eventual BPS and CPS Dropouts Fit Into Four Key Segments That Are Mutually Exclusive (No Overlap)

Chicago Public Schools

- Over-Age at Entry
- High Fall-Term Absences
- High Course Failures
- High Course Failures or Low Credit Accumulation By Freshman Spring

Boston Public Schools

- Late Entrant ELL Students
- Substantially Separate Special Education
- Students with Multiple 8th Grade Risk Factors
 - Attendance <80%
 - Two or more years overage
 - Multiple core course failures
- Multiple 9th Grade Core Course Failures (English, Math, Science and/or History)

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Three-Quarters of All BPS Dropouts Fit Into Four Key Segments, None of Which Have a 4-Year Graduation Rate Above 36%

Segments Are Mutually Exclusive (Overlap Between Segments Has Been Removed)

(1) Late Entrant ELL Students	(2) Substantially Separate SPED Students	(3) Students with One or More 8th Grade Risk Factors	(4) Students Failing Multiple Core Courses in 9th Grade
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<u>Percent of Class of '04 Dropouts:</u>	13% of dropouts (137 dropouts)	17% of dropouts (169 dropouts)	26% of dropouts (274 dropouts)	18% of dropouts (190 dropouts)
<u>Graduation Rate:</u>	36% 4-year rate 47% 6-year rate	24% 4-year rate 32% 6-year rate	34% 4-year rate 40% 6-year rate	31% 4-year rate 48% 6-year rate

- Description:**
- English language learning students who enter BPS for the first time during high school
 - All students who are substantially separate SPED at any point in grade 9-12, excluding students with severe disabilities not intended for a diploma
 - Risk factors include:
 - Attendance rate below 80%
 - Two or more years overage
 - Fail multiple core courses
 - First time 9th graders who fail one or more course in English, Math, Science or History



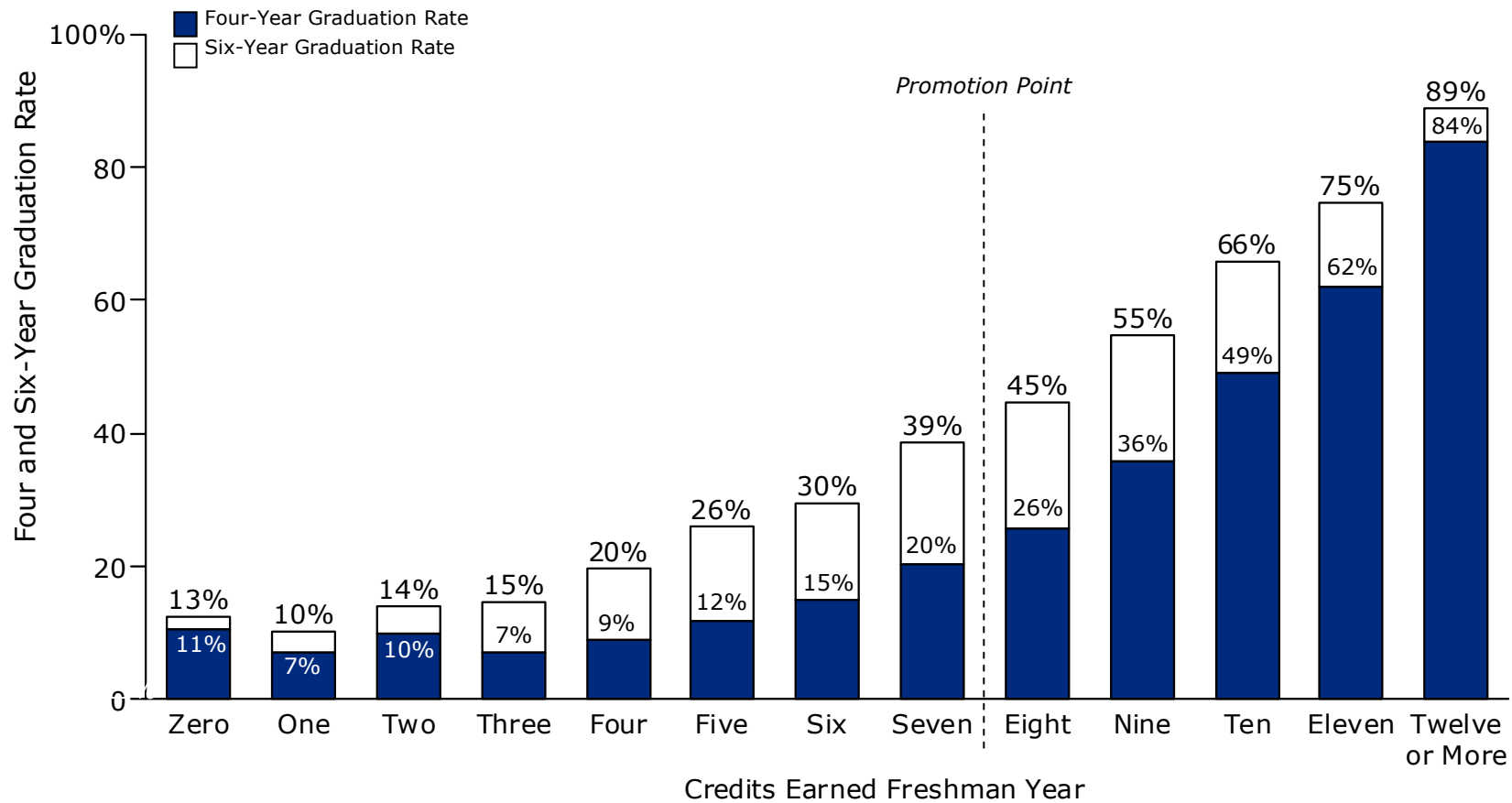
Annually, BPS high schools take in approximately 2,000 first-time 9th graders across these four segments

Note: In removing overlap between segments, students were assigned to a group based on the numbered hierarchy above
Source: BPS Internal Data

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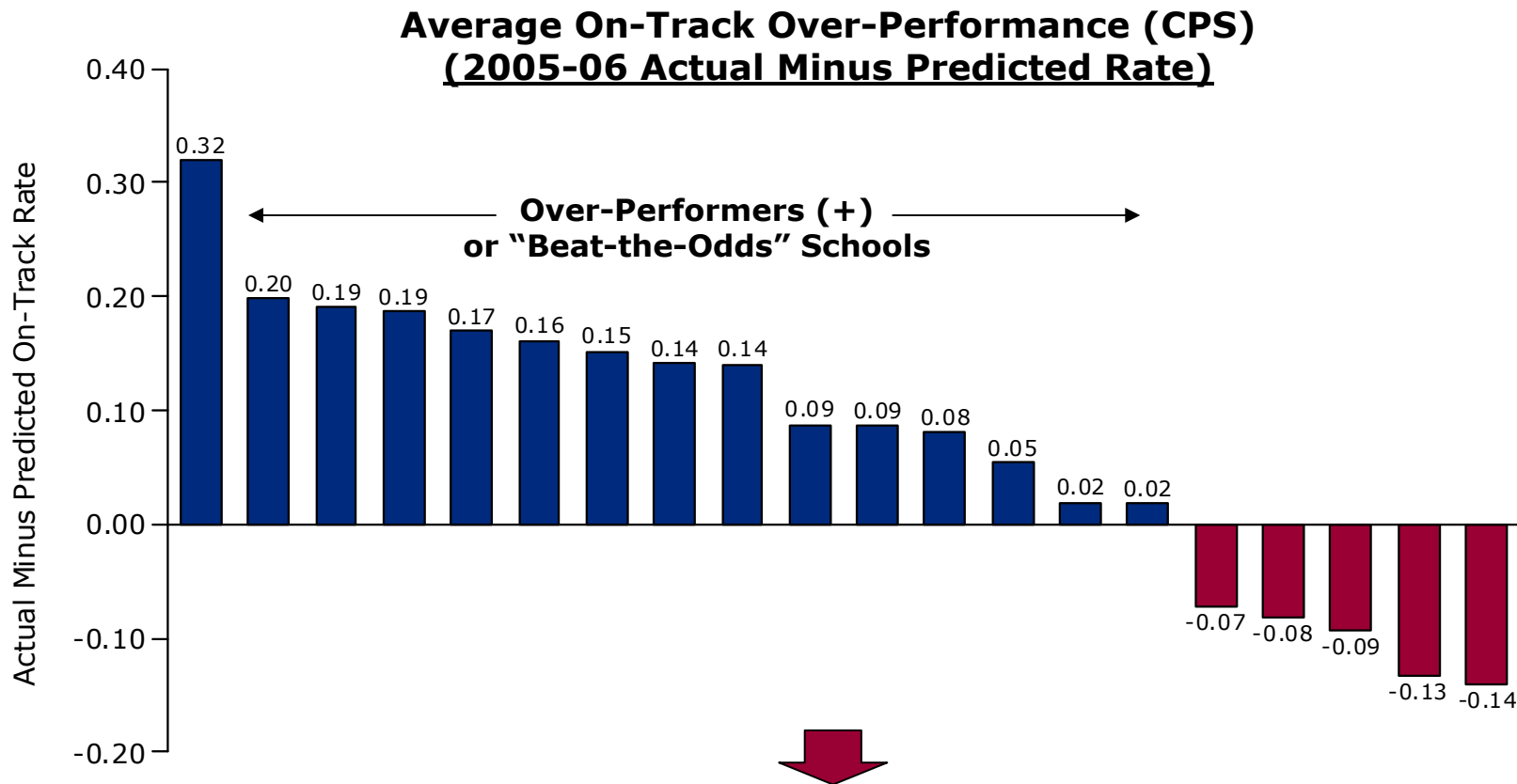
Freshman Year Credit Accumulation Is Highly Predictive of Four- and Six-Year Graduation Outcomes

Four- and Six-Year Graduation Rate by Credits Earned Freshman Year, Class of 2003 Cohort (NYC DOE)



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New Small Schools Demonstrate Preventive Power in Chicago, As Well As in NYC and Boston

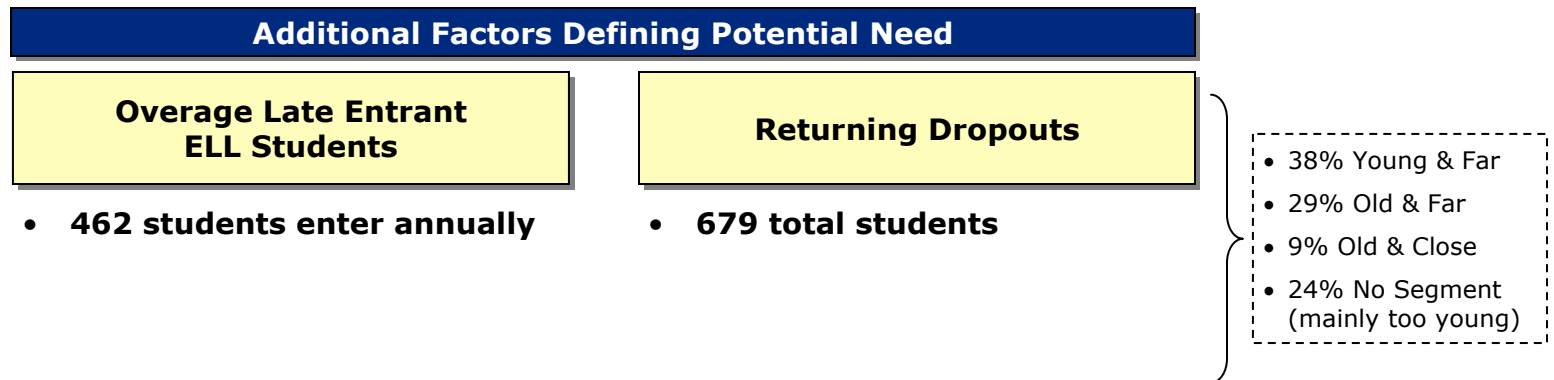
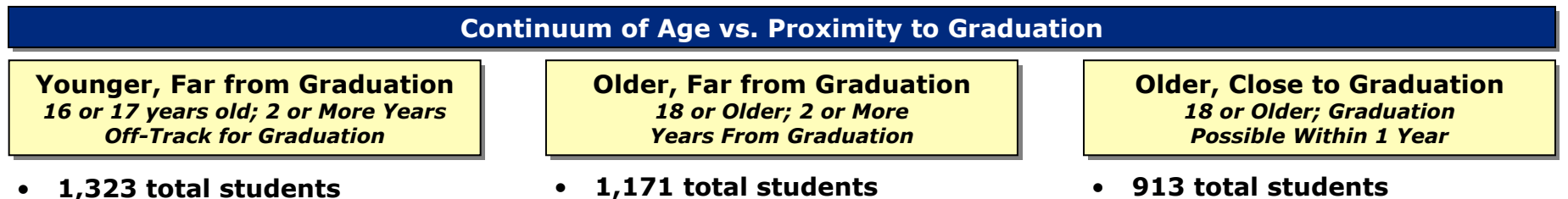


Newer small schools tend to keep ~15-20% more students on-track

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“Off-Track” Students Tend to Fall Into Distinct Needs-Based Segments That Inform Specific Portfolio Needs (BPS)

- At the end of 2005-06, ~4,500 “off-track” students enrolled in BPS high schools fell into five distinct segments

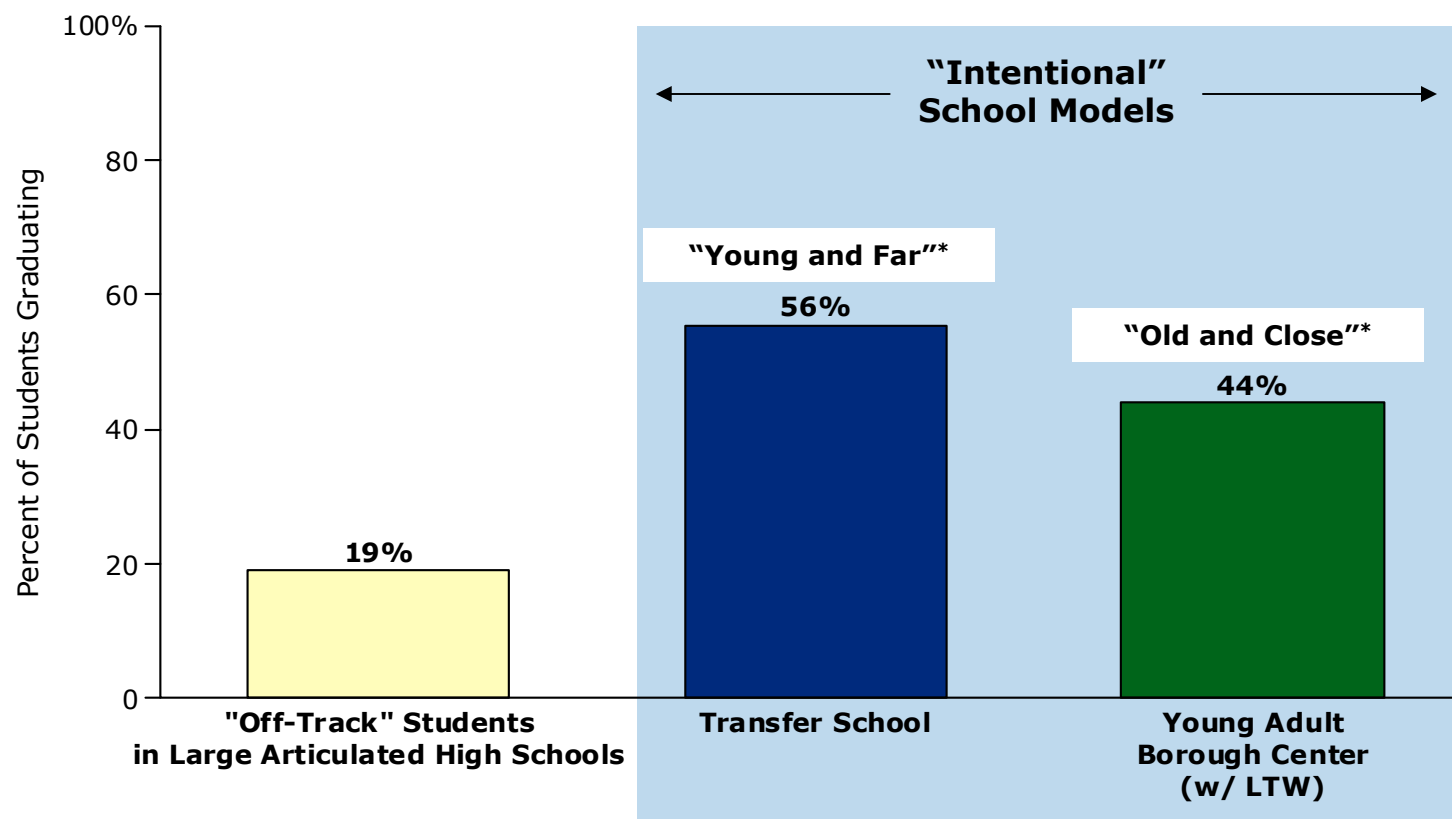


The distinct needs of individual “off-track” populations require differentiated recuperative portfolio solutions

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Intentional Recuperative School Models Highlight Success in Achieving Graduation Outcomes with Off-Track Students

Students Graduating from Articulated High Schools and Multiple Pathways Programs (NYC DOE)

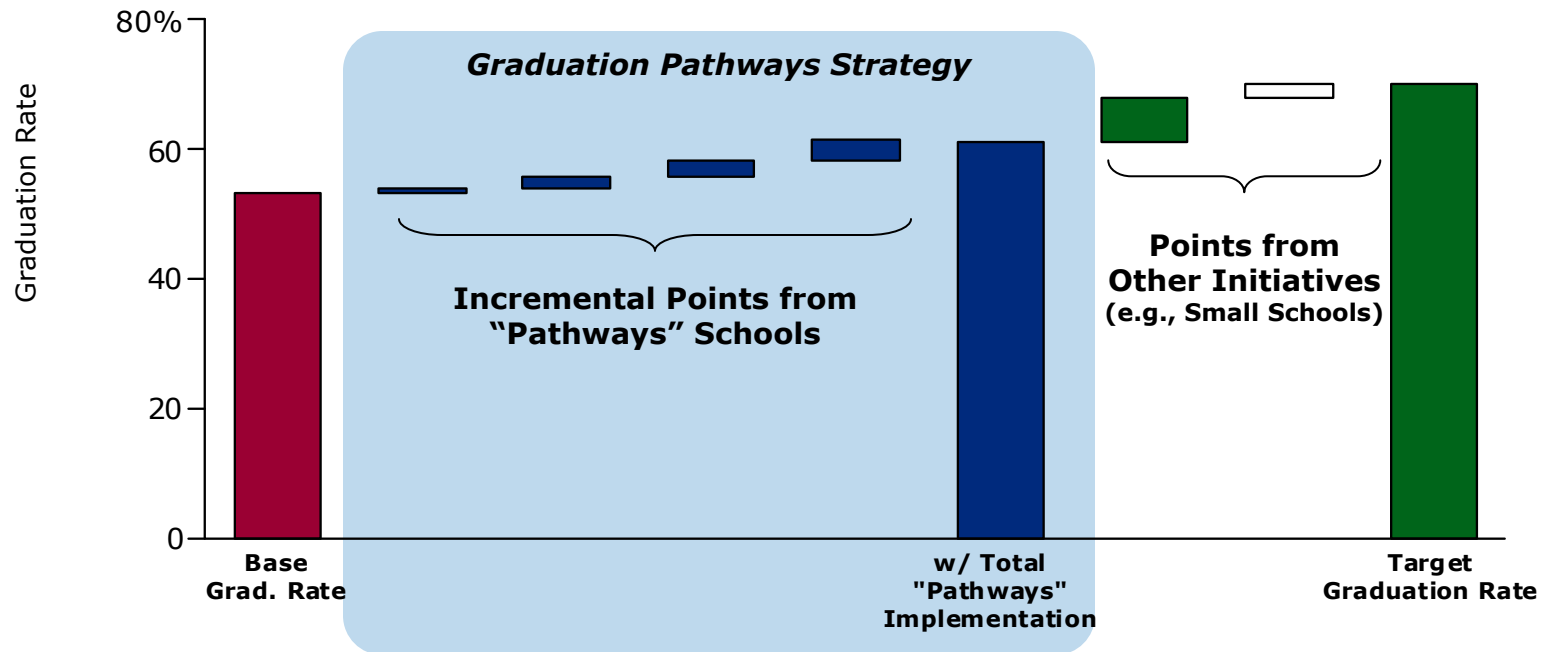


Note: *overlay of BPS terminology for off-track segments to comparable NYC DOE Multiple Pathways models
Source: NYC DOE Multiple Pathways Strategy - Summary Findings (2006)

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Analyses of Performance vs. Cost Allow A District to Make More Informed and Efficient Investment Decisions

Incremental Graduation Rate by Type of Program

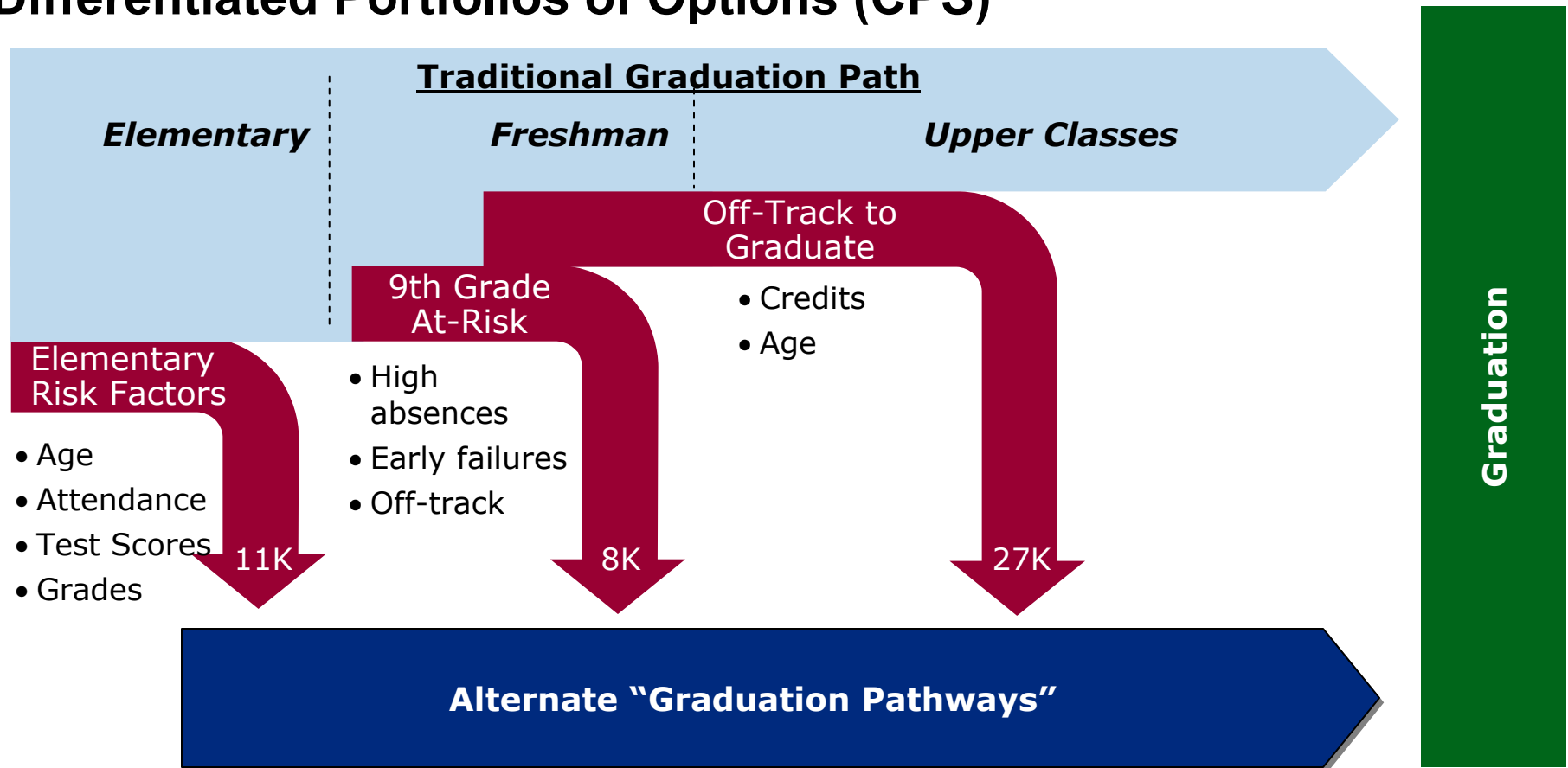


Incremental Grads	100	142	365	575	1,182	1,050	2,232
Cost per Point of Graduation	\$1MM	\$9.5MM	\$1MM	\$8.5MM	\$5.5MM	\$4.5MM	

Hypothetical Example

Pathways to Graduation – The Chicago Example

Ultimately, Fact-Based Assessments Enable Districts to Develop Differentiated Portfolios of Options (CPS)



- CPS' traditional path to graduation is not working for half its students
- A portfolio approach ensures that differentiated student needs are met

Pathways to Graduation – The Chicago Example

Effective Strategies Require Identifying Segments Among First-Time 9th Graders (CPS)

	Overage At Entry	High Absences Fall Semester	High Course Failures Fall Semester	High Failures / Low Credits Spring Semester	All Other Students
Description:	<ul style="list-style-type: none"> Age 15 or over in fall of 9th grade 	<ul style="list-style-type: none"> Students missing more than 10 days of school in the fall of 9th grade 	<ul style="list-style-type: none"> Students failing 2 or more core courses in the fall of 9th grade 	<ul style="list-style-type: none"> Students with fewer than 5 credits or 2+ core semester failures by the end of 9th grade 	<ul style="list-style-type: none"> Remaining students in cohort who do not fall into previous four segments
Number of Students: (‘05-‘06 Cohort)	11.2K	3.7K	1.8K	2.8K	15.4K
Five-Year Graduation Rate: (‘01-‘02 Cohort)	27%	19%	34%	39%	75%
Timing of Identification:	Before 9 th Grade	During First Semester	End of First Semester	End of Freshman Year	End of Freshman Year



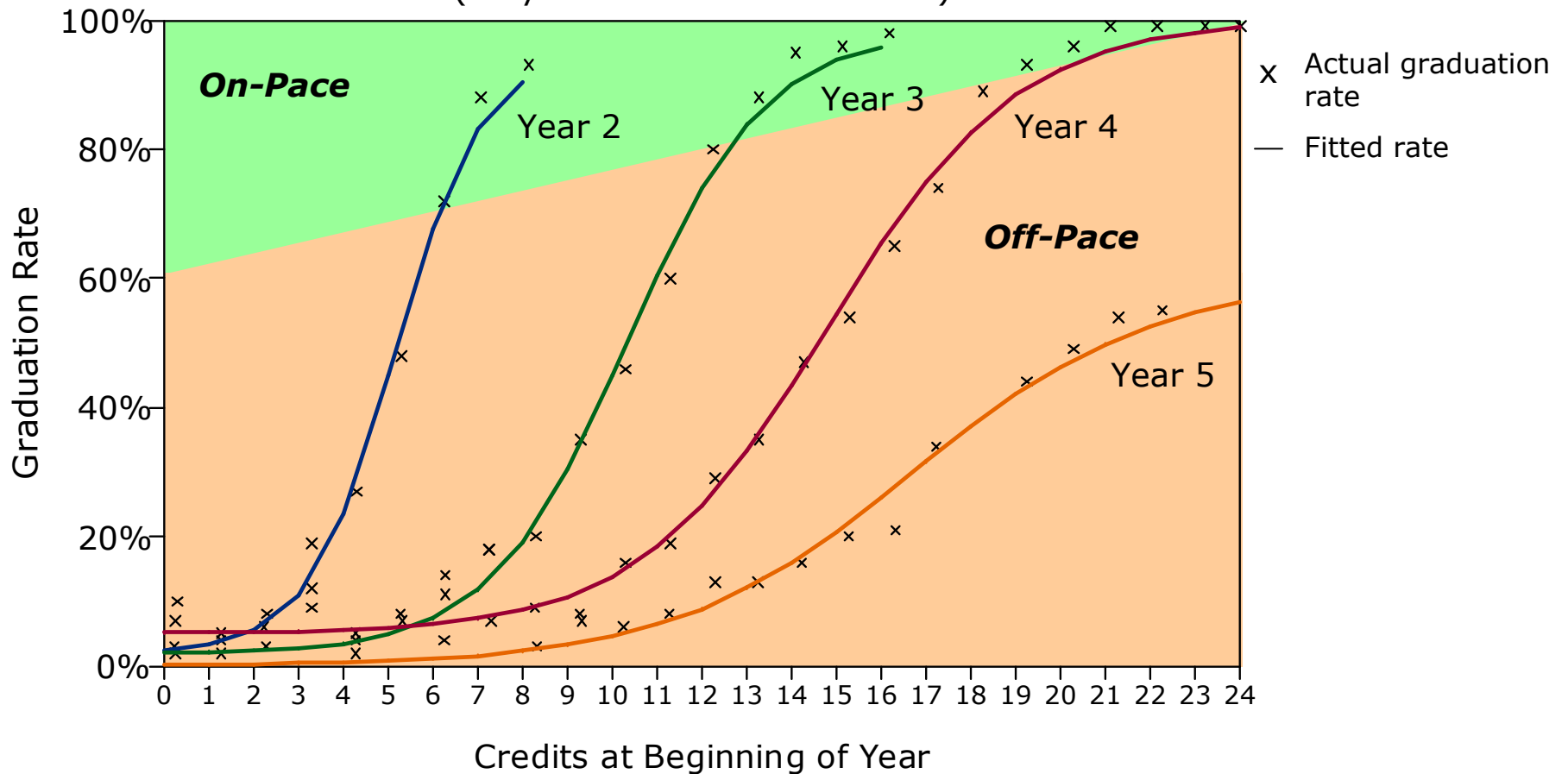
- Four discrete segments of at-risk 9th graders have different needs and can be identified throughout 9th grade (but no later than the end of 9th grade)
- Collectively, these four segments account for over ¾ of eventual CPS dropouts

Pathways to Graduation – The Chicago Example

A “Graduation Pathways” Strategy Also Requires Understanding Student Needs Based on Age & Credits

Graduation Patterns for Age-Credit Combinations (CPS)

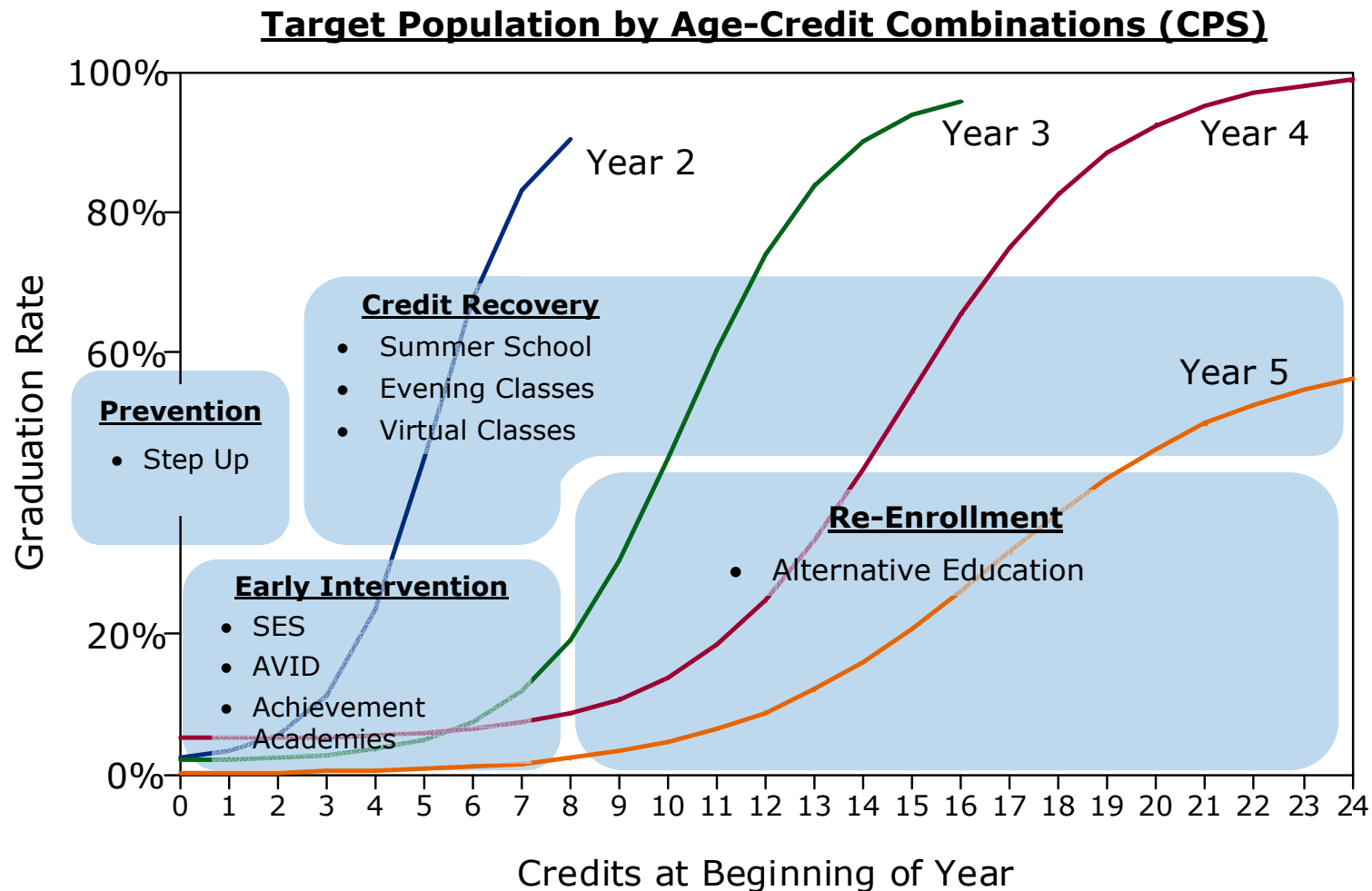
(14 yr old first-time freshmen)



Understanding the effects of credit accumulation helps CPS target the right interventions to the right students at the right time

Pathways to Graduation – The Chicago Example

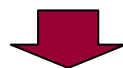
Age & Credit Data Allow for Differentiated Strategies That Target Each Component of “Graduation Pathways”



Pathways to Graduation – Lessons Learned

A Focus Beyond Recuperative “Multiple Pathways” Can Promote Broader Improvements and A Greater Return on Investment

- **At-risk and off-track student populations represent a broader secondary crisis for large urban school districts**
 - The two populations make-up a sobering percentage of nearly 50% or more of high school enrollments in large urban school districts
 - Strategic solutions for at-risk populations must be differentiated from options for off-track students
- **The scale of off-track populations cannot be addressed by recuperative options alone**
 - **Preventive and intervention strategies must be pursued in parallel with recuperative efforts**, in order to “stem the tide”
- **Proof points of success exist** – and should be used as key levers to raise system-wide graduation rates



The “off-track” problem in NYC, Boston and Chicago IS the dropout problem and has broader implications for secondary planning and district partnerships



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