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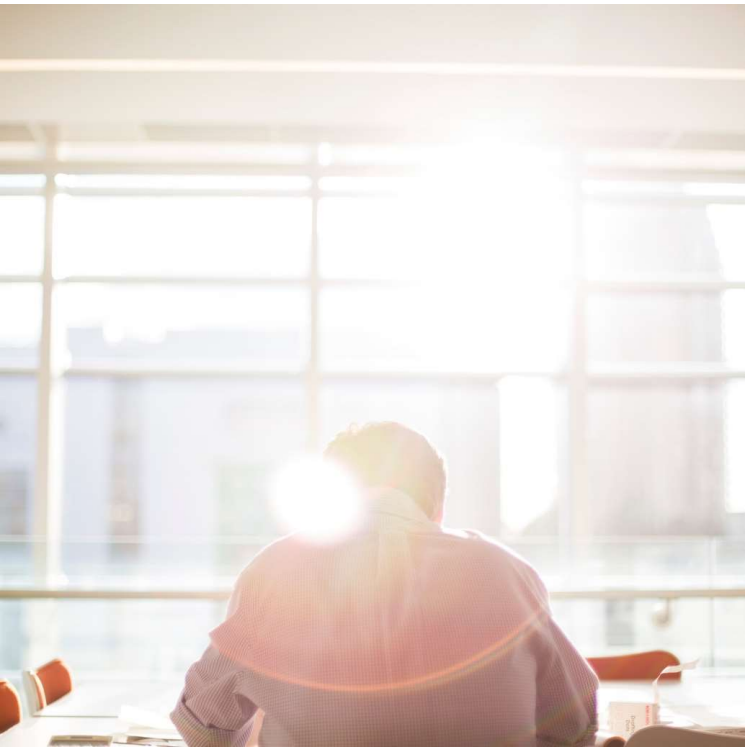
Modern Youth Apprenticeship



Recruiting, hiring & training costs Colorado businesses $24K+ per employee

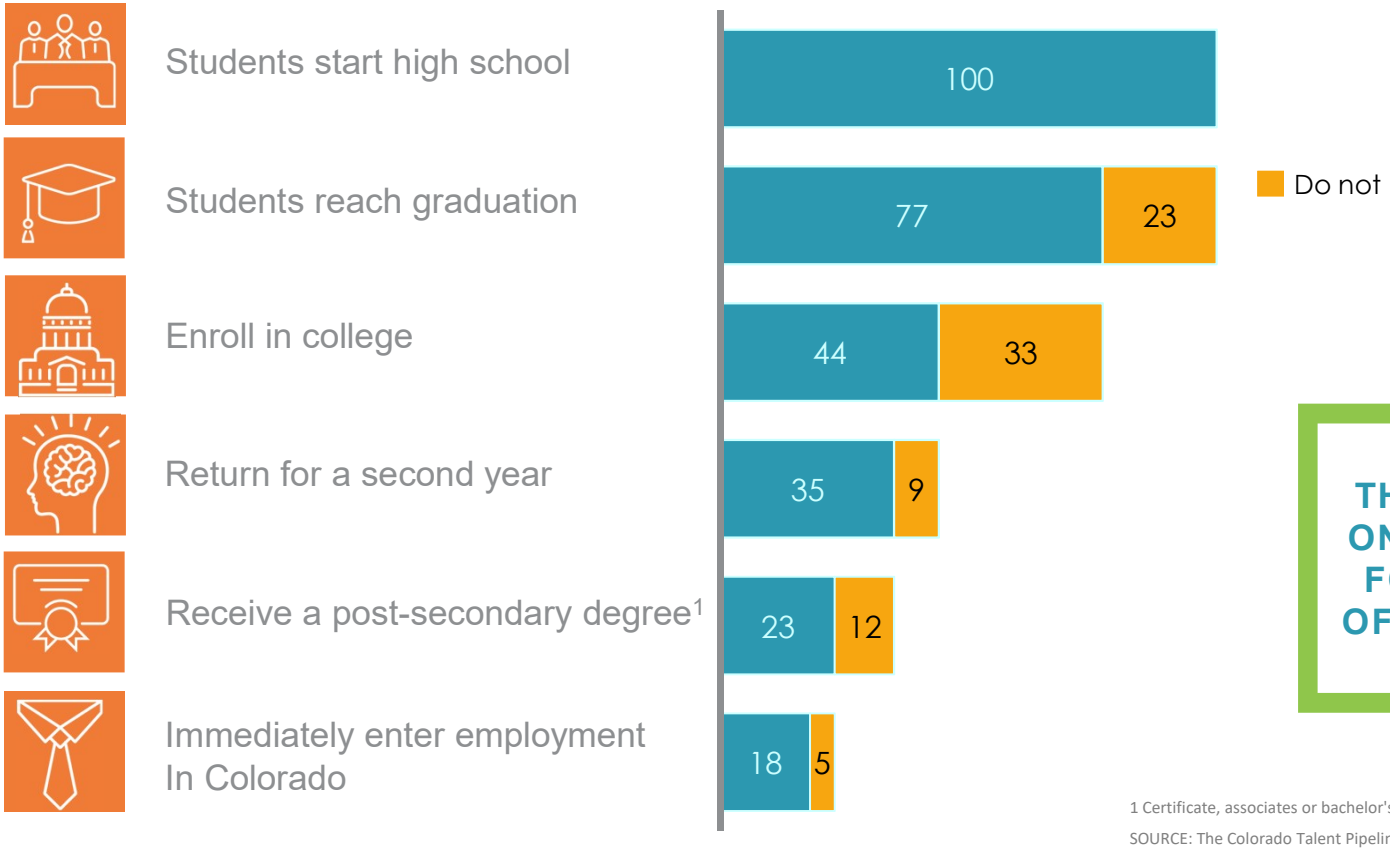
Middle-skilled positions take 15% longer to fill in Colorado compared to the national average[1]

RECRUITING EMPLOYEES

An estimated 25,000 weekly job vacancies in high-growth industries go unfilled because of a LACK OF SKILLED WORKERS, costing the state more than $300 million in lost GDP[2]

1 Burning Glass Technologies, Interim Deliverable, "Overview of Colorado's Middle-Skill Job Market"; Colorado
2 CPR.org, "Colorado Unveils $9.5M Youth Apprenticeship Program", September 2016

COLORADO'S EDUCATION SYSTEM



THE SYSTEM ONLY WORKS FOR 18-23% OF STUDENTS

1 Certificate, associates or bachelor's degree within 150% of allotted time

SOURCE: The Colorado Talent Pipeline Report 2015

Consider the Gallup Hope Index

The Gallup measure of hope has three components:

- The degree to which a person has goals
- A person's level of self determination
- A person's belief that there are multiple pathways to achieve their goals

The component most often missing when a person does not have hope is the belief that there are multiple pathways to achieve their goals.

When we show students one pathway, and that pathway is only working for 23% of students, we deprive 77% of our students of hope for their future.

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"Why America Must Create an Educonomy" Presentation by Brandon Busteed, Gallup, 2/5/16 Denver, Colorado

BRIDGING THE GAP BETWEEN EDUCATION & CAREER

CareerWise Colorado connects industry and education to create a statewide, modern youth-apprenticeship system.

Apprentices earn a wage while gaining valuable workplace experience, a nationally recognized industry certification and debt-free college credit.

APPRENTICE

Industry benefits from tangible financial ROI as it makes the shift from being consumers of talent to producers of talent.

BUSINESS

EDUCATION

K-12 and higher education institutions improve student outcomes with increased student engagement and attendance, graduation rates and college-credit attainment.

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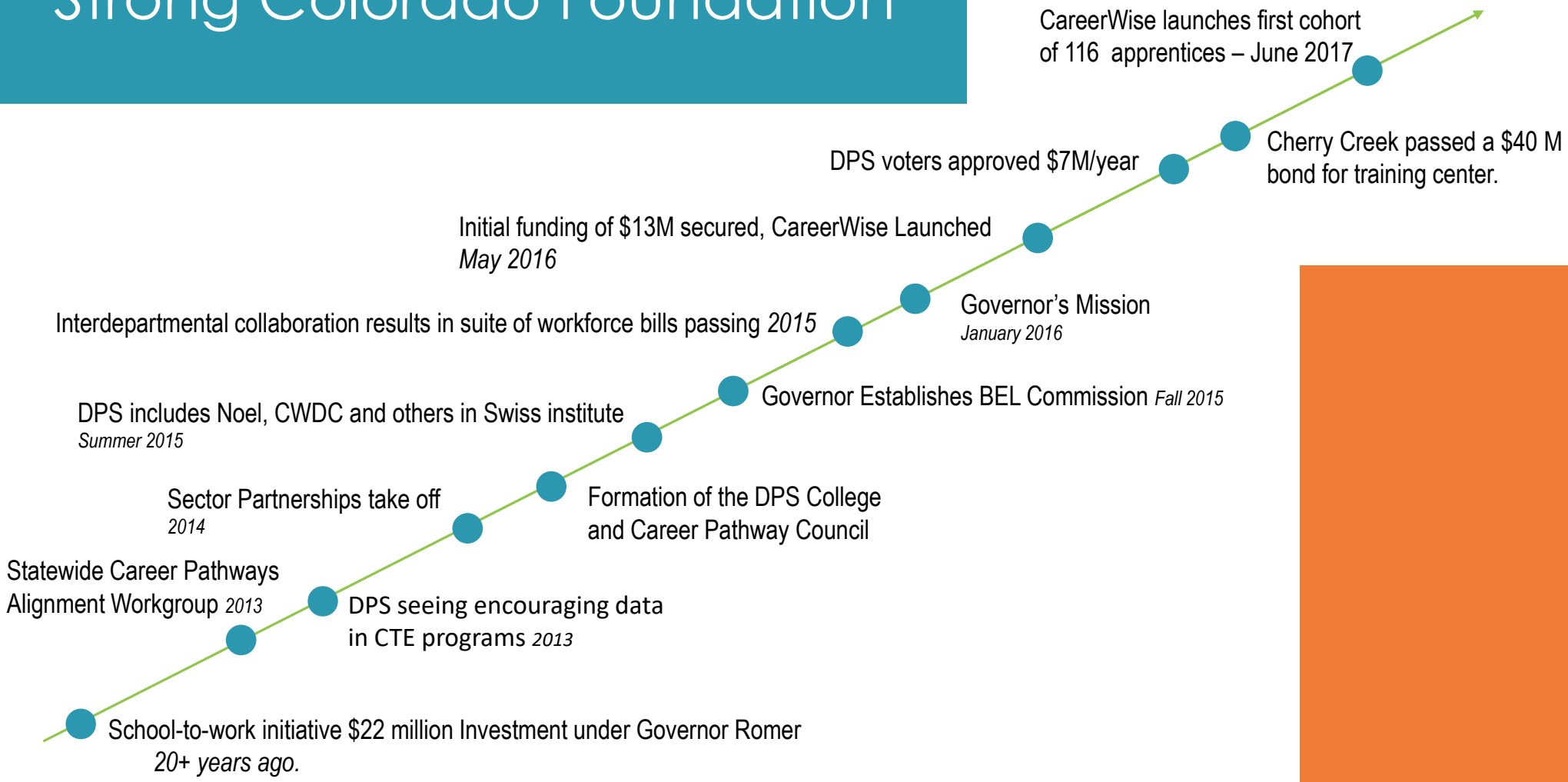
Strong Colorado Foundation



Current and Future Enabling Policy

Current

Blending public funding
- Concurrent Enrollment
- Ptech
- Early College
- ASCENT

Creating Higher Education Permeability
- Guaranteed Transfer (GT) Courses

Policies that Enable Alignment and Efficiency
- Competency-based graduation
- Competency-based learning
- Competency-based work at community colleges

Future

- **Removing seat time from school funding formula**
- **Apprenticeship-specific ASCENT Fund**
- **Expansion of GT courses**
- **Redefinition of Endorsed Diploma**

PUBLIC PRIVATE PARTNERSHIP

COLORADO Department of Education

COLORADO Department of Higher Education

COLORADO Department of Labor and Employment

COLORADO Office of Economic Development & International Trade

the BEL Commission
Business Experiential Learning Commission

Colorado Workforce Development Council

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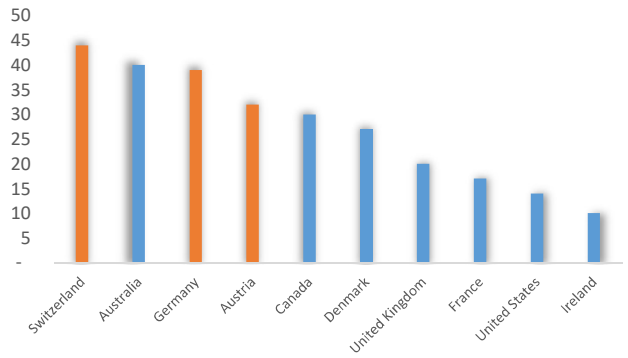
Learning from outside CO and US

Systems with the best outcomes are highly structured as systems and built on a foundation of youth apprenticeship

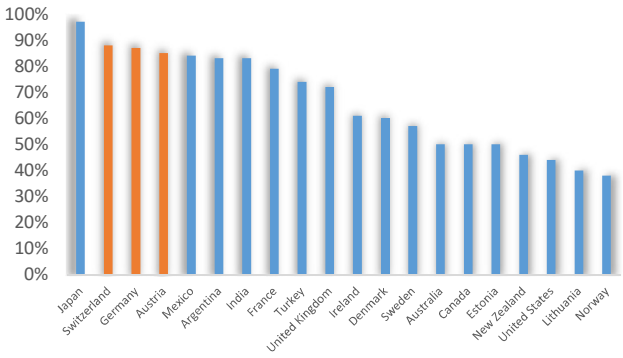
…the highest participation in apprenticeships

Apprentices per 1,000 People Employed by Country



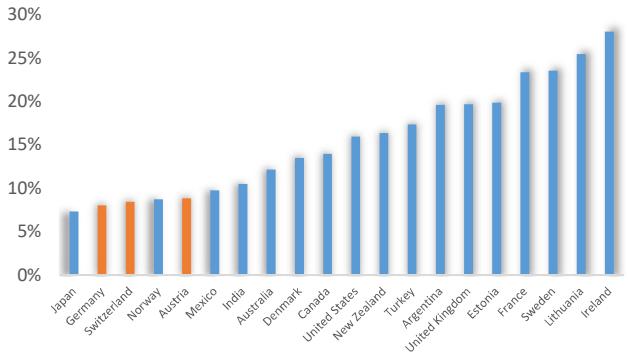
…highest apprenticeship completion rates

Apprenticeship Completion Rates by Country



…and the lowest youth unemployment

Youth Unemployment by Country



Switzerland, Germany, and Austria highlighted in orange

Source: World Bank; Country Response via OECD 2014; Overview Of Apprenticeship Systems And Issues, Nov 2012

Income Inequality

The Gini coefficient is based on the comparison of cumulative proportions of the population against cumulative proportions of income they receive, and it ranges between 0 in the case of perfect equality and 1 in the case of perfect inequality.

Switzerland	United States
.297	.394

https://data.oecd.org/inequality/income-inequality.htm#indicator-chart
2014 data – most recent available

Poverty Rate

The poverty rate is the ratio of the number of people whose income falls below the poverty line; taken as half the median household income of the total population

Switzerland	United States
9.9%	17.5%

https://data.oecd.org/inequality/poverty-rate.htm#indicator-chart
2014 data – most recent available

What should we replicate?

Values	Business Driven and Student Centered
Incentives	What are the naturally existing selfish reasons for all parties to participate

The Swiss system works because it aligns with shared values and facilitates a perpetual balancing and rebalancing of the the natural needs and wants of all participating stakeholders.

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As a non-governmental, non-profit intermediary we are testing and refining the apprenticeship design parameters to maximize value for each stakeholder and a sustained system.

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BUSINESS

Design Parameters	Alignment with Natural Incentives
• State-wide business-identified occupational pathways • State-wide business –identified competencies per pathway	• Concrete mechanism they can use to drive alignment between industry needs, training centers and companies
• Living wage earning potential • College credits • High school credit for work experience	• Attracts wide range of talent, maybe more diverse than their current pool
• 3 year apprenticeship duration	• Ensures positive ROI
• Company paid wages	• Encourages supervisors to push for high-skill work • Contributes to loyalty
• Company paid training and certification exam(s)	• Gives companies decision making authority re: training providers

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APPRENTICE

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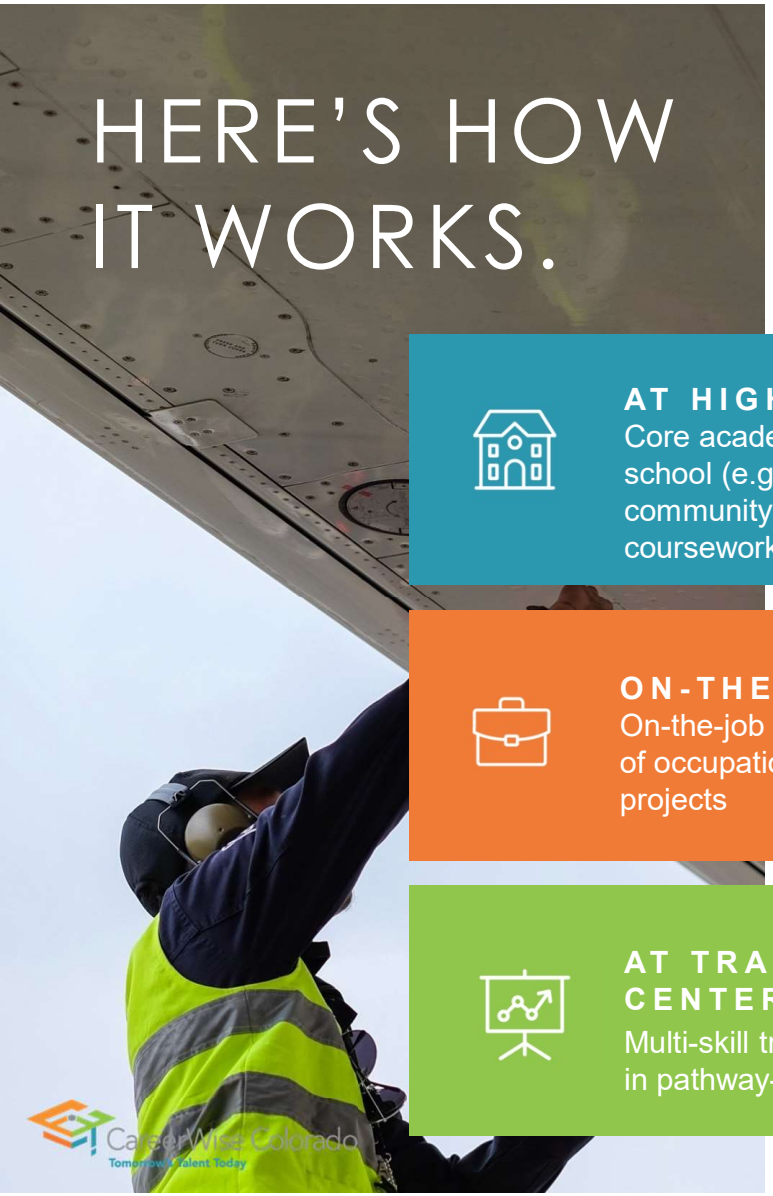

HERE'S HOW IT WORKS.

CAREERWISE APPRENTICES SPLIT TIME BETWEEN SCHOOL, TRAINING CENTERS, AND WORK ON A SCHEDULE THAT WORKS FOR STUDENTS AND BUSINESSES

	YEAR 1	YEAR 2	YEAR 3
AT HIGH SCHOOL Core academic courses at school (e.g., math), some community college coursework	~3 days a week	~2 days a week	NA
ON-THE-JOB On-the-job training, in form of occupation, rotation or projects	16 hours a week	24 hours a week	32-40 hours a week
AT TRAINING CENTER Multi-skill training curriculum in pathway-specific skills	~150 hours a year	~175 hours a year	~200 hours a year

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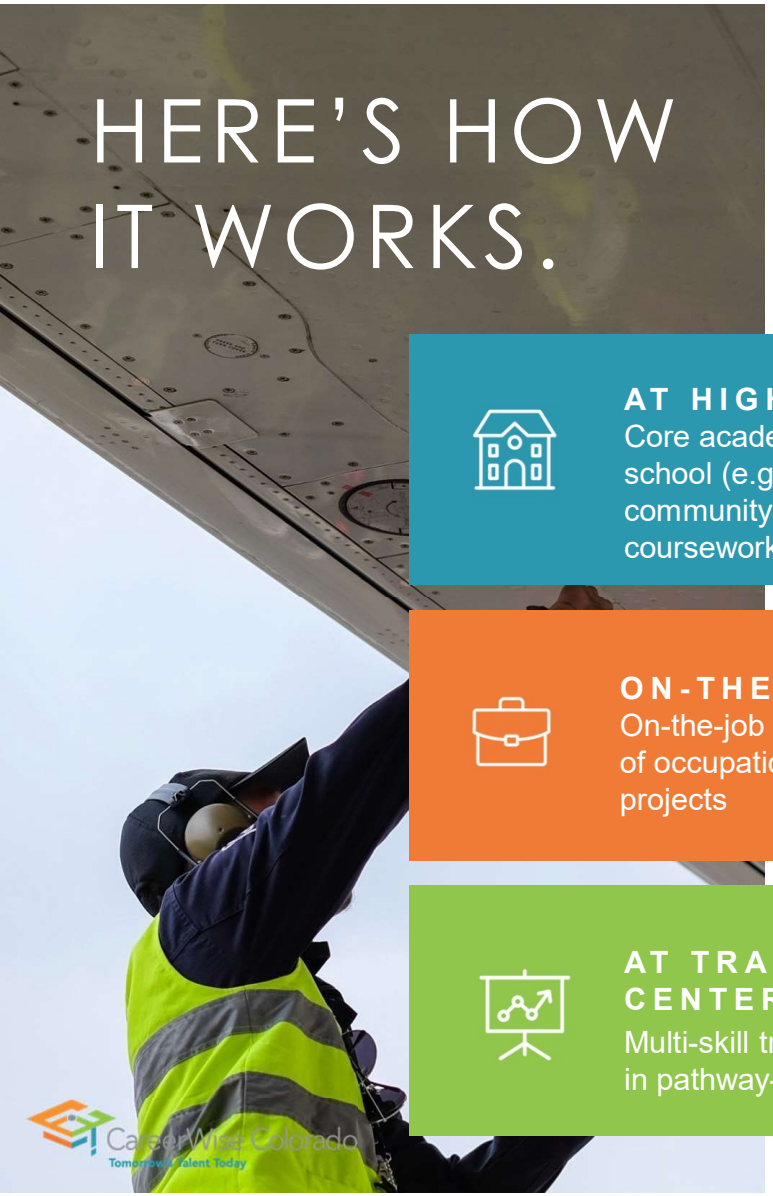

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AT TRAINING CENTER
Multi-skill training curriculum in pathway-specific skills

AT THE END OF THEIR APPRENTICESHIP

- High school diploma
- One or more professional credentials or certifications
- 30+ debt-free college credits
- $25-30K of accumulated pay
- Living wage earning potential
- Another 1-2 semesters of technical credits

AFTER APPRENTICESHIP

	YEAR 1	YEAR 2	YEAR 3
AT HIGH SCHOOL Core academic courses at school (e.g., math), some community college coursework	~3 days a week	~2 days a week	NA
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Student signs on as full-time

EMPLOYEE

OR BOTH!

Student continues

EDUCATION

with 2- or 4-year degree

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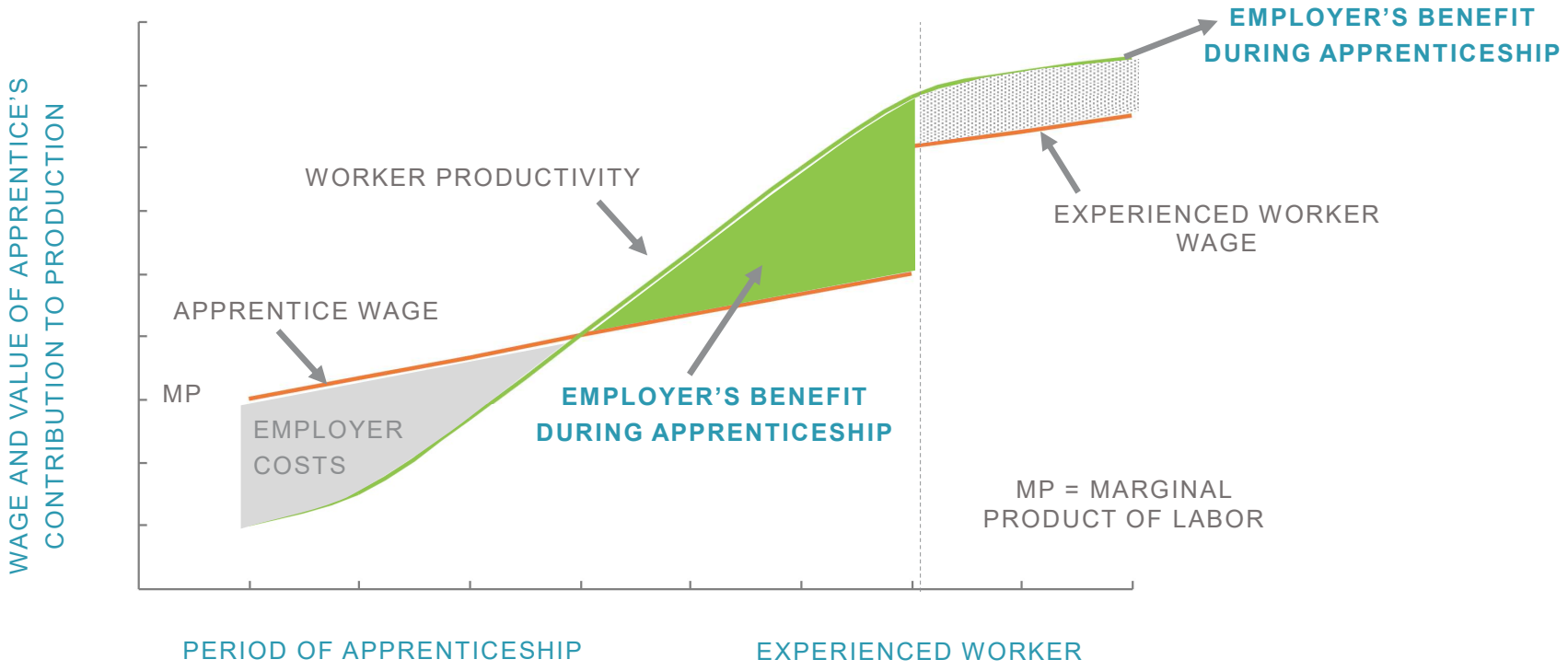
COMPANIES ARE PROJECTED TO EARN

POSITIVE ROI

ON APPRENTICE WORK

Swiss firms saw an ROI of 10% during the training period, and additional ROI once apprentices became full-time employees[1]

PROJECTED WAGES & PRODUCTIVITY, RELATIVE TO STANDARD FTE



1 Wolter et al (2006)

Characteristics of Cohort 1 Companies

- Clear human capital pain point
- Retirement cliff coming
- Current staff not as diverse as current and projected client make up
- Believe growth of a talent pool will have long-term benefits in terms of cost and retention of talent
- Care about youth development

FIVE PRIMARY PATHWAYS

THESE STARTER PATHWAYS LEAD TO A VARIETY OF OCCUPATIONS

	ADVANCED MANUFACTURING	INFORMATION TECHNOLOGY	FINANCIAL SERVICES	BUSINESS OPERATIONS	HEALTHCARE
PRIMARY PATHWAY					
SAMPLE OCCUPATIONS	CNC machinist Electro-mechanical assembler Quality control inspector Maintenance technician	Computer Technician Software QA Tester Junior Coder	Accounting Clerk Insurance Services Expert Financial Coordinator Customer Support	Project Coordinator Purchasing Coordinator Operations Specialist	LAUNCHING FOR 2018/19 COHORT
SAMPLE BUS. PARTNERS	CoorsTek Amazing Solutions Intertech Plastics Nordson	DaVita University of Colorado Denver Arrow Intrawest Home Advisor	Pinnacol Assurance EKS&H Audit | Tax | Consulting Colavria Hospitality	Stonebridge DaVita Skillful Western States Fire Protection Co.	

Launch Stats

After months of complex systems innovation and business and student recruitment, CareerWise Colorado launched its inaugural class of modern youth-apprentices in June of 2017.

4 **PATHWAYS** Manufacturing, Technology, Business Operations & Financial Services

116 Youth APPRENTICES

40 Confirmed **EMPLOYERS**

1 Statewide Youth-Apprenticeship **MARKETPLACE**

10 Occupational **TRAINING** Plans

3 **COMMUNITIES** Front Range, Western Slope & Northern Colorado

4 **SCHOOL DISTRICTS** Cherry Creek, DPS, Jeffco and Mesa 51

2 **CHARTER SCHOOLS** STEM School & Academy, CEC Fort Collins

8 **HIGHER ED PARTNERS** Two-year and four-year

1 RECRUITING

2 TRAINING PLAN DEVELOPMENT

3 APPRENTICE TRAINING

4 EDUCATION LIAISON

5 EMPLOYER TRAINING

6 ONGOING PROGRAM SUPPORT

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SUPPORTS

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NEW COMMUNITIES READINESS

New CareerWise communities need active participation from:

- ✓ The business community, including local business-support organizations
- ✓ The education community, including K12 and higher education/training partners
- ✓ Community leadership interested in fostering a supportive ecosystem and infrastructure

Learn more

gretchen.morgan@CareerWiseColorado.org

www.CareerWiseColorado.org

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Reference Slides

COMMUNITY & GOVERNMENT

Design Parameters	Alignment with Natural Incentives
• State-wide business-identified occupational pathways • State-wide business –identified competencies per pathway	• Creates transferable value for youth who participate
• Require K-12 partners make concurrent enrollment contribution • Business fees to sustained system quality functions	• Prevents program from seeking/relying upon sustained additional public funding
• Require businesses to make additional training contribution	• Ensure adequate training while understanding limits of CE
• Unsubsidized apprentice wage	• Encourages access to high skill work during apprenticeship
• Make registering apprenticeship pathways easier for companies who are interested	• Support state in goals re: expansion of registered apprenticeships in a biz-centered way

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SUSTAINED QUALITY STATE-WIDE SYSTEM

Design Parameters	Alignment with Natural Incentives
• State-wide business-identified occupational pathways • State-wide business –identified competencies per pathway	• Contributes to system that will continuously pull parts of the system into alignment
• Package of outcomes for students	• Will bring more students into postsecondary skill development which is good for economic growth and costs of public assistance
• Package of outcomes for businesses	• Will bring more companies to Colorado, with further contributes to economic development
• Business participation fee	• Funds functions that help grow the system with sustained quality • Funds research system learning/evolution functions

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What should we replicate?

Values and Incentives:

Business Driven & Student Centered

COMMUNITY & GOVERNMENT

- Ensures education and training alignment
- A range of options for youth
- A system to ensure stability
- Ensures a strong start for all young people
- Creates business need to provide "sniffing" opportunities

APPRENTICE

- Expanded viable choices and pathways
- Independence
- Access to higher education
- Earn wages
- Professional Network
- A path to happy and successful young adult life

BUSINESS

- Cost-effective way to attract, develop and keep talent
- Productivity from paid employees
- Innovation in products and operations
- Positive ROI
- Ensures education and training alignment

The Swiss system works because it facilitates a perpetual balancing and rebalancing of the the natural needs and wants of all participating stakeholders.