

Lighting the Burning Platform

The background features a dark, textured surface with vibrant, flowing light waves. On the left, bright blue and cyan waves ripple across the frame. These waves transition into a spectrum of colors, including purple and pink, before culminating in intense orange and yellow waves on the right side, resembling a fire or a high-energy plasma flow.

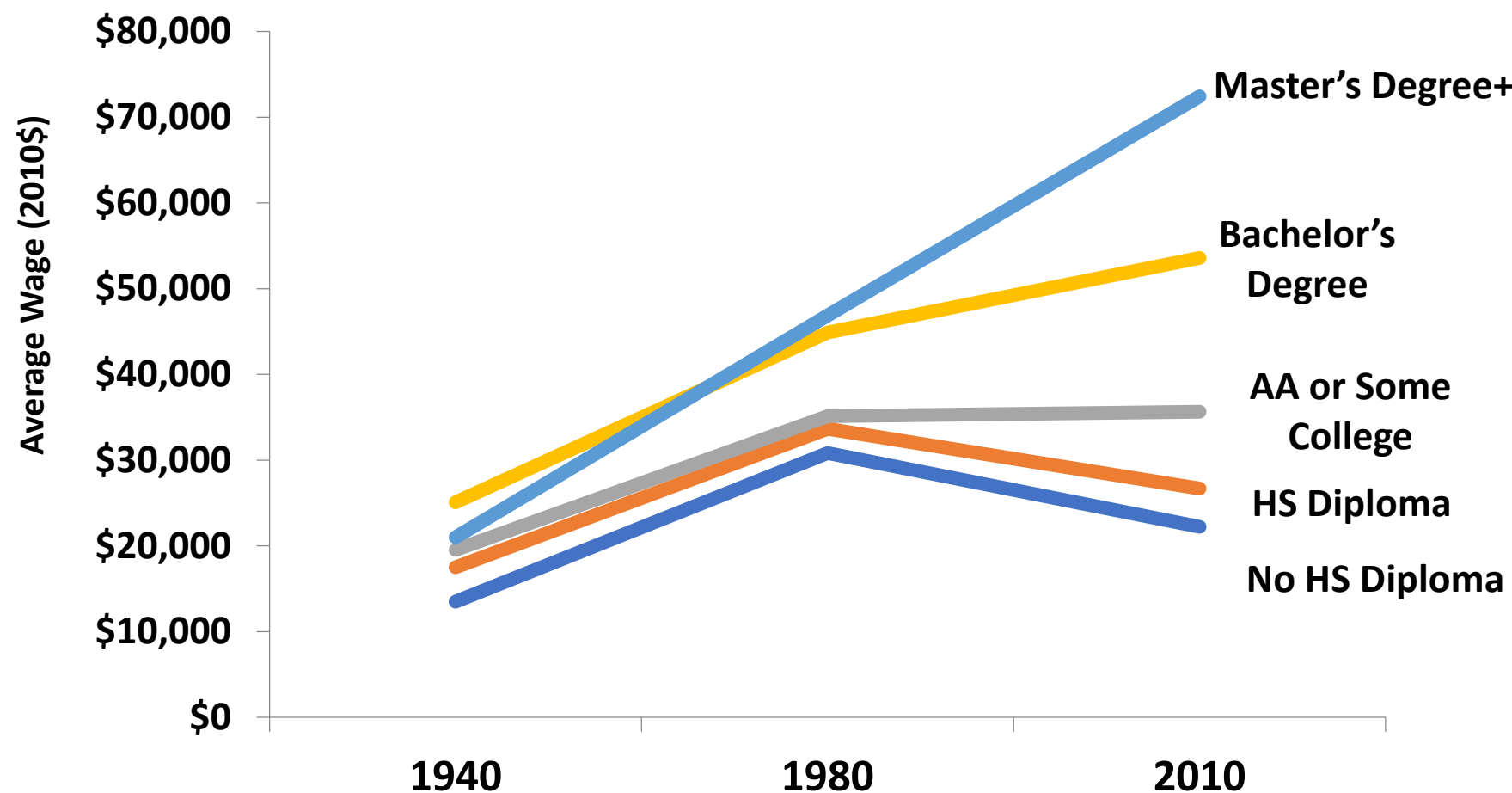
**Data Visualization to Support
Oregon Education Attainment Policy**

Oregon's Ambitious 40-40-20 Attainment Goal (2011)

- *40 percent of Oregon adults = a bachelor's degree or higher*
- *40 percent = at least an associate's degree or other technical credential*
- *20 percent = a high school diploma that represents a high level of academic and work readiness skills.*

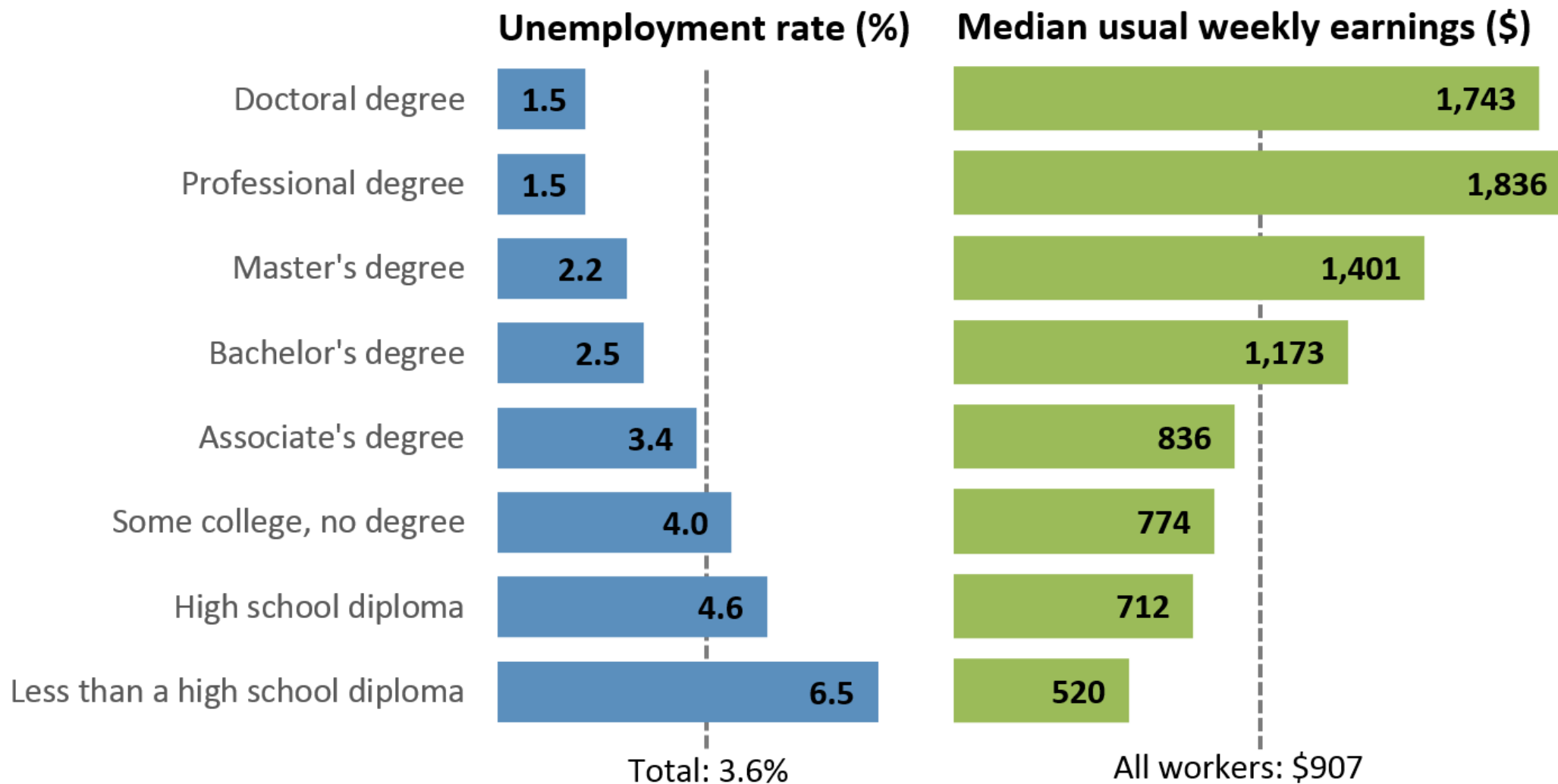
Part 1: The Why

The Reality Since 1980: Declines in Real Wages for High School Grads and Dropouts



Source: US Census. Average Portland Wages (2010 dollars) by Education Attainment, Laborforce Participants Ages 25-64

Unemployment Rates and Earnings by Attainment (2017)

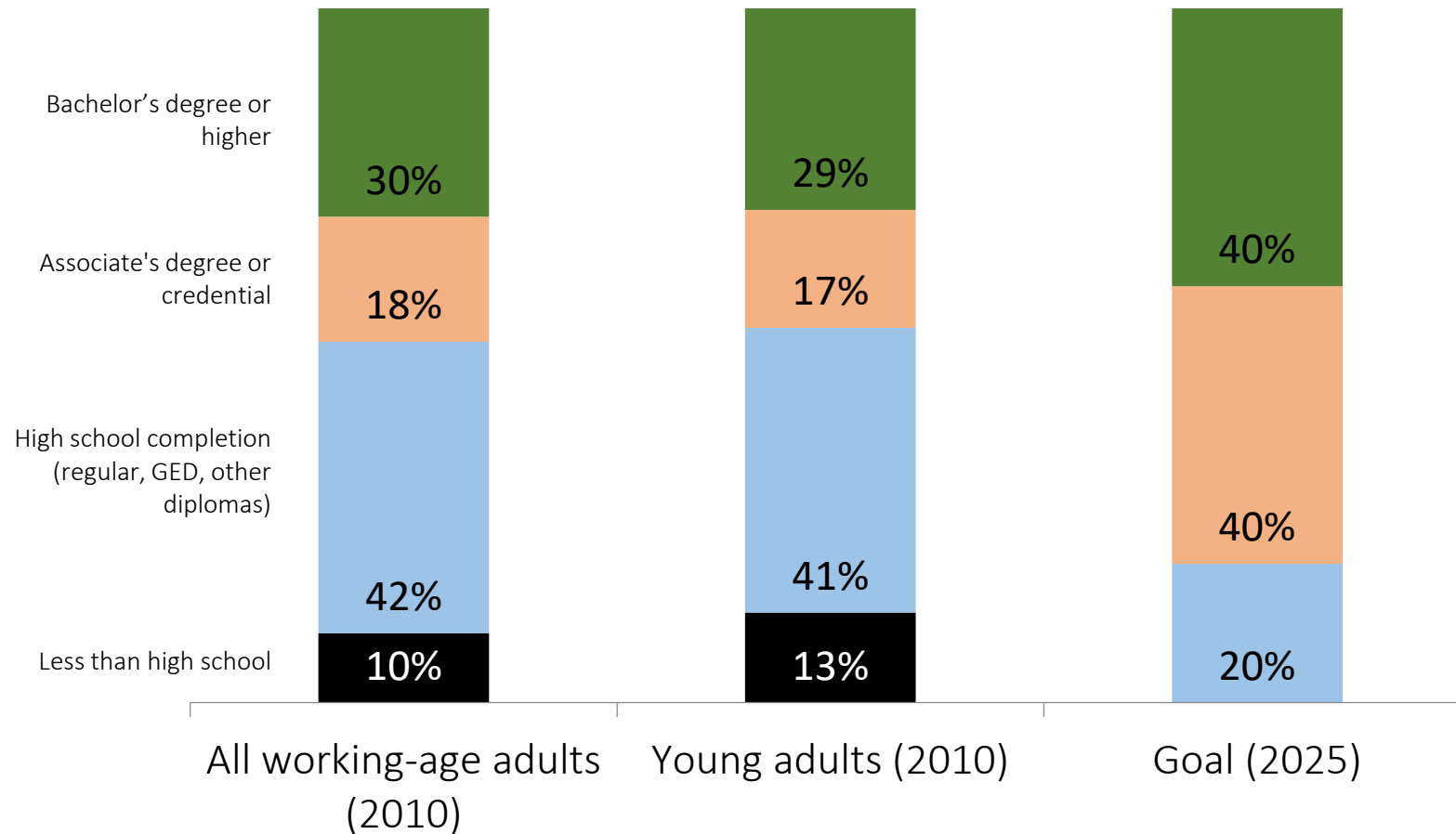


Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.

Source: U.S. Bureau of Labor Statistics, Current Population Survey.

Part 2: The Goal Gap

Current Education Attainment of Oregon Adults, Versus the 40/40/20 Goal



Source: US Census, ACS, 2005-2009 PUMS

Unknown 1

45,000 Oregonians come of age each year. So, an 80 percent postsecondary completion goal translates to **36,000 credentials per annual cohort**.

Oregon higher education institutions—public and private —granted almost **34,000 associates and bachelors degrees** in 2011-12.

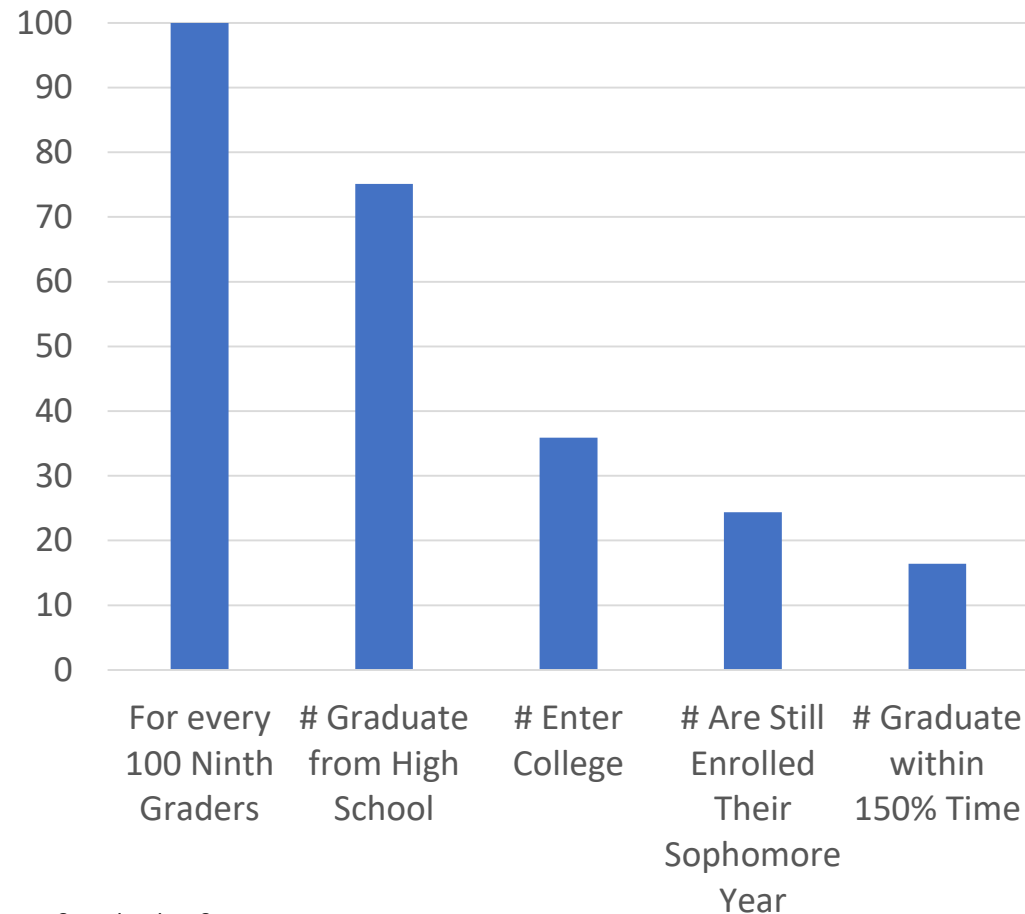
But, degrees reported by Oregon institutions include non-residents, students of all ages, and students with multiple degrees.

How does an individual, emerging cohort fare?

Unknown 2

How does a pipeline that appears to generate **16 percent bachelors completion** in 150 percent time end up with more than 30 percent of its population with a bachelors degree?

Ninth Grade to 150% Time Graduation, Oregon, 2010



Unknown 3

Self-reported attainment on the Census suggested **87 percent** of young Oregonians had at least a high school diploma.

But, the cohort graduation rate estimates (2010-11) indicated only **68 percent** of Oregonians graduated high school on-time.

What explains the difference?

Part 3: Lighting the Challenge – a Single Cohort

Task for Oregon Learns: an OBC Initiative To Support Higher Attainment & Redesign Policy



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The Task: How to Portray Data on Cohort Attainment?

Pattern	Popularity	No Attainment	HS Attainment	2 Year Attainment	4 Year Attainment	2 Year Enrollment Efficiency	4 Year Enrollment Efficiency	2 Year Credit Efficiency	4 Year Credit Efficiency
H	46.8%	42.9%	57.1%						
H4	21.5%	3.3%	30.7%	0.3%	65.8%	1.4	1.1	1.0	1.0
H2	17.8%	19.8%	66.0%	14.1%	0.1%	1.1		0.8	
H24	7.1%	3.4%	27.3%	15.2%	54.1%	1.8	1.2	1.4	1.1
H42	2.2%	4.9%	64.0%	18.0%	13.1%	1.5	1.2	1.1	1.0
H424	2.0%	1.3%	32.1%	10.8%	55.9%	2.1	1.3	1.7	1.1
H242	0.9%	6.3%	57.6%	16.4%	19.8%	2.2	1.3	1.7	1.1
H2424	0.9%	3.3%	26.0%	15.5%	55.1%	2.9	1.4	2.3	1.1
H42424	0.2%	1.0%	40.8%	5.1%	53.1%	2.8	1.4	2.1	1.1
H4242	0.2%	5.4%	66.2%	6.8%	21.6%	1.8	1.3	1.1	1.0
H242424	0.1%	1.7%	30.0%	10.0%	58.3%	3.4	1.4	2.4	1.1
H24242	0.1%	2.1%	51.1%	23.4%	23.4%	2.7	1.3	1.8	1.0
H4242424	0.0%	0.0%	52.9%	5.9%	41.2%	4.1	1.3	2.6	0.9
H424242	0.0%	0.0%	77.8%	22.2%	0.0%	3.0		2.1	
H24242424	0.0%	0.0%	50.0%	0.0%	50.0%		1.5		1.3
H2424242	0.0%	0.0%	25.0%	0.0%	75.0%		1.6		1.1
H42424242	0.0%	0.0%	0.0%	0.0%	100.0%		1.2		0.8
H424242424	0.0%	0.0%	0.0%	0.0%	100.0%		1.6		
H2424242424	0.0%	0.0%	0.0%	100.0%	0.0%	3.8		2.9	
All		24.7%	50.2%	4.7%	20.4%	1.5	1.2	1.1	

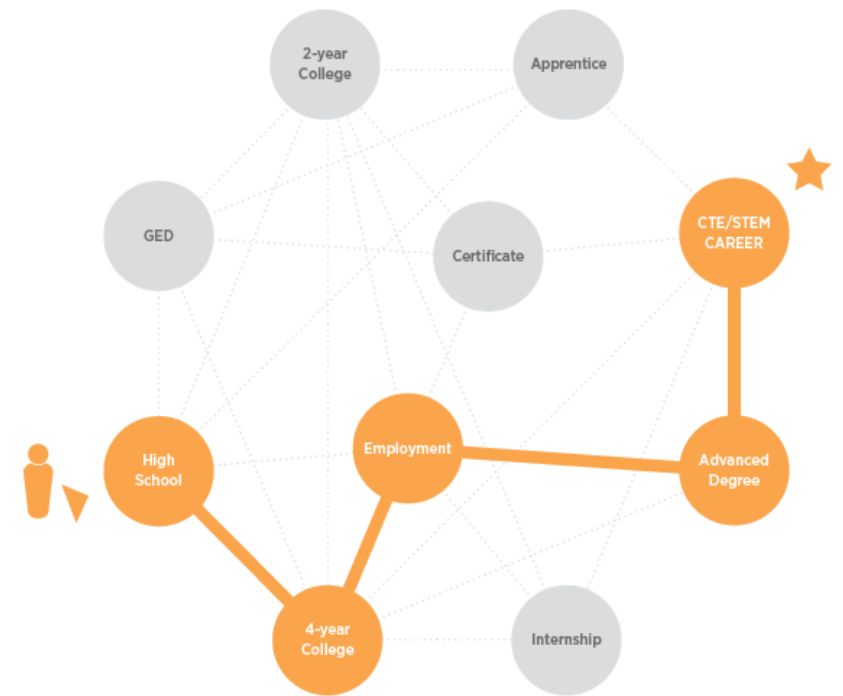
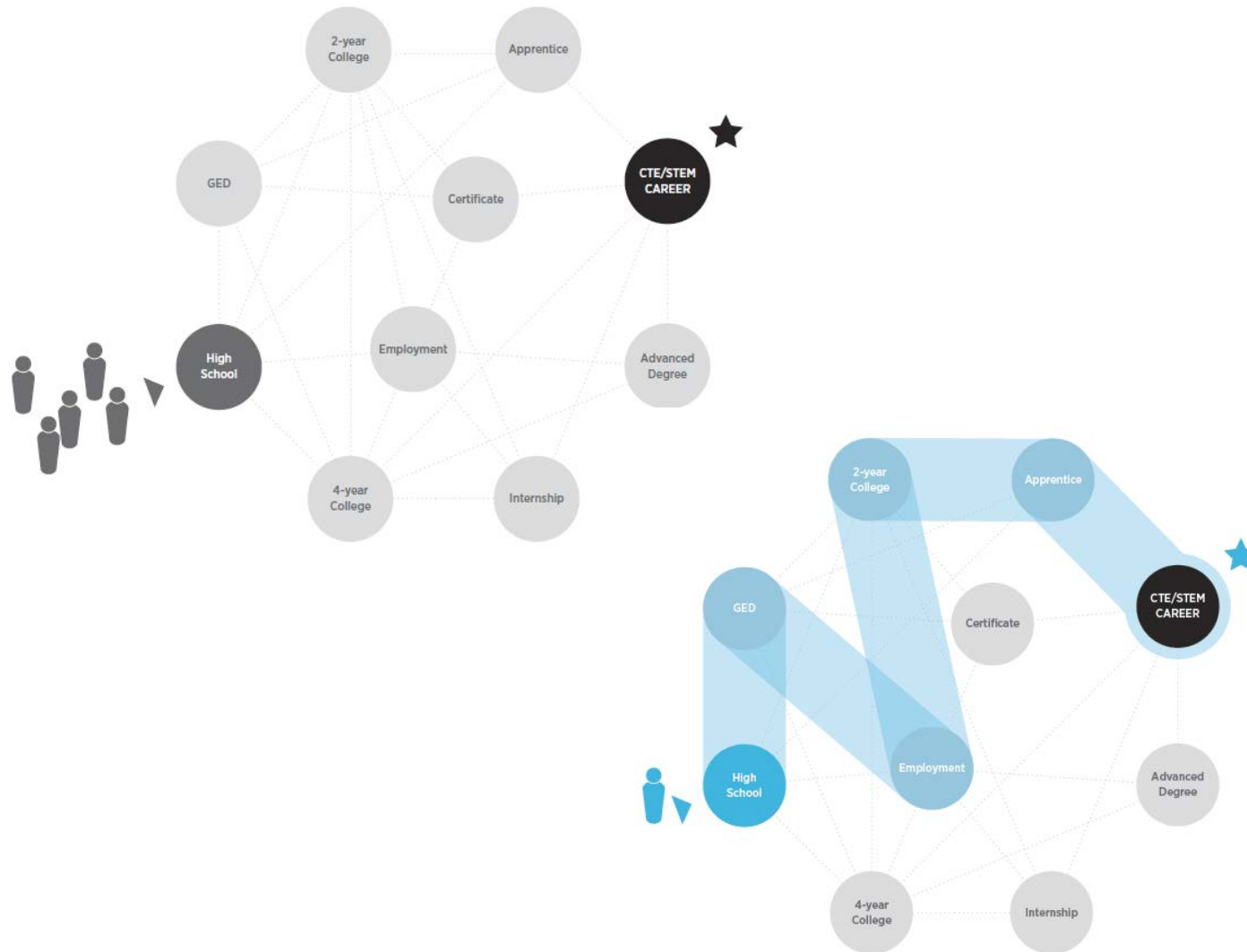
The Ingredients

- Longitudinal data system
- Access
- Data mining capability

The Team

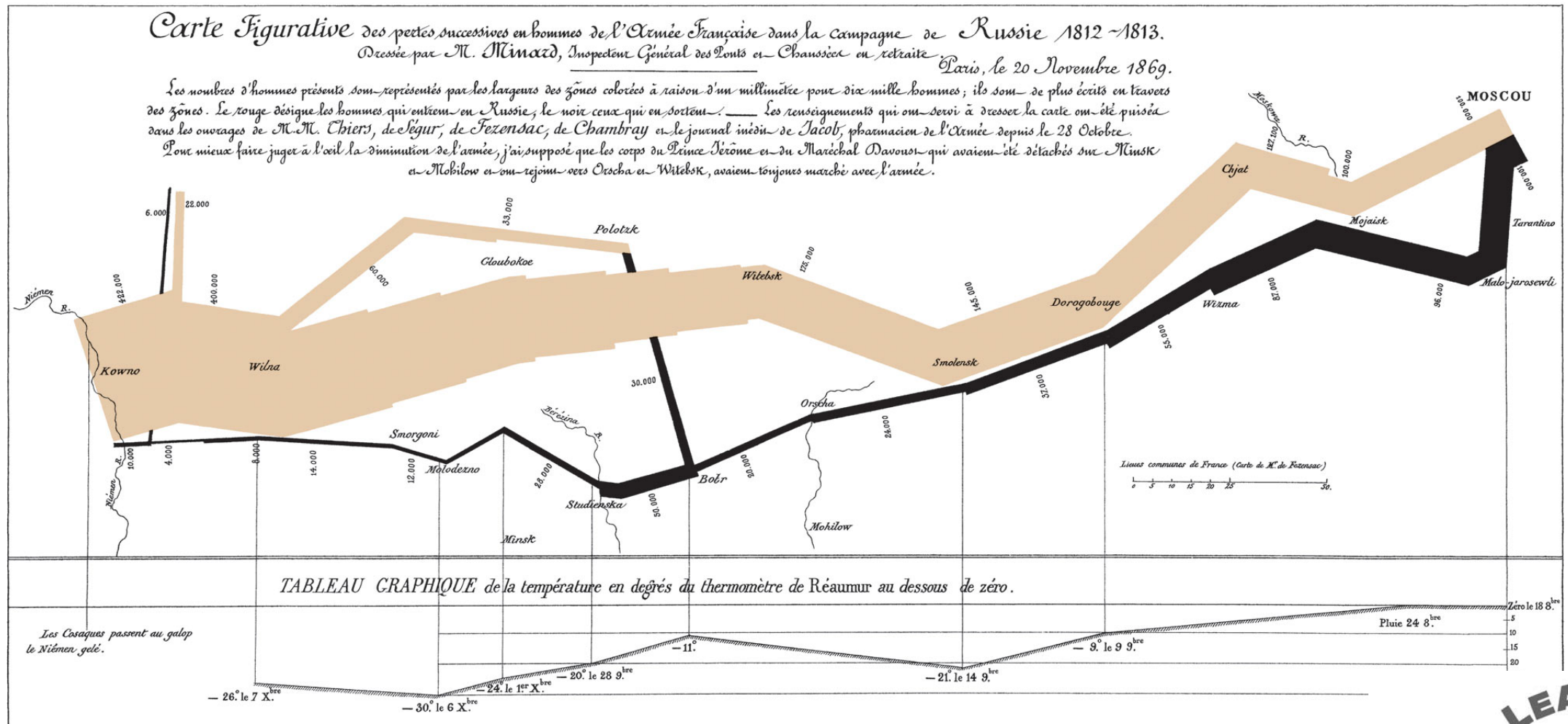
- Economist/data analyst
- Data visualization designer
- Writer/editor
- Policy specialist

Some Initial Stumbling Around

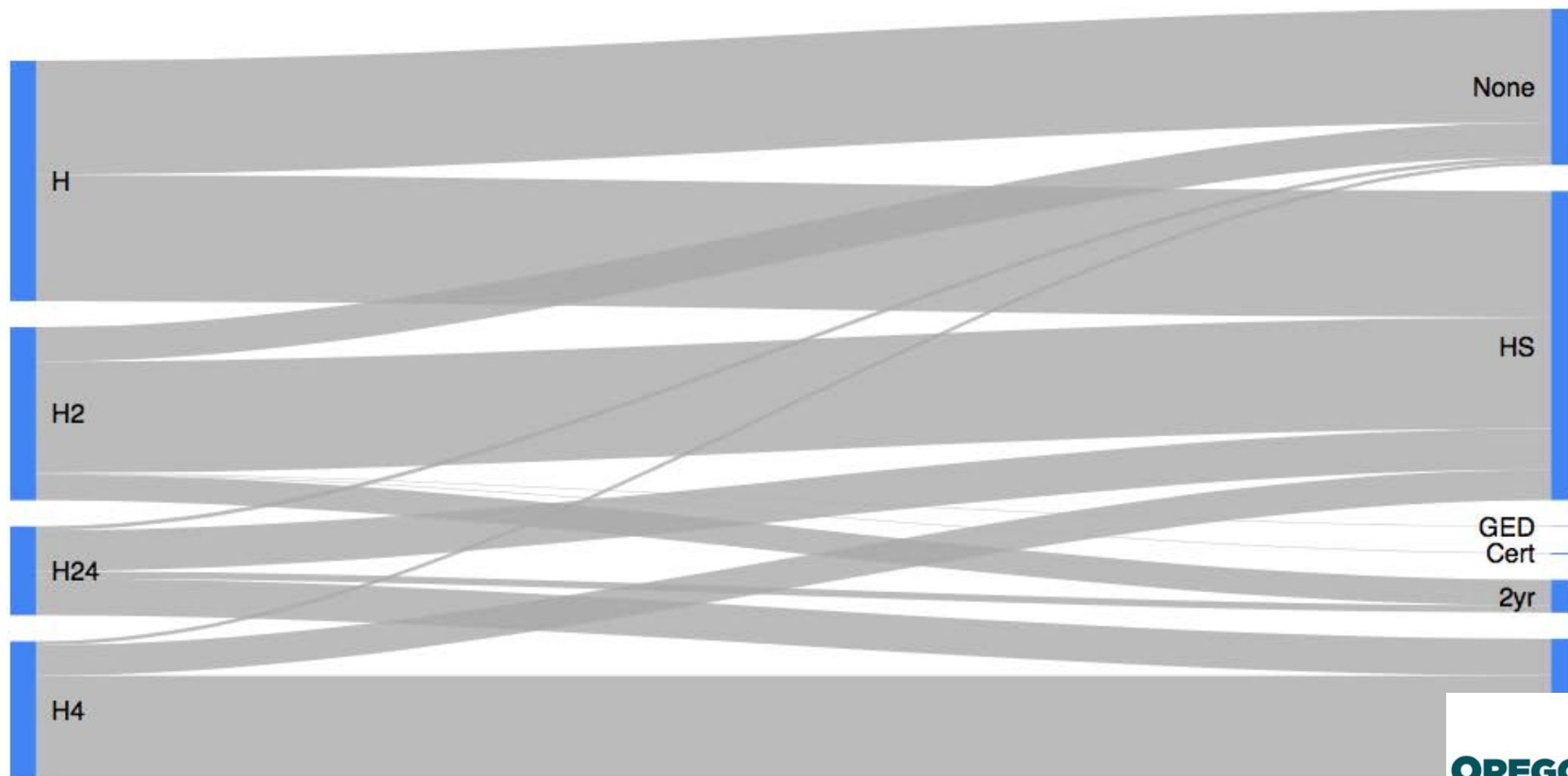


Sankey Chart Inspiration – Charles Minard's 1869 Map of Napoleon's 1812 Russia Campaign

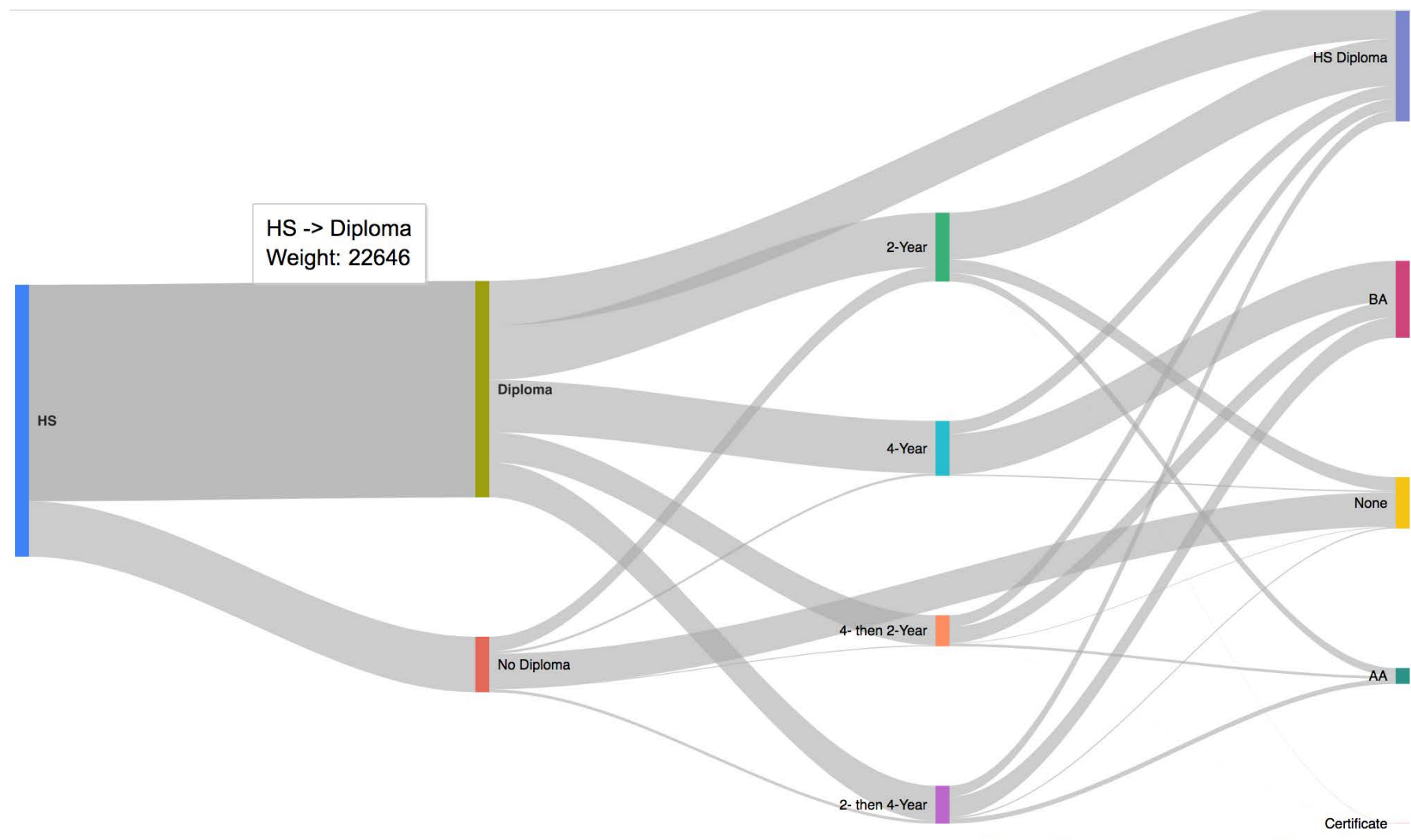
(From 400,000 soldiers to fewer than 10,000)



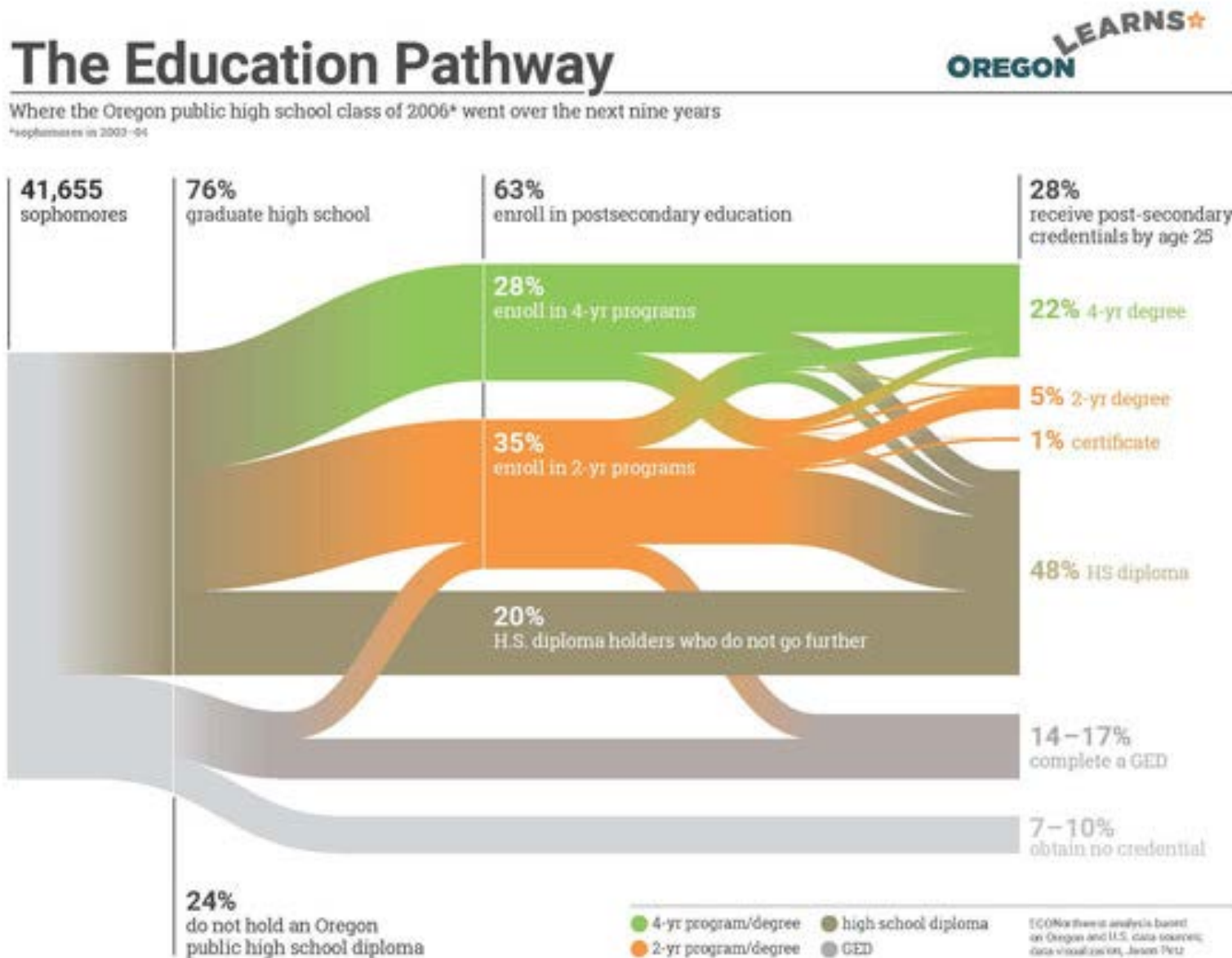
The Economist's Sankey, First Take



The Economist's Sankey, Second Take



The Data Visualization Designer's Product



That Triggered Requests for Disaggregation of Data From Secondary and Postsecondary Officials

- By high school
- By school district
- By student gender
- By student family income (FRL)
- By student ethnicity

Step 1: Custom Drawn Disaggregation

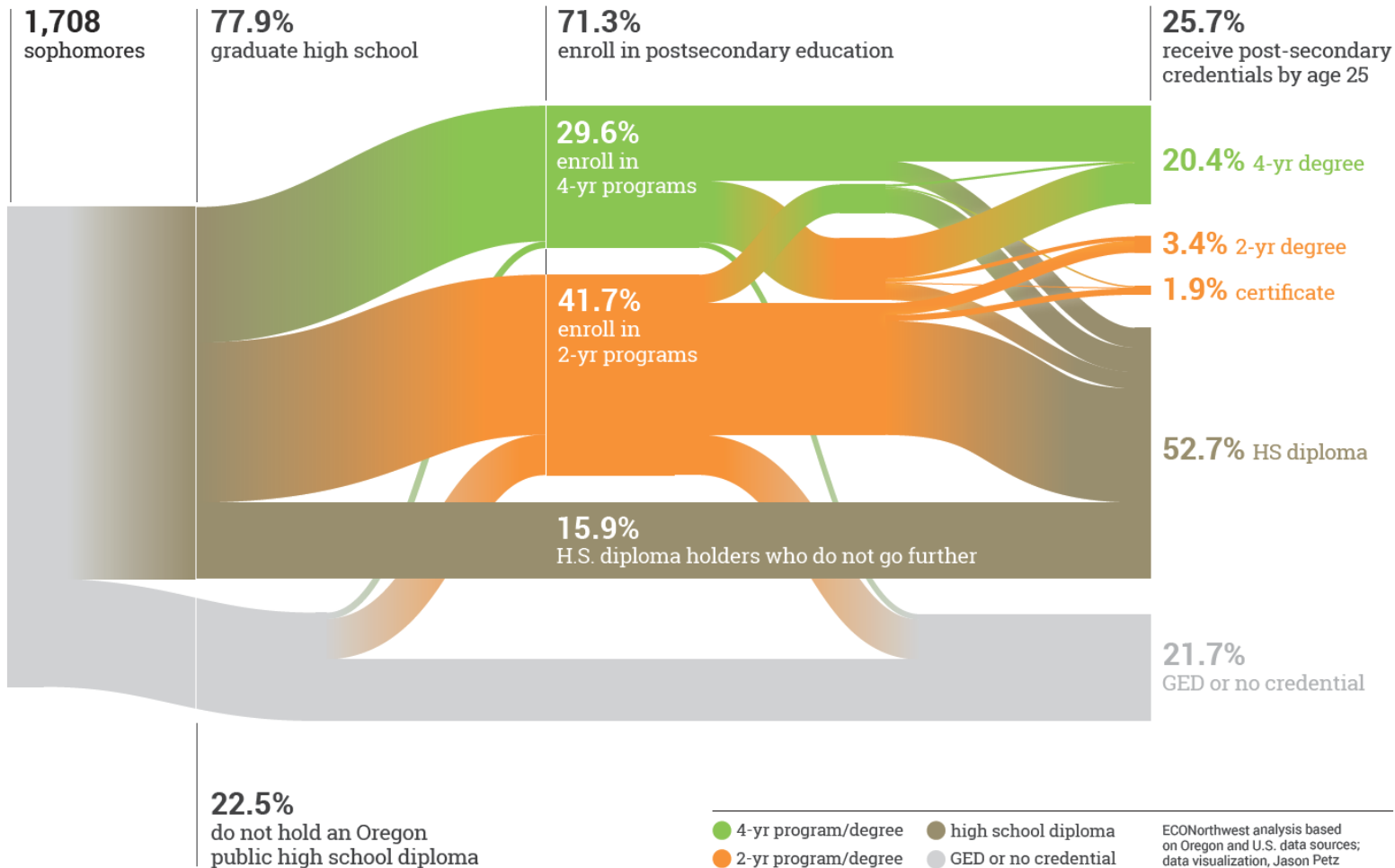
E.g., Linn-Benton CC Feeder High Schools

The Education Pathway

LINN-BENTON COMMUNITY COLLEGE

Where the Oregon public high school class of 2006* went over the next nine years

*sophomores in 2003-04



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ECONorthwest analysis based on Oregon and U.S. data sources; data visualization, Jason Petz
To learn more: oregonlearns.org

E.g., Multnomah County High Schools

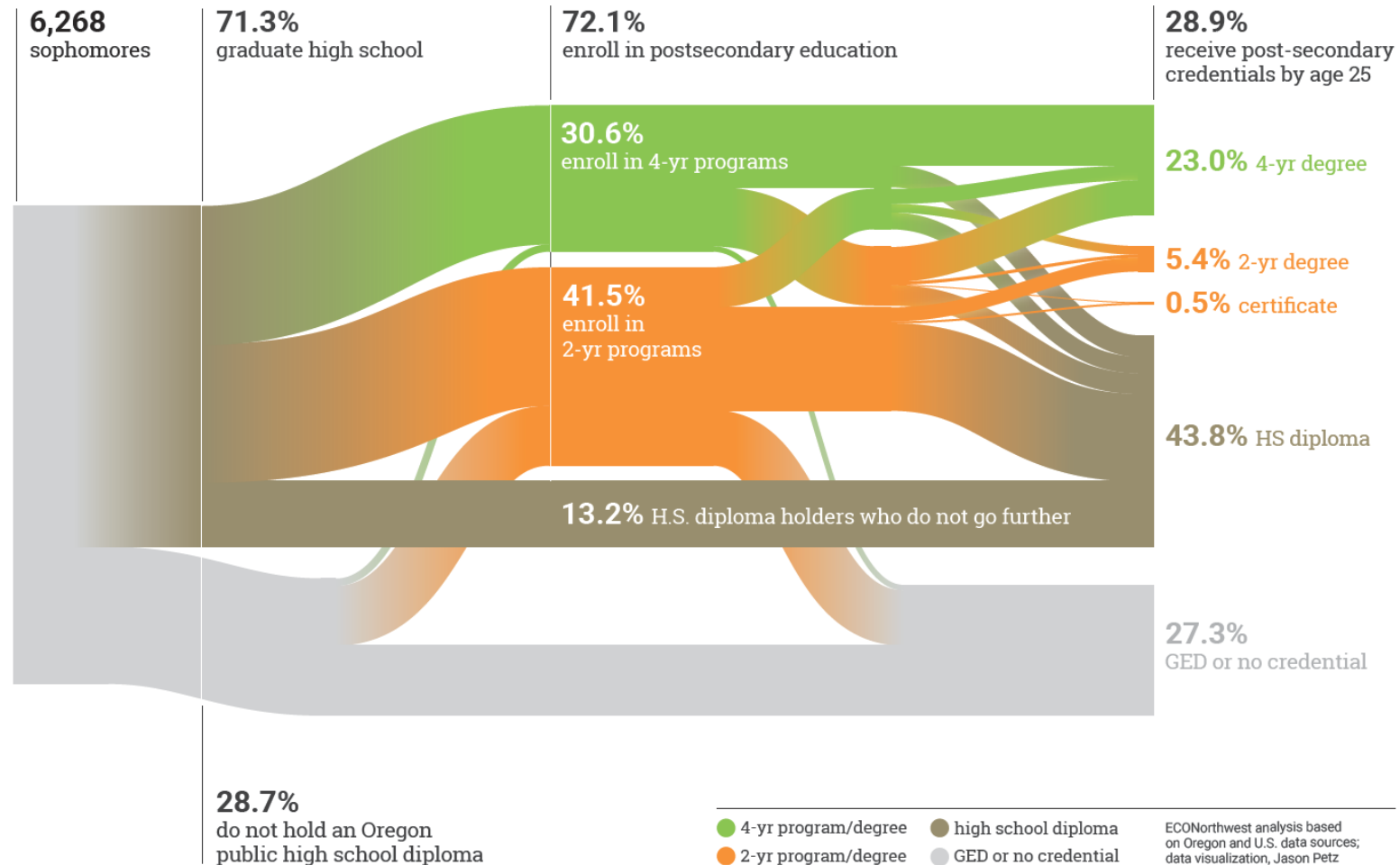
The Education Pathway



MULTNOMAH COUNTY HIGH SCHOOL STUDENTS (excluding Corbett and Riverdale)

Where the Oregon public high school class of 2006* went over the next nine years

*sophomores in 2003-04



ECONorthwest analysis based on Oregon and U.S. data sources; data visualization, Jason Petz
To learn more: oregonlearns.org

Step 2: The Interactive Tool

www.oregonlearns.org

The Education Pathway

Where students in the public high school class of 2006* went by age 25

*Sophomores in 2003-04

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Gender *

All

Ethnicity *

All

Income Level *

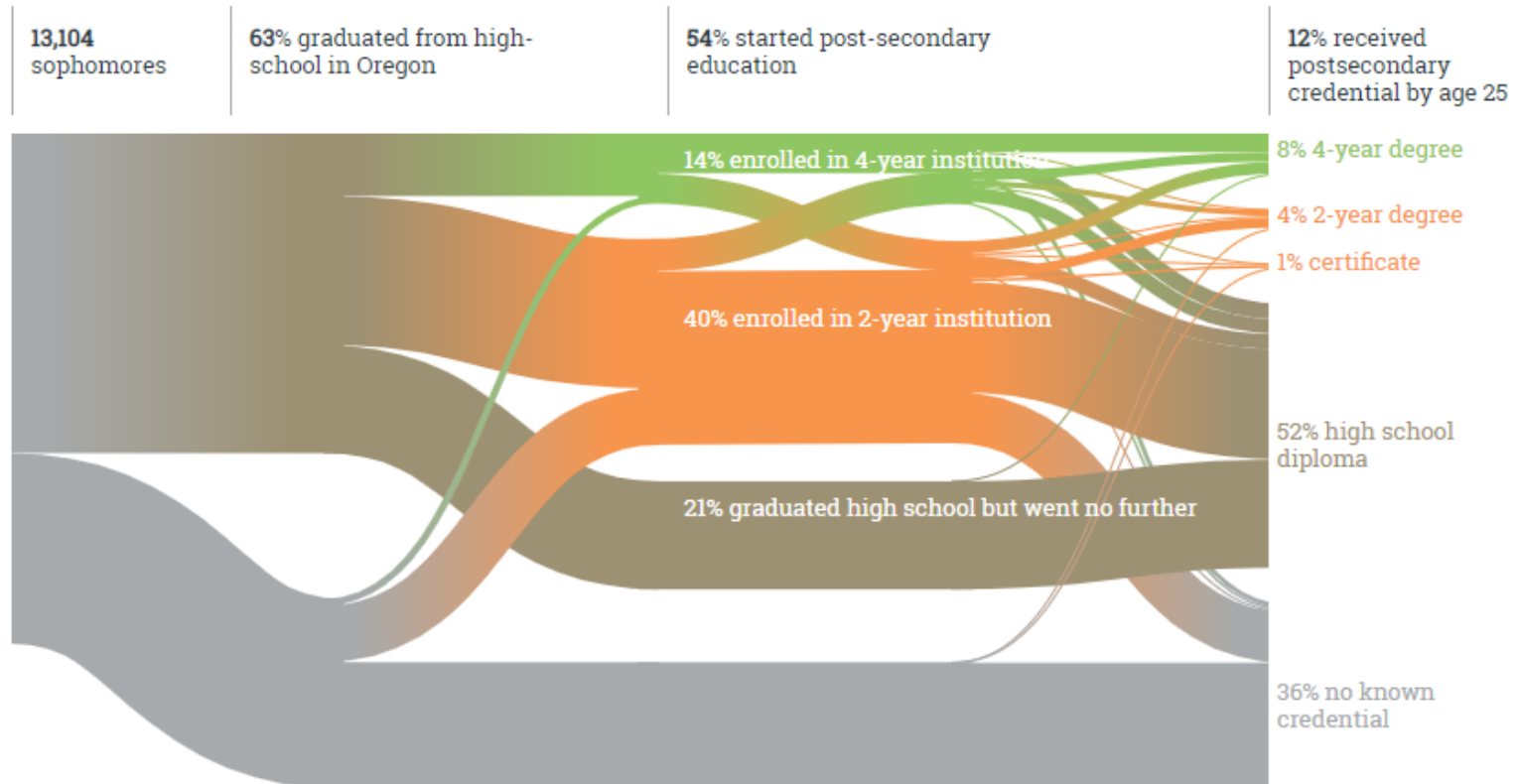
Low Income

School District

All

High School

All



Full
Cohort,
Low
Income

The Education Pathway

Where students in the public high school class of 2006* went by age 25

*Sophomores in 2003-04

</>



Gender *

All

Ethnicity *

All

Income Level *

Non-Low Incom

School District

All

High School

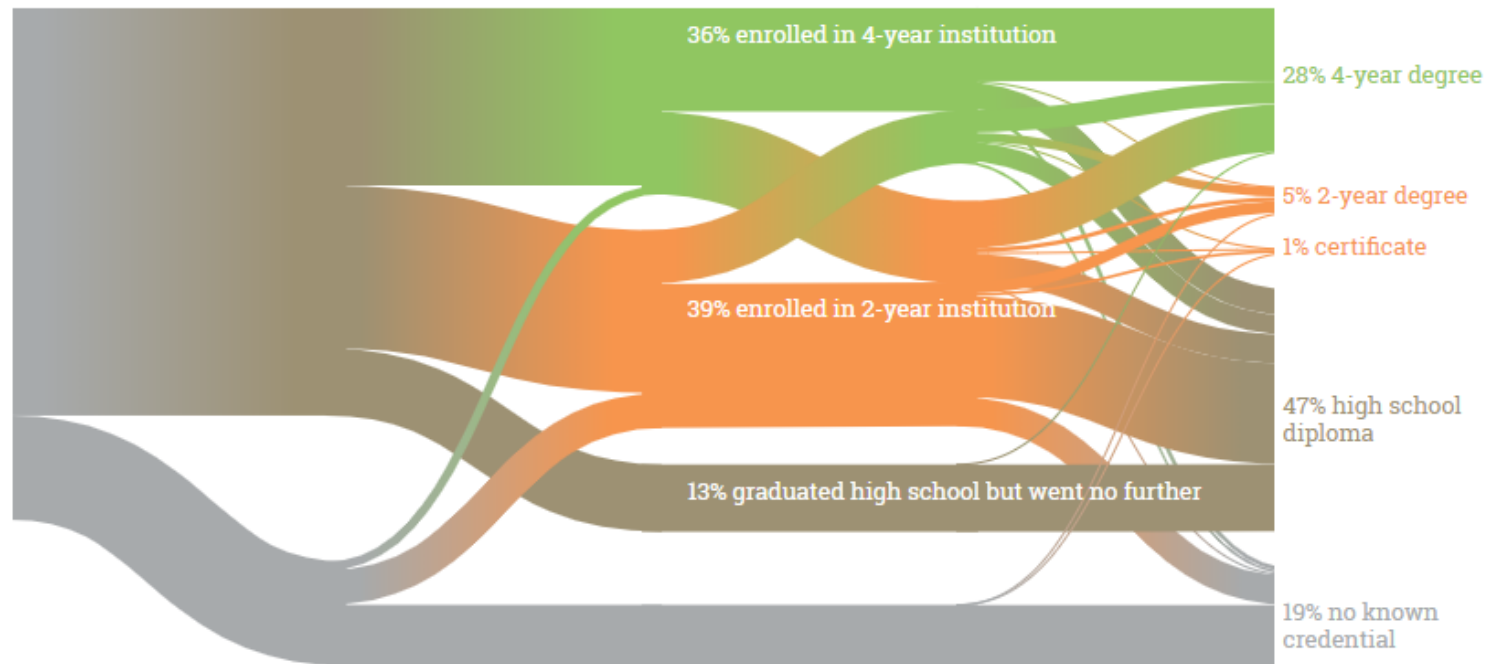
All

28,440
sophomores

80% graduated from high-
school in Oregon

75% started post-secondary
education

34% received
postsecondary
credential by age 25



4-year degree

high school diploma

2-year degree

no known credential

Full
Cohort,
Non
Low
Income

The Education Pathway

Where students in the public high school class of 2006* went by age 25

</>



*Sophomores in 2003-04

Gender *

All

Ethnicity *

Latino

Income Level *

All

School District

All

High School

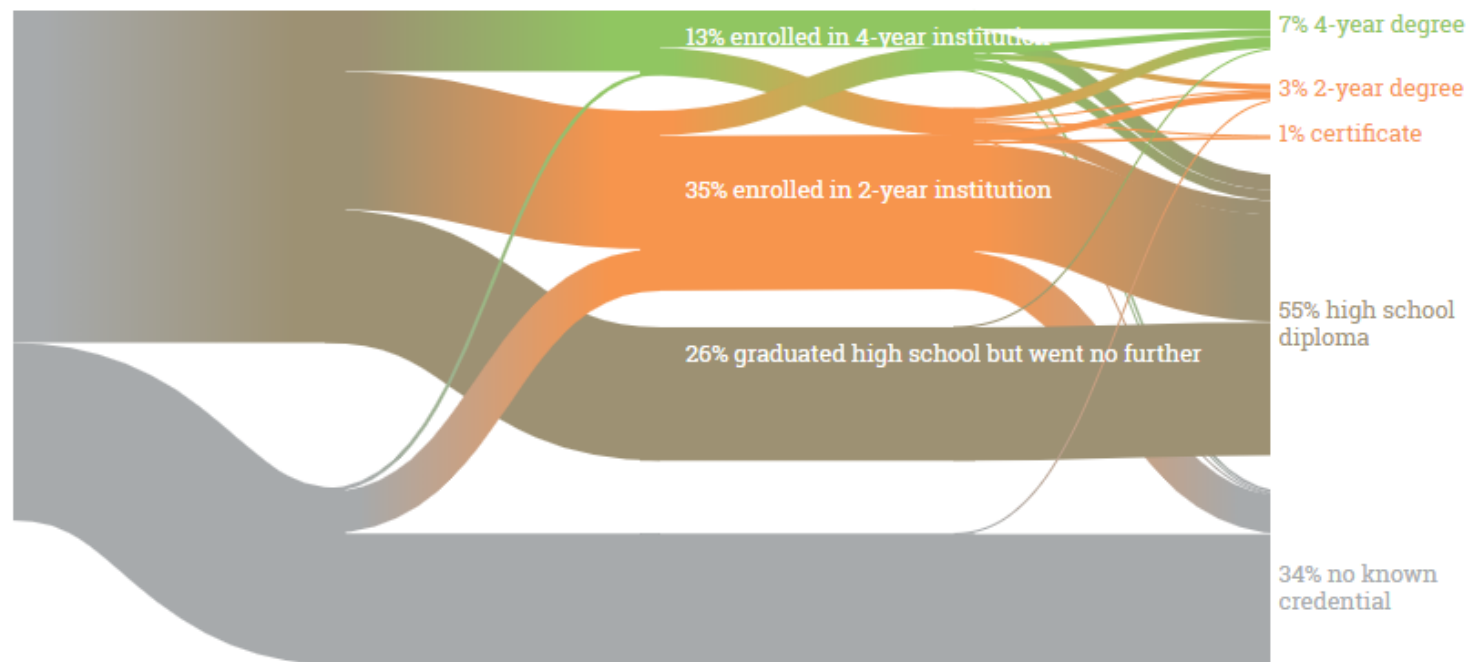
All

4,197
sophomores

65% graduated from high-
school in Oregon

48% started post-secondary
education

11% received
postsecondary
credential by age 25



4-year degree

high school diploma

2-year degree

no known credential

Full
Cohort,
Latino

The Education Pathway

Where students in the public high school class of 2006* went by age 25

*Sophomores in 2003-04

</>



Gender *

All

Ethnicity *

White

Income Level *

All

School District

All

High School

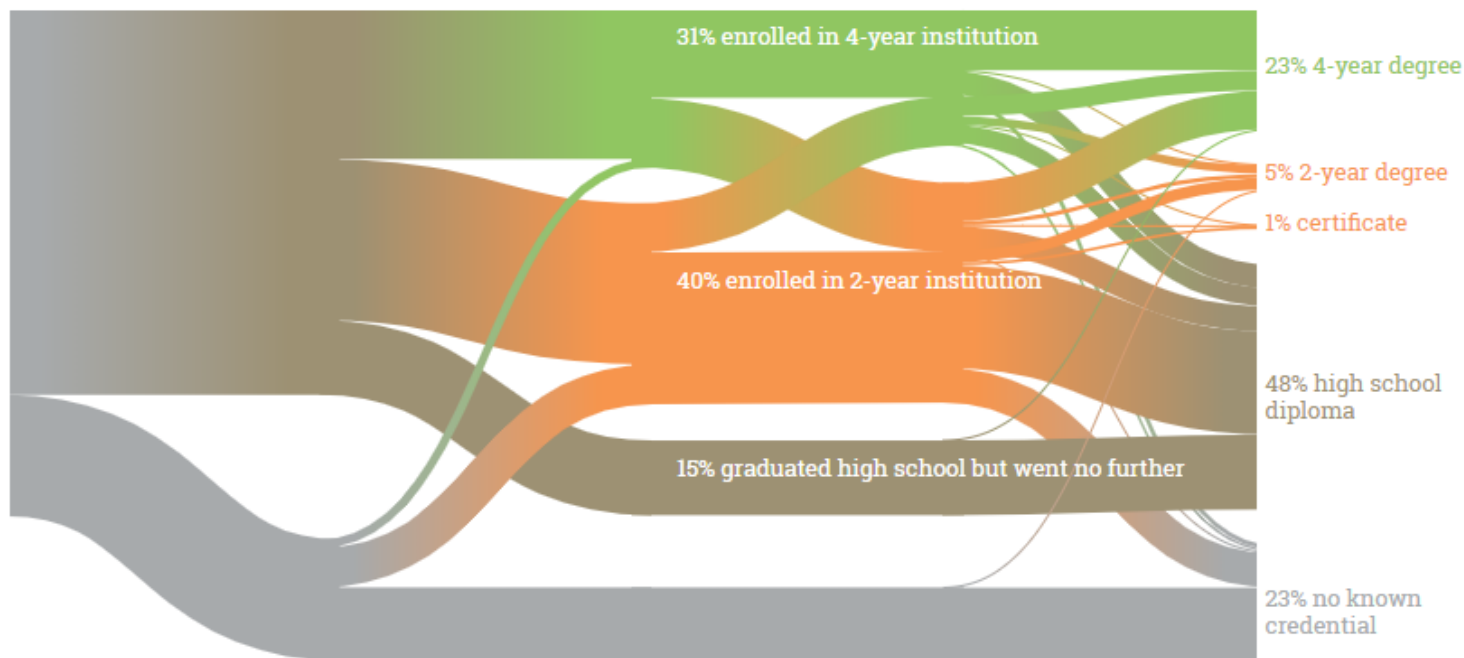
All

32,653
sophomores

76% graduated from high-
school in Oregon

71% started post-secondary
education

29% received
postsecondary
credential by age 25



4-year degree

high school diploma

2-year degree

no known credential

Full
Cohort,
White

The Education Pathway

Where students in the public high school class of 2006* went by age 25

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*Sophomores in 2003-04

Gender *

All ▼

Ethnicity *

All ▼

Income Level *

All ▼

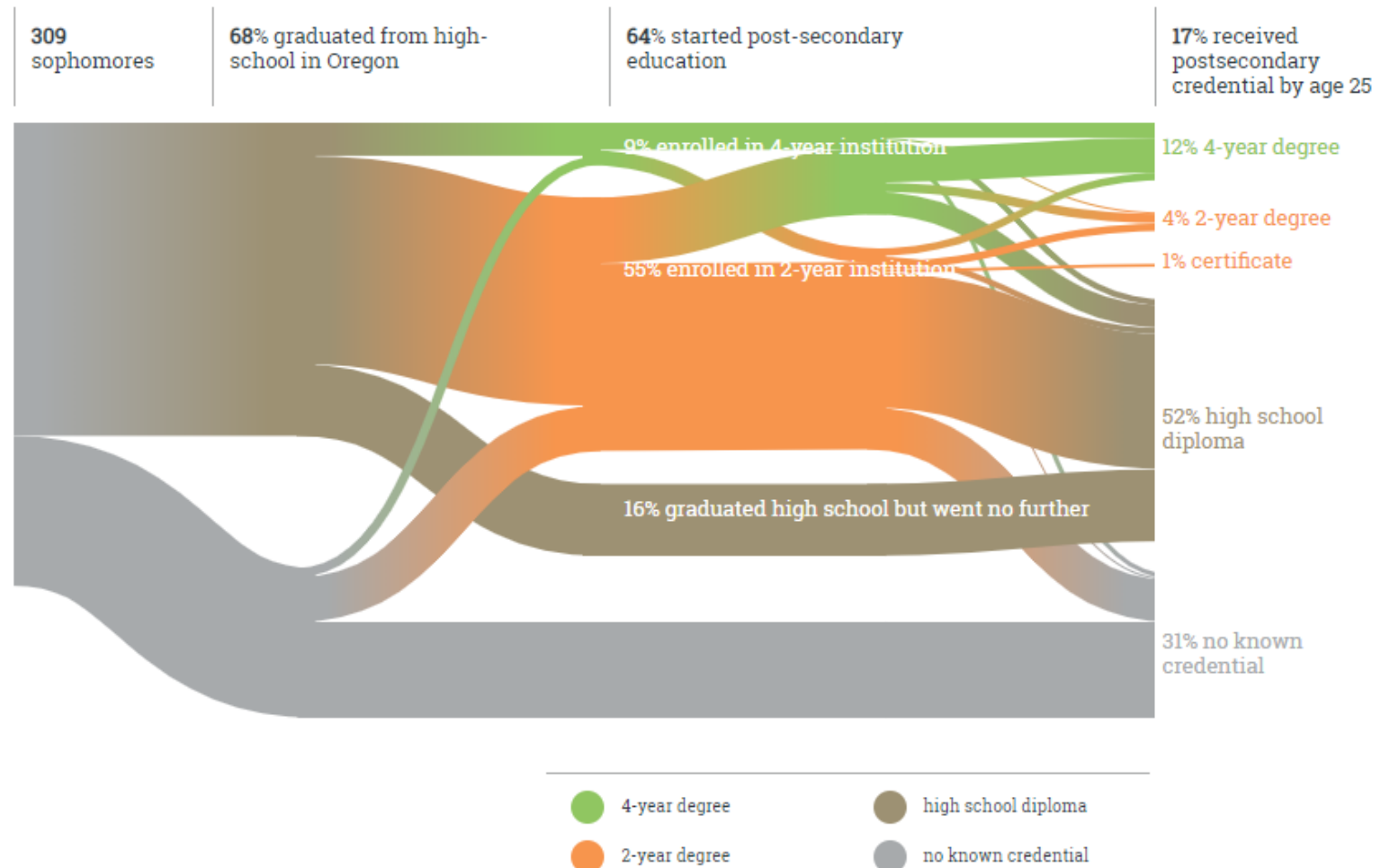
School District

Coos Bay SD 9 ▼

High School

All ▼

Coos Bay School District



The Education Pathway

Where students in the public high school class of 2006* went by age 25

</>



*Sophomores in 2003-04

Gender *

All ▼

Ethnicity *

All ▼

Income Level *

All ▼

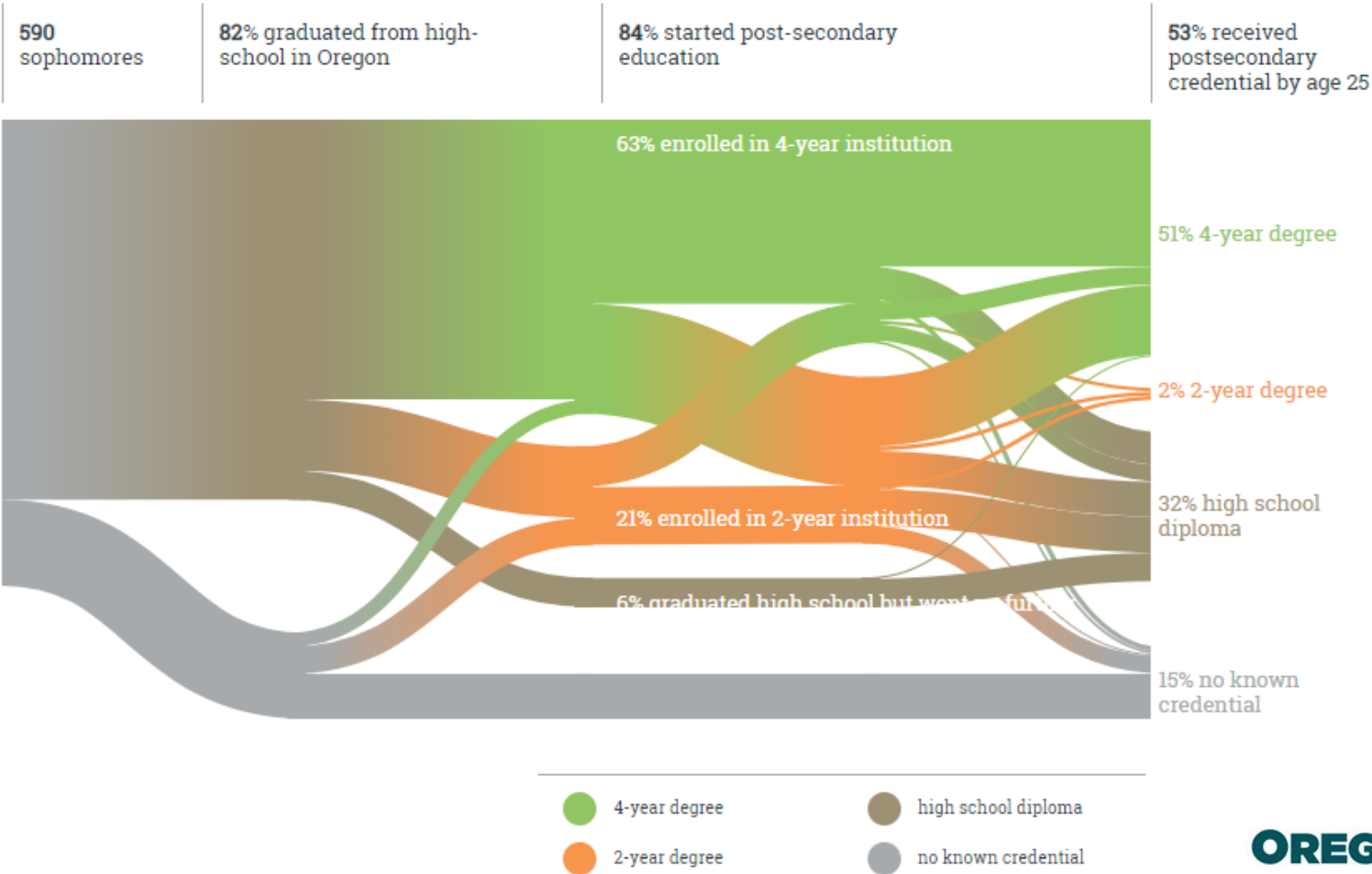
School District

Lake Oswego SE ▼

High School

All ▼

Lake
Oswego
School
District



Part 4: The Impact

Within Oregon, Significant Policy Leverage on Attainment

- Community college shift in focus from enrollment to completion
- Outcome payments to universities for completion improvement (overall and targeted)

Beyond Oregon, Recognition and Discussion

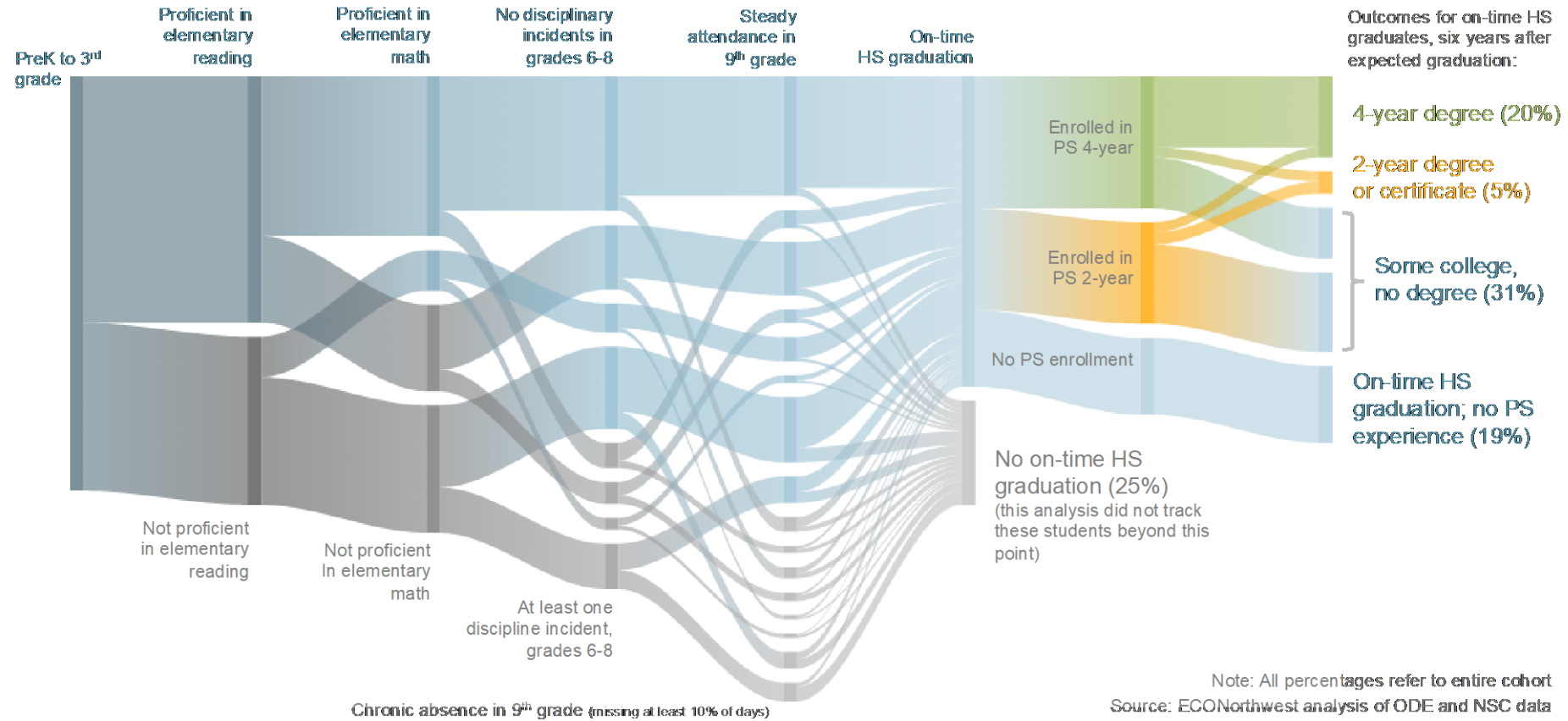
- Among education thinkers
- Among foundations
- This conference

Part 5: Tremendous Upside

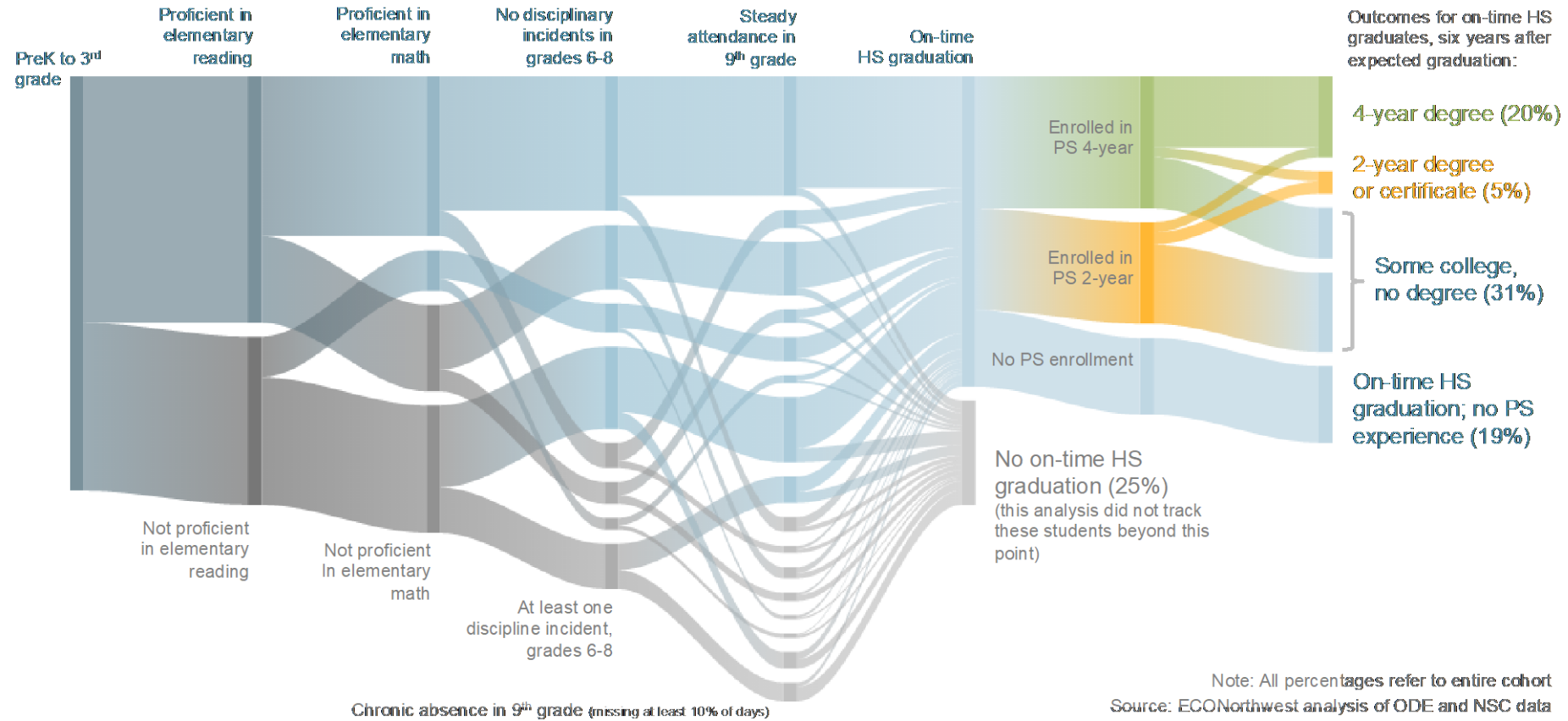
There's More We'd Like to Do With this Tool

- Build out a look at the full continuum, P20+
- Do deeper dives on schools, cohorts, and sub cohorts
- Add cohorts to detect change and progress
 - What's working well
 - What isn't
 - Opportunities

Understanding, Affecting the Whole Continuum



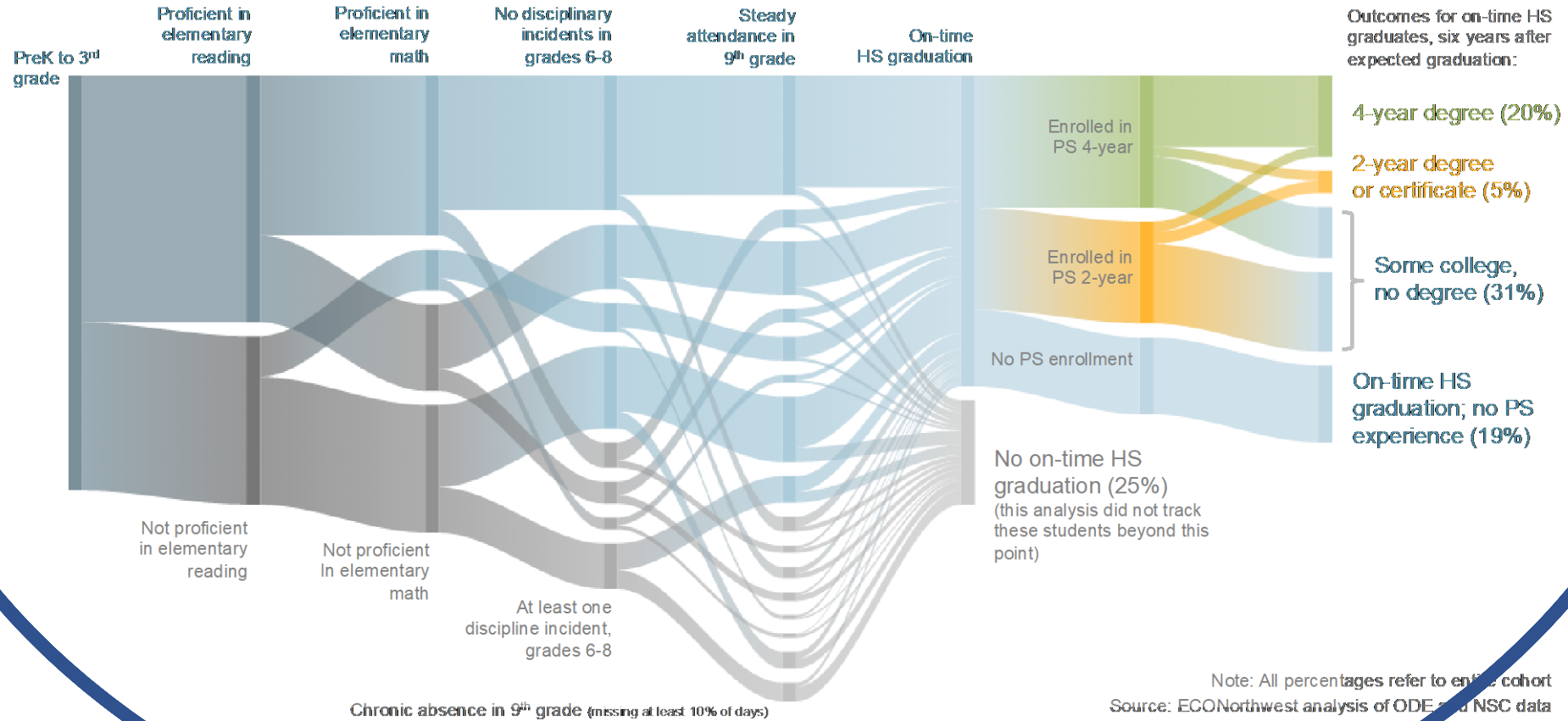
Employment, Income & Families



- Employment
- Income
- Families

The Generational Loop

- Planned births
- Healthy babies
- Supportive & supported families



- Employment
- Income
- Families

Thank you!



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