

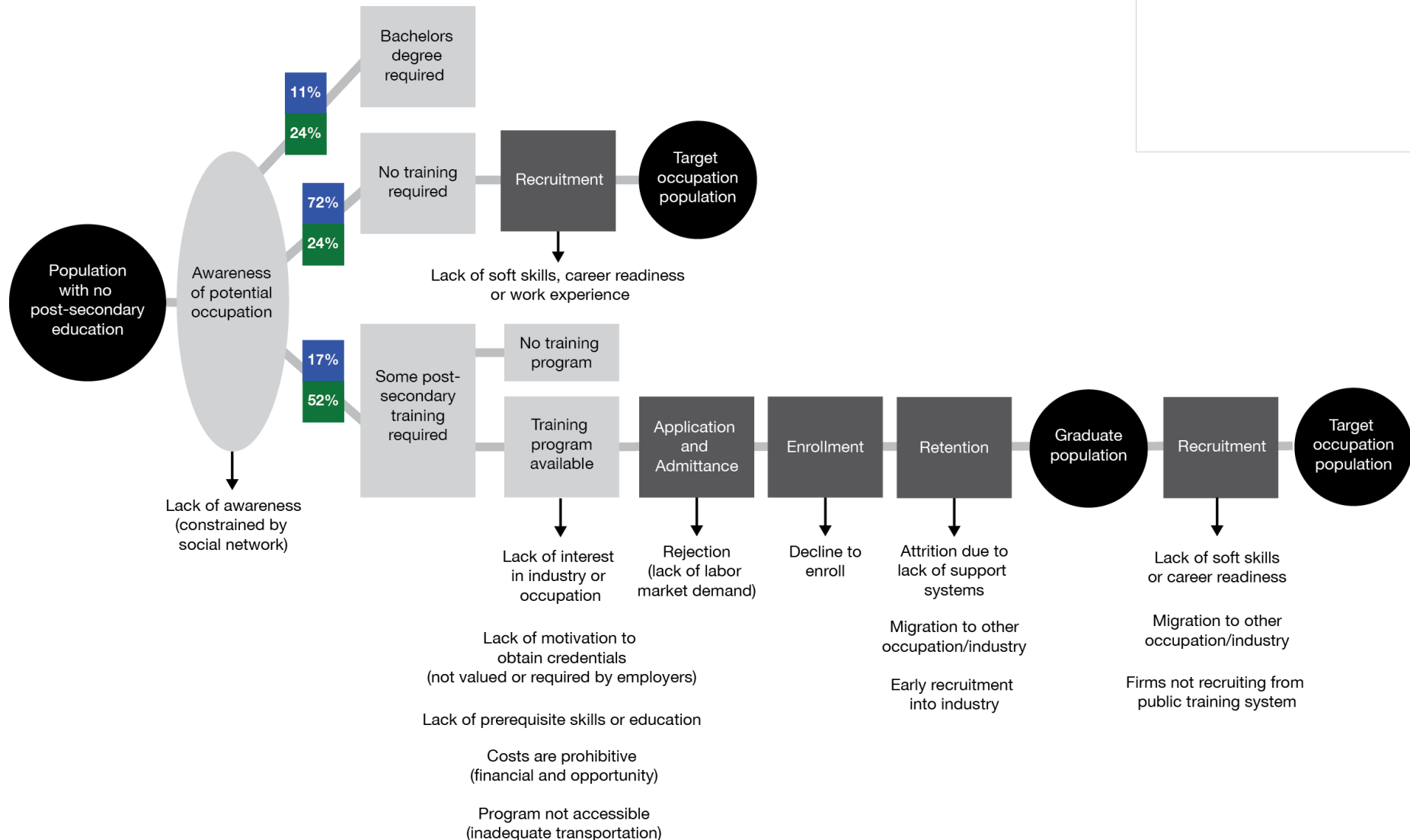
Middle-skill occupations in healthcare, manufacturing and the skilled trades: Assessing potential paths to self-sufficiency

Convening Committee Meeting
Institute of Portland Metropolitan Studies



October 7, 2014

The Workforce Pipeline



Primary research question

How well do these occupations, and their related training programs, provide a viable path to self-sufficiency, especially for disadvantaged communities?

Research approach

Viable path to self-sufficiency...

How many people in these occupations earn a self-sufficient wage?

Self-Sufficiency Report
Worksystems *(in progress)*

Is there unmet demand for more workers to join these occupations, i.e. is there a skills gap?

Skills Gap Literature Review
IMS *(draft complete)*

What are the causes of and potential solutions to this skills gap, if it exists?

Supply-Demand Analysis
(not started)

...for people of disadvantaged backgrounds

Are people of color and English language learners employed in these occupations in proportion to the population as a whole?

Workforce Demographics Report
Partners in Diversity
(in progress)

Is the workforce training system increasing the share of people of color and English language learners in these occupations?

Pipeline Demographic Analysis
(not started)

Self-Sufficiency Report: Preliminary results for 2014

- *Self Sufficiency Standard* is the amount of income families of various sizes and compositions need to make ends meet *without public or private assistance*.
- Varies by family type: number of workers, number and age of children.
- Varies by county and considers costs for housing, food, transportation, medical care, child care, etc.
- Takes into account taxes and tax credits

2014 Standards for Metro Counties

Table 1. Median Household Income and Self-Sufficiency Standard as a Percent of Federal Poverty Level (FPL), 2014

Three Family Types, All Oregon Counties

County	Median Household Income**	ONE ADULT, ONE PRESCHOOLER		ONE ADULT, ONE PRESCHOOLER, ONE SCHOOL-AGE		TWO ADULTS, ONE PRE-SCHOOLER, ONE-SCHOOL AGE	
		Annual Self-Sufficiency Standard	Self-Sufficiency Standard as a Percentage of FPL	Annual Self-Sufficiency Standard	Self-Sufficiency Standard as a Percentage of FPL	Annual Self-Sufficiency Standard	Self-Sufficiency Standard as a Percentage of FPL
<i>Clackamas County</i>	\$63,762	\$47,211	300%	\$57,515	291%	\$65,490	275%
<i>Columbia County</i>	\$54,518	\$44,667	284%	\$55,302	279%	\$63,442	266%
<i>Multnomah County</i>	\$51,878	\$47,037	299%	\$60,025	303%	\$65,027	273%
<i>Washington County</i>	\$65,356	\$47,571	302%	\$58,017	293%	\$65,800	276%
<i>Yamhill County</i>	\$52,777	\$39,305	250%	\$43,310	219%	\$49,635	208%

The 2014 FPL is: \$15,730 for a family of two, \$19,790 for a family of three, and \$23,850 for a family of four. See <http://aspe.hhs.gov/poverty/14poverty.shtml>.

Sources: U.S. Census Bureau, American Community Survey 3-Year Estimates, 2010-2012 (Median Household Income); Pearce, D (2014). The Self-Sufficiency Standard for Oregon, 2014. Center for Women's Welfare, University of Washington (Self-Sufficiency Standard).

*Median household income data from American Community Survey 5-year Estimates, 2008-2012

**Adjusted to 2014 dollars using the Consumer Price Index for western urban areas

Percent Meeting the standard DRAFT

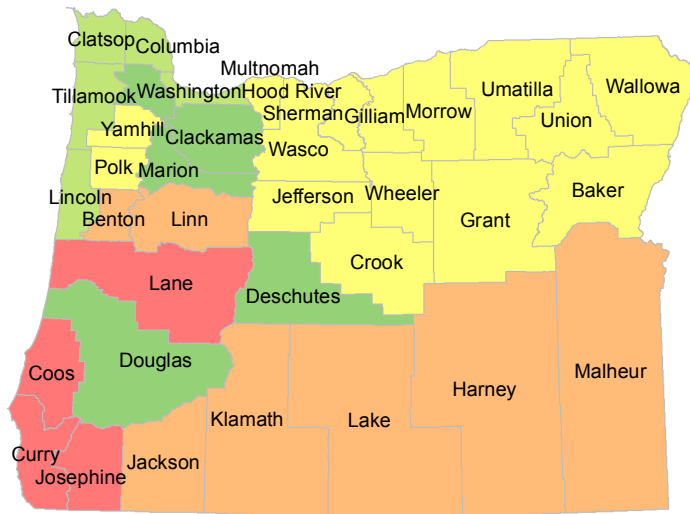
Table 2. Percentage of Households in Income Categories by County: Oregon 2010-2012
DRAFT September 23, 2014

Geography	Income Category				Total
	Below Poverty	Above Poverty, Below Self-Sufficiency	Below Self-Sufficiency (subtotal)	Above Self-Sufficiency	
Oregon	15%	20%	35%	65%	100%
Oregon Counties					
<i>Clackamas County</i>	10%	22%	32%	68%	100%
<i>Columbia County*</i>	16%	19%	35%	65%	100%
<i>Multnomah County</i>	18%	17%	35%	65%	100%
<i>Washington County</i>	11%	21%	32%	68%	100%
<i>Yamhill County*</i>	15%	21%	36%	64%	100%

Source: American Community Survey, PUMS data 2010-2012

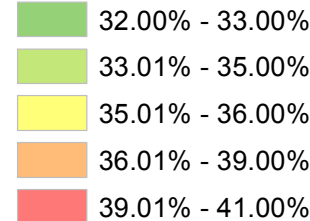
* Estimates are for PUMA level geography.

Self Sufficiency by County - DRAFT

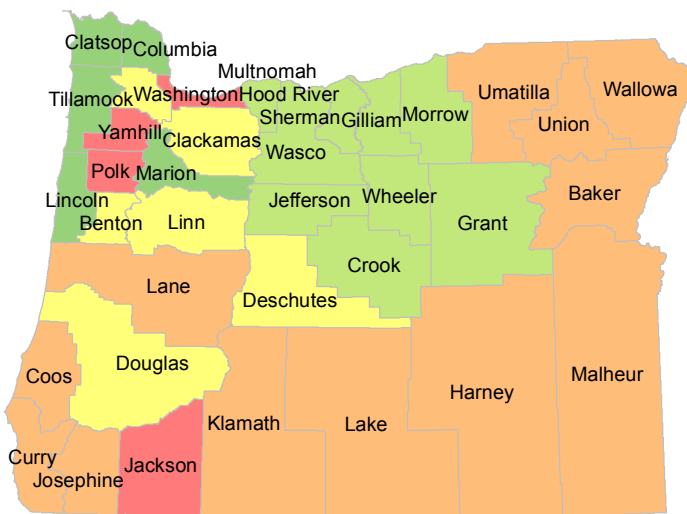


Self-Sufficiency in 2012

Percent of households under Self-Sufficiency Standard

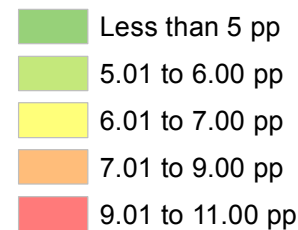


Source: American Community Survey, PUMS data 2010-2012



Increase, 2007-2012

Percentage point increase in households under the Self-Sufficiency Standard



Source: American Community Survey, PUMS data 2005-2007, 2010-2012

Self Sufficiency by Race/Ethnicity and Sex - DRAFT

Table 4. Percentage of Households in Income Categories by Householder, Race, and sex: Oregon 2010-2012

DRAFT September 23, 2014

	Income Category				Total
	Below Poverty	Above Poverty, Below Self-Sufficiency	Below Self-Sufficiency (subtotal)	Above Self-Sufficiency	
Oregon	15%	20%	35%	65%	100%
Race of Head of Household					
<i>White</i>	13%	19%	32%	68%	100%
<i>Black or African American</i>	36%	18%	53%	47%	100%
<i>American Indian or Alaskan Native</i>	24%	25%	49%	51%	100%
<i>Asian or Other Pacific Islander</i>	17%	21%	38%	62%	100%
<i>Other</i>	29%	29%	58%	43%	100%
Sex of Head of Household					
<i>Male</i>	12%	18%	30%	71%	100%
<i>Female</i>	20%	22%	42%	58%	100%

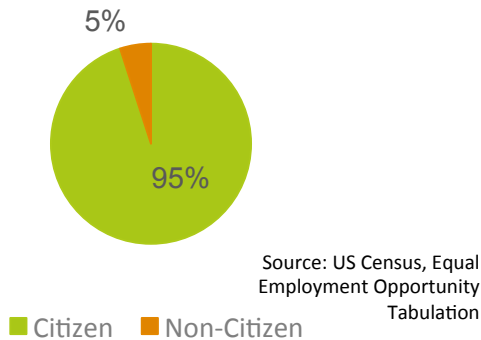
Source: American Community Survey, PUMS data 2010-2012

Workforce Demographics Report: *First Line Supervisors, Construction and Extraction 47-1011*

Wage Distribution, Portland-Vancouver-Hillsboro MSA, 2013	Annual 10th percentile wage	Annual 25th percentile wage	Annual median wage	Annual 75th percentile wage	Annual 90th percentile wage
<i>First Line Supervisors, Construction and Extraction 47-1011</i>	\$33,720	\$49,660	\$64,250	\$83,190	\$100,030
<i>Portland-Vancouver-Hillsboro MSA</i>	\$19,840	\$25,750	\$38,650	\$60,980	\$91,690

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment Statistics

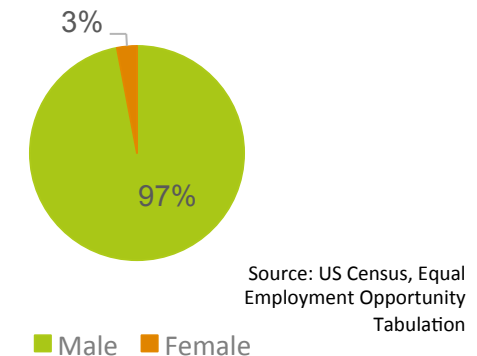
Workforce by citizenship status, Portland-Vancouver-Hillsboro MSA, 2006-2010



Anticipated Growth 30%
 =
 1,044 New Jobs

Source: Oregon Employment Department and Washington Security Department

Workforce by sex, Portland-Vancouver-Hillsboro MSA, 2006-2010



Workforce by race and Hispanic origin, Portland-Vancouver-Hillsboro MSA, 2006-2010	Hispanic or Latino	White alone, NH	Native Hawaiian and Other Pacific Islander alone, NH	Other, NH	Black AOIC, NH	American Indian and Alaskan Native AOIC, NH	Asian AOIC, NH
<i>First Line Supervisors, Construction and Extraction 47-1011</i>	6.1%	90.9%	0.6%	0.6%	0.2%	0.8%	0.8%
<i>Portland-Vancouver-Hillsboro MSA</i>	9.3%	79.6%	0.4%	0.5%	2.6%	1.4%	6.3%

Source: US Census, Equal Employment Opportunity Tabulation

Workforce Demographics Report: *Machinists 51-4041*

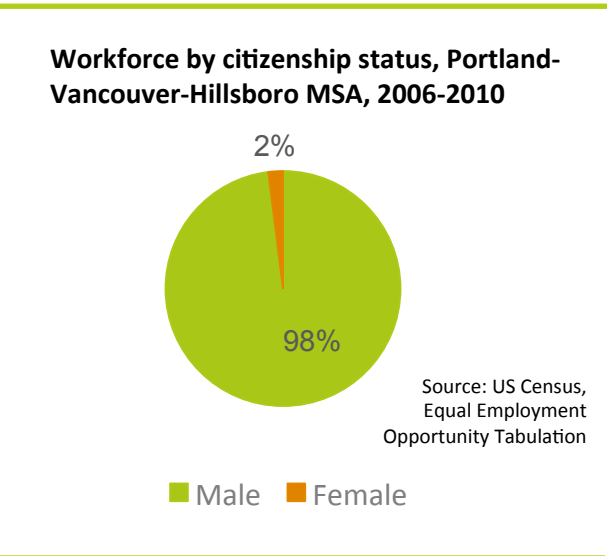
Wage Distribution, Portland-Vancouver-Hillsboro MSA, 2013	Annual 10th percentile wage	Annual 25th percentile wage	Annual median wage	Annual 75th percentile wage	Annual 90th percentile wage
<i>Machinists 51-4041</i>	\$30,290	\$36,580	\$45,540	\$55,700	\$65,530
<i>Portland-Vancouver-Hillsboro MSA</i>	\$19,840	\$25,750	\$38,650	\$60,980	\$91,690

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment Statistics



Anticipated Growth 30%
 =
664 New Jobs

Source: Oregon Employment Department and Washington Security Department



Workforce by race and Hispanic origin, Portland-Vancouver-Hillsboro MSA, 2006-2010

	Hispanic or Latino	White alone, NH	Native Hawaiian and Other Pacific Islander alone, NH	Other, NH	Black AOIC, NH	American Indian and Alaskan Native AOIC, NH	Asian AOIC, NH
<i>Machinists 51-4041</i>	8.0%	82.0%	2.0%	0.0%	1.0%	1.0%	6.0%
<i>Portland-Vancouver-Hillsboro MSA</i>	9.3%	79.6%	0.4%	0.5%	2.6%	1.4%	6.3%

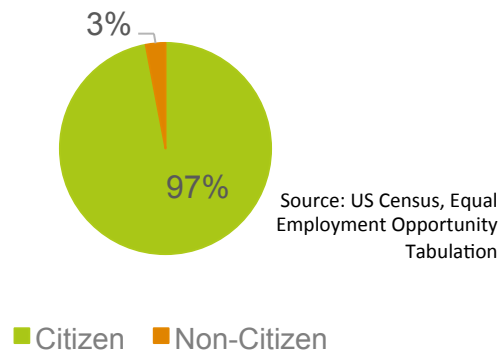
Source: US Census, Equal Employment Opportunity Tabulation

Workforce Demographics Report: *Medical Assistants 31-9092*

Wage Distribution, Portland-Vancouver-Hillsboro MSA, 2013	Annual 10th percentile wage	Annual 25th percentile wage	Annual median wage	Annual 75th percentile wage	Annual 90th percentile wage
Medical Assistants 31-9092	\$26,540	\$30,840	\$35,020	\$39,910	\$45,300
Portland-Vancouver-Hillsboro MSA	\$19,840	\$25,750	\$38,650	\$60,980	\$91,690

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment Statistics

Workforce by citizenship status, Portland-Vancouver-Hillsboro MSA, 2006-2010



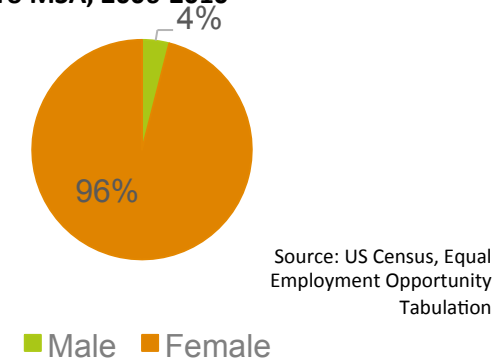
Anticipated
Growth 23%

=

253 New Jobs

Source: Oregon Employment Department and Washington Security Department

Workforce by sex, Portland-Vancouver-Hillsboro MSA, 2006-2010



Workforce by race and Hispanic origin, Portland-Vancouver-Hillsboro MSA, 2006-2010

	Hispanic or Latino	White alone, NH	Native Hawaiian and Other Pacific Islander alone, NH	Other, NH	Black AOIC, NH	American Indian and Alaskan Native AOIC, NH	Asian AOIC, NH
Medical Assistants 31-9092	7.0%	77.8%	1.5%	0.5%	2.7%	2.7%	7.7%
Portland-Vancouver-Hillsboro MSA	9.3%	79.6%	0.4%	0.5%	2.6%	1.4%	6.3%

Source: US Census, Equal Employment Opportunity Tabulation

Self sufficiency and occupation

How do the median wages for each occupation compare to the Self Sufficiency Standard for various family types?

- One adult, one preschooler
- One adult, one preschooler, one school-age
- Two adults, one preschooler, one school-age

Self sufficiency and occupation

Median wage as percentage of Self-Sufficiency Standard for select family types, 2013

	Family Type	Clackamas County	Columbia County	Multnomah County	Washington County	Yamhill County
<i>First Line Supervisors, Construction and Extraction 47-1011</i>	One Adult, One Preschooler	136%	144%	137%	135%	163%
	One Adult, One Preschooler, One School-Age	112%	116%	107%	111%	148%
	Two Adults, One Preschooler, One School-Age*	196%	203%	198%	195%	259%
<i>Machinists 51-4041</i>	One Adult, One Preschooler	96%	102%	97%	96%	116%
	One Adult, One Preschooler, One School-Age	79%	82%	76%	78%	105%
	Two Adults, One Preschooler, One School-Age*	139%	144%	140%	138%	183%
<i>Medical Assistants 31-9092</i>	One Adult, One Preschooler	74%	78%	74%	74%	89%
	One Adult, One Preschooler, One School-Age	61%	63%	58%	60%	81%
	Two Adults, One Pre-schooler, One-School Age*	107%	110%	108%	106%	141%

*Family type includes two adults and assumes both adults work full time. Chart assumes each adult earns the same income.

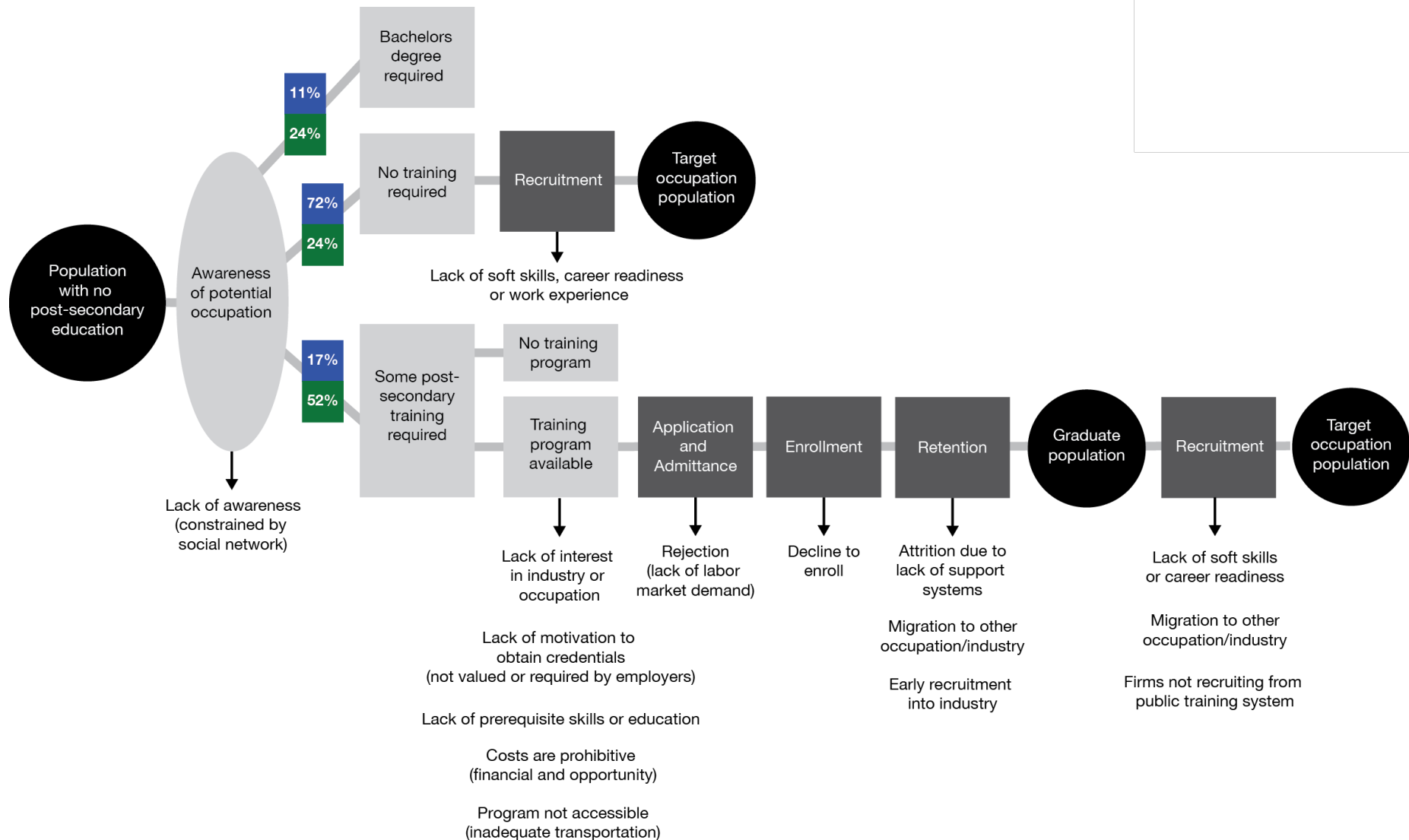
Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment Statistics The Self-Sufficiency Standard for Oregon, 2014. Center for Women's Welfare, University of Washington (Self-Sufficiency Standard).

Skills Gap Literature Review

What are the causes of and potential solutions to this skills gap, if it exists?

- ❑ Shortages are likely overstated by firm surveys
- ❑ Systematic measurement of the manufacturing skills gap does not support a story of worker shortages, but local research is needed
- ❑ Foundational academic and interpersonal skills are in need
- ❑ Some healthcare support occupations are heavily over-trained
- ❑ Healthcare practitioner and technician occupations are more likely to experience skills gaps than healthcare support occupations
- ❑ Technology change and retirements may increase shortages for some occupations

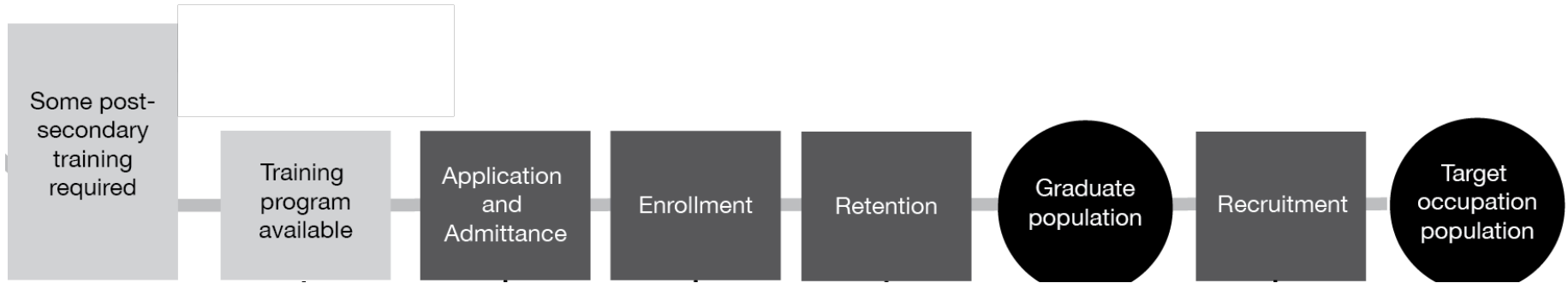
Workforce Pipeline



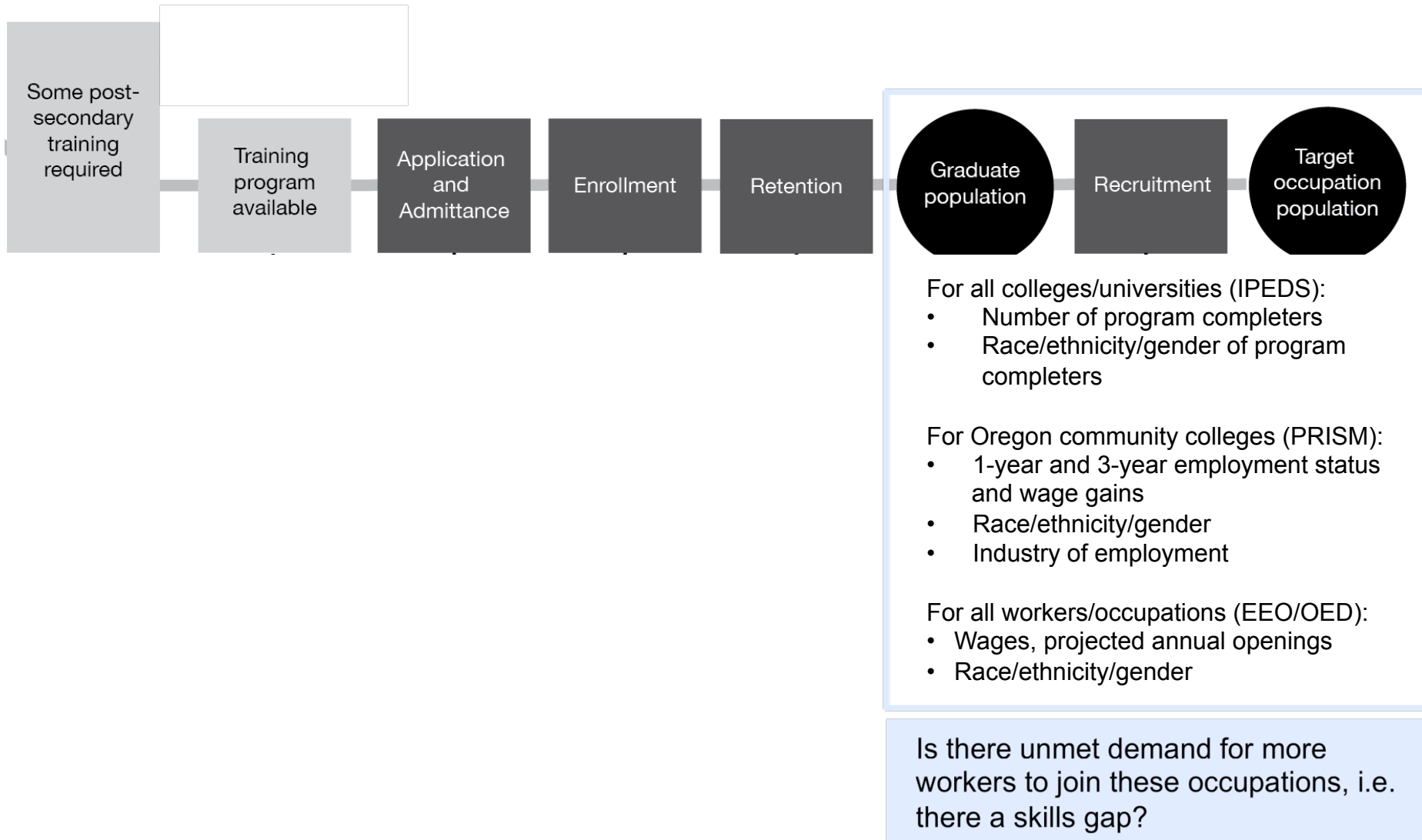
Workforce Pipeline

Phase	Potential Barriers	Indicator or Evidence	Data Type(s)	Data Source(s)	Status	Next steps/notes	Owner
Awareness and interest in occupation	Lack of awareness Lack of interest	NA	Primary: Literature Review	Academic journals, other research	Scoping	?	Jamin
			Primary: Focus Groups	Community college students? High school seniors?	Scoping	Determine cost and funding source	?
			Primary: Interviews	Community college students? High school seniors?	Scoping	Determine cost and funding source	?
			Secondary: Report	Lane County Youth Awareness of Middle Skill Jobs Survey Worksystems youth manufacturing initiatives?	Data available Scoping	Some minor insights Email Jesse Aronson	Jamin
Occupations that don't require credential	Insufficient pay	Share of jobs that meet self-sufficiency standard	Secondary: Census/ACS	Worksystems Self-Sufficiency Analysis	Analysis in progress	Complete analysis	Liza
	Employer screening practices	Employers unwilling to train Employers screen out qualified candidates	Secondary: Report	National reports	Analysis complete	Write up findings	Jamin
Occupations that require post-secondary credential	Insufficient pay	Share of jobs that meet self-sufficiency standard	Secondary: Census/ACS	Worksystems Self-Sufficiency Analysis	Analysis in progress	Complete analysis	Liza
	No program available	Program supply and demand analysis	Secondary: Report	Mfg: WIRED Manufacturing Workforce Audit Healthcare: CWWC Healthcare Workforce Report	Analysis complete	Write up findings	Jamin
Application and admittance to training program	General data needed	Applicants: Age, income, gender, and race/ethnicity	Primary: Quantitative	Program admission records	Scoping	Strategize how to approach	Jamin/Sheila
		Admitted students: Age, income, gender, and race/ethnicity	Primary: Quantitative	Program admission records	Scoping	Strategize how to approach	Jamin/Sheila
		Enrolled students: Age, income, gender, and race/ethnicity	Primary: Quantitative	IPEDS (count), program admission records (demographics)	Scoping	Strategize how to approach	Jamin/Sheila
	Pre-requisite education	Applicants not admitted due to lack of GED/diploma	Primary: Quantitative	Program admission records	Scoping	Strategize how to approach	Jamin/Sheila
		Share of target population without GED/diploma	Secondary: Census/ACS	Census/ACS/EEO	Data available	Collect and analyze data	?
	Language barrier	Share of target population for whom English is not first language	Secondary: Census/ACS	Census/ACS/EEO	Data available	Collect and analyze data	?
	Transportation issues	Share of target population within 45 minutes of program by transit	Secondary: Census/ACS	Census/ACS; TriMet, Community Colleges	Data available	Collect and analyze data	?
	Child care responsibilities	Share of target population with young children	Secondary: Census/ACS	Census/ACS/EEO	Data available	Collect and analyze data	?
	Work scheduling conflicts	Share of target population that are shift workers	Secondary: Census/ACS	Census/ACS/EEO and research on shift workers by occupation	Data available	Collect and analyze data	?
		Share of program classes offered only during the daytime	Primary: Quantitative	Community colleges, possible private career schools	Data available	Collect and analyze data	?
	Program lacks capacity	Program supply and demand analysis	Secondary: Report	Mfg: WIRED Manufacturing Workforce Audit Healthcare: CWWC Healthcare Workforce Report	Analysis complete	Write up findings	Jamin
		Programs not prioritized by policymakers	Secondary: Labor States	Critique OPM for high skill/high demand bias?	Scoping	Discuss with Sheila	Jamin
Applicants not admitted due to limited capacity		Primary: Quantitative	Program admission records	Scoping	Strategize how to approach	Jamin/Sheila	
Completion of training program	General data needed	Program completers: Age, income, gender, and race/ethnicity	Primary: Quantitative	IPEDS (count), individual program records (demographics)	Scoping	Strategize how to approach	Jamin/Sheila
	Early recruitment	Employer perception of training credential	Secondary: Report	Mfg: CWWC Manufacturing Firm Survey	Analysis complete	Write up findings	Jamin
		Reports of firms recruiting prior to program completion	Secondary: Report	Mfg: WIRED Manufacturing Workforce Audit	Analysis complete	Write up findings	Jamin
	Lack of social support systems	Students dropping out due to financial or family obligations	Primary: Interviews Primary: Quantitative	Program staff and faculty Program attrition records	Scoping Scoping	Strategize how to approach Strategize how to approach	Jamin/Sheila Jamin/Sheila
Change occupation/industry	Students using skills to get job in another occupation/industry	Secondary: Report	Mfg: WIRED Manufacturing Workforce Audit	Analysis complete	Write up findings	Jamin	
Recruitment and hiring	Lack of work experience	Employer reports of deficiencies in skills or work experience	Secondary: Report	Healthcare: CWWC Healthcare Workforce Report	Analysis complete	Write up findings	Jamin
	Lack of basic skills			Mfg: CWWC Manufacturing Firm Survey	Analysis complete	Write up findings	Jamin
	Lack of soft skills			National reports	Analysis complete	Write up findings	Jamin
	Employer screening practices	Employers unwilling to train	Secondary: Report	National reports	Analysis complete	Write up findings	Jamin
		Decline of apprenticeship and internship programs	Secondary: Labor Stats	State labor statistics on apprenticeships	Data available	Collect and analyze data	Jamin
		Employers screen out long-term unemployed	Secondary: Report	Mfg: CWWC Manufacturing Firm Survey	Analysis complete	Write up findings	Jamin
		Employers screen out qualified candidates	Secondary: Labor Stats	iMatch, compare rate of job placement by length of UI claims	Scoping	Discuss with Sheila	Jamin
		Employers don't use public workforce system	Secondary: Labor Stats	iMatch, compare total openings to those listed on iMatch	Scoping	Discuss with Sheila	Jamin
	Program ineffective (lack of technical skills)	Employers screen out qualified candidates	Secondary: Report	National reports	Analysis complete	Write up findings	Jamin
		Program unable to teach students the newest technology	Primary: Interviews	Program staff and faculty	Scoping	Strategize how to approach	Jamin/Sheila
Program curriculum not aligned to skills in demand		Secondary: Report	Healthcare: CWWC Healthcare Workforce Report Mfg: CWWC Manufacturing Firm Survey Mfg: WIRED Manufacturing Workforce Audit	Analysis complete Analysis complete Analysis complete	Write up findings Write up findings Write up findings	Jamin Jamin Jamin	

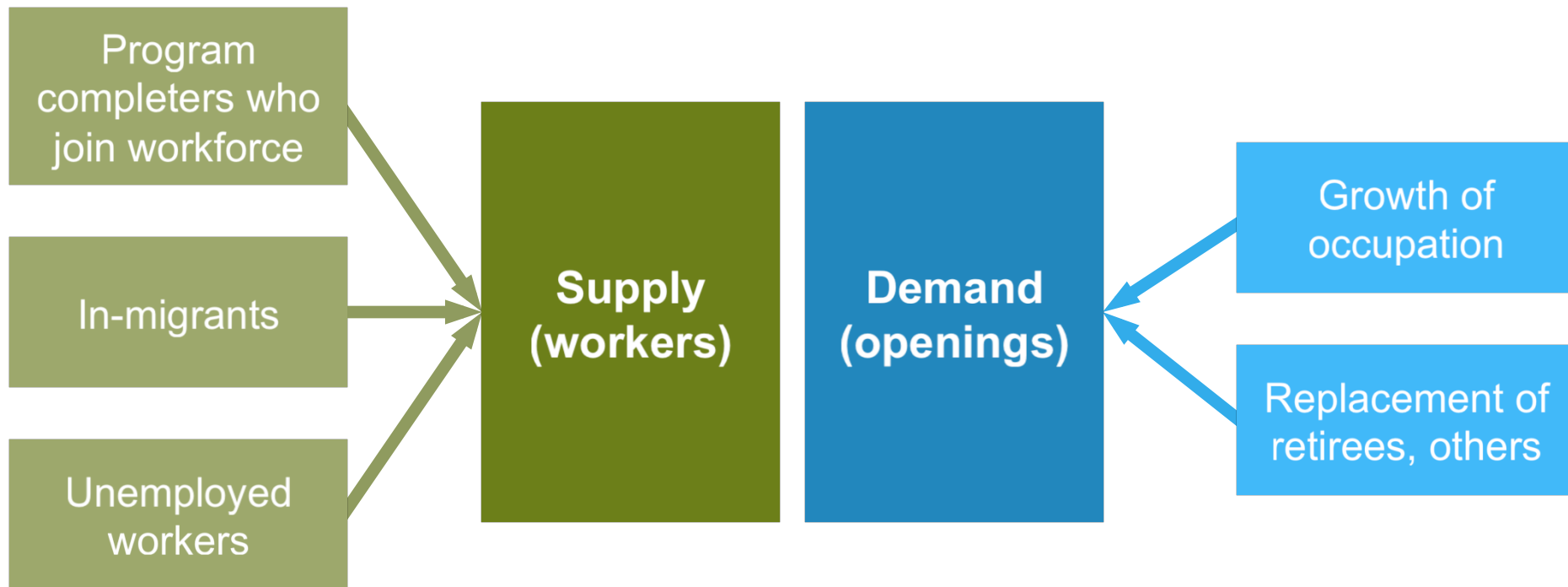
Workforce Pipeline



Workforce Pipeline



Supply and Demand Gap Analysis



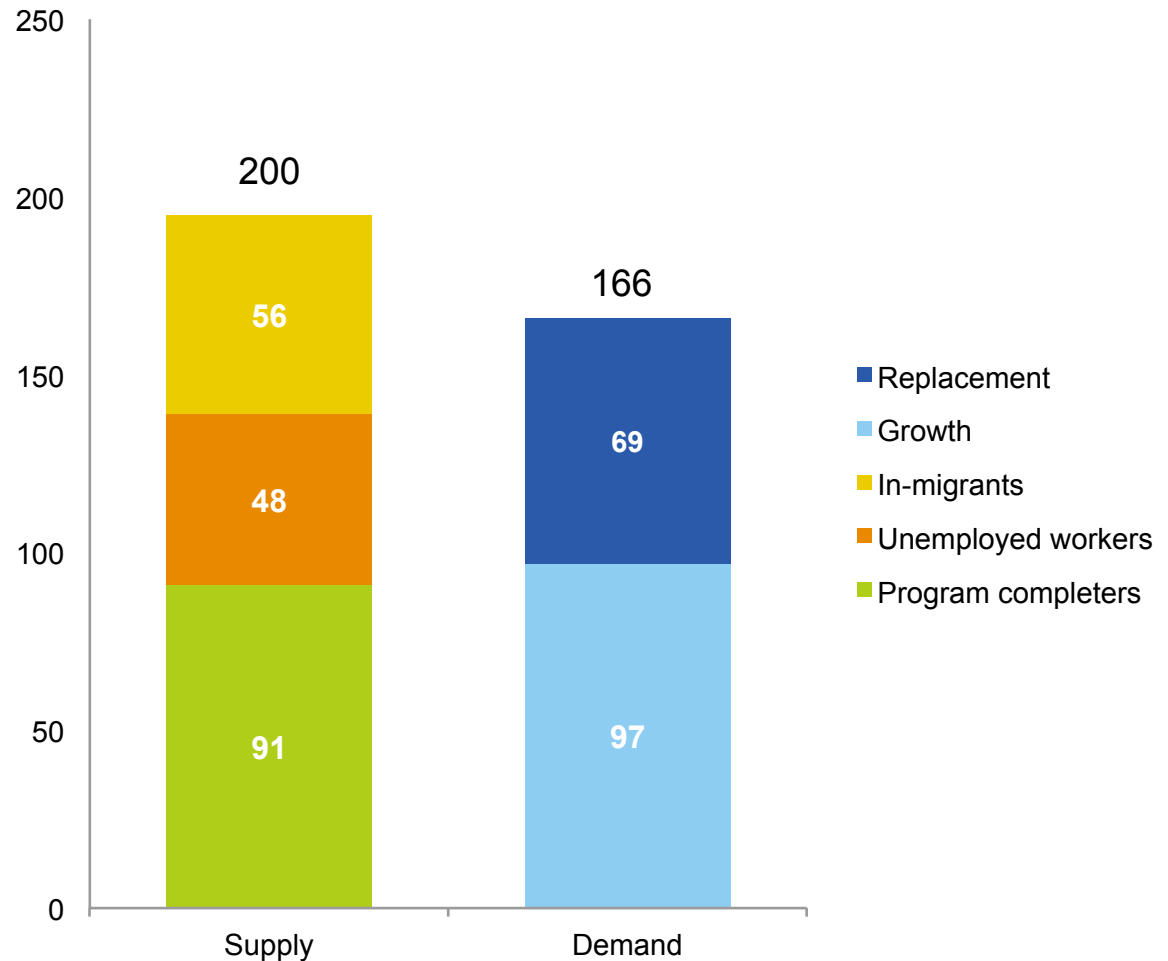
Supply and Demand Gap Analysis – *Sample Data*

Supply-Demand Analysis, Machinists, 2012

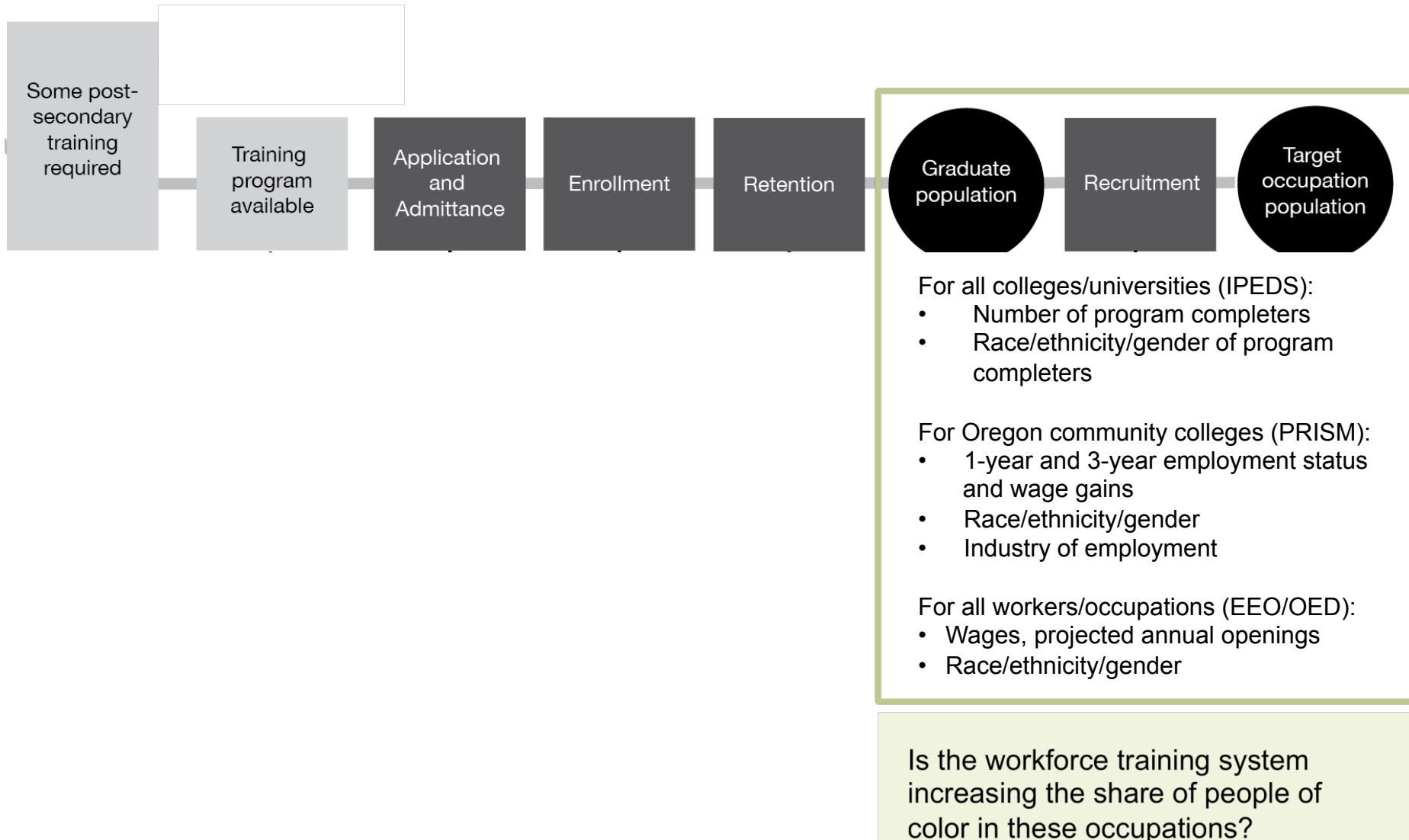
Is there unmet demand for more workers to join these occupations, i.e. there a skills gap?

Supplemented by more detailed data on community college completers:

- Employment status and wage gains
- Industry of employment
- Race and ethnicity



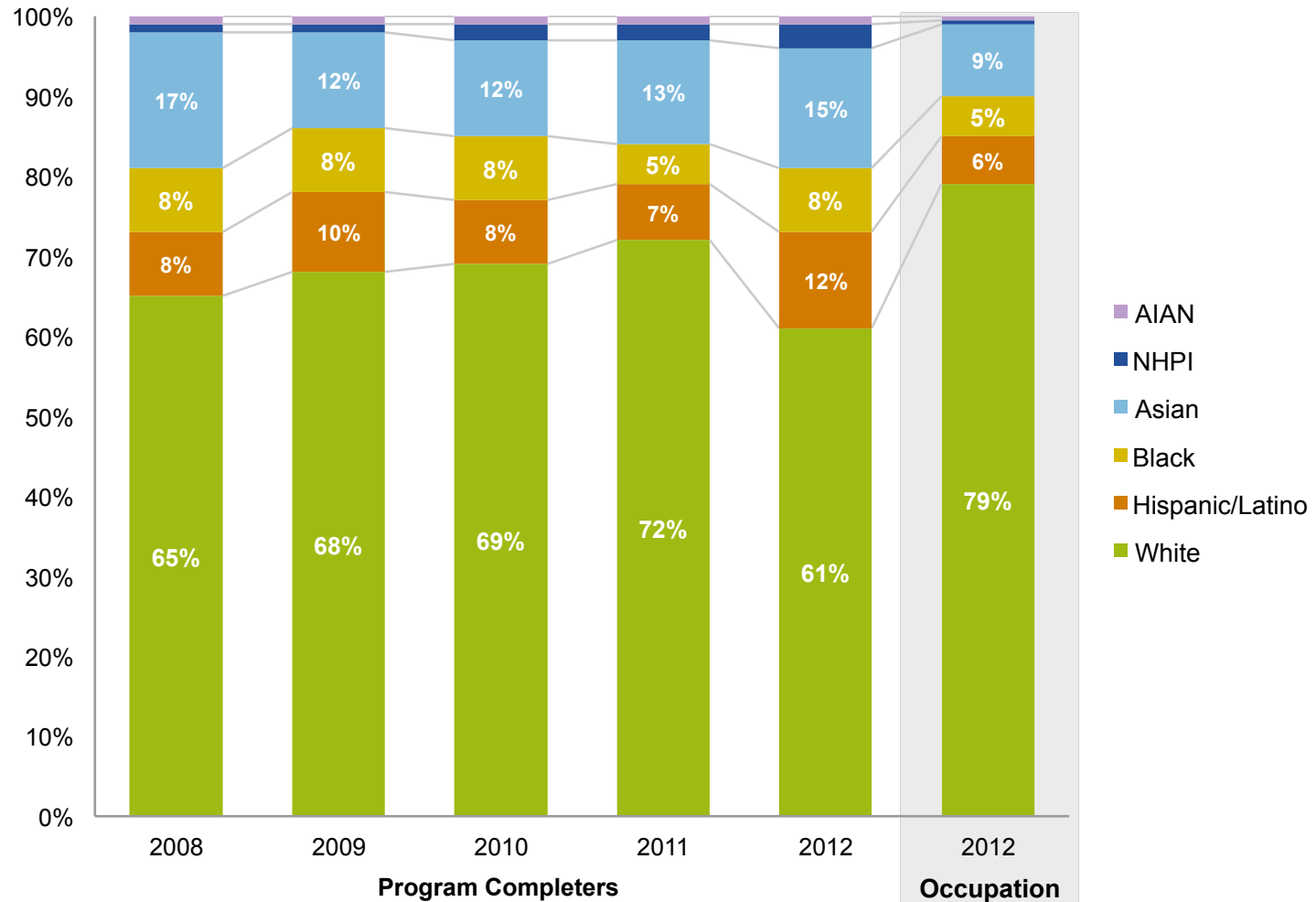
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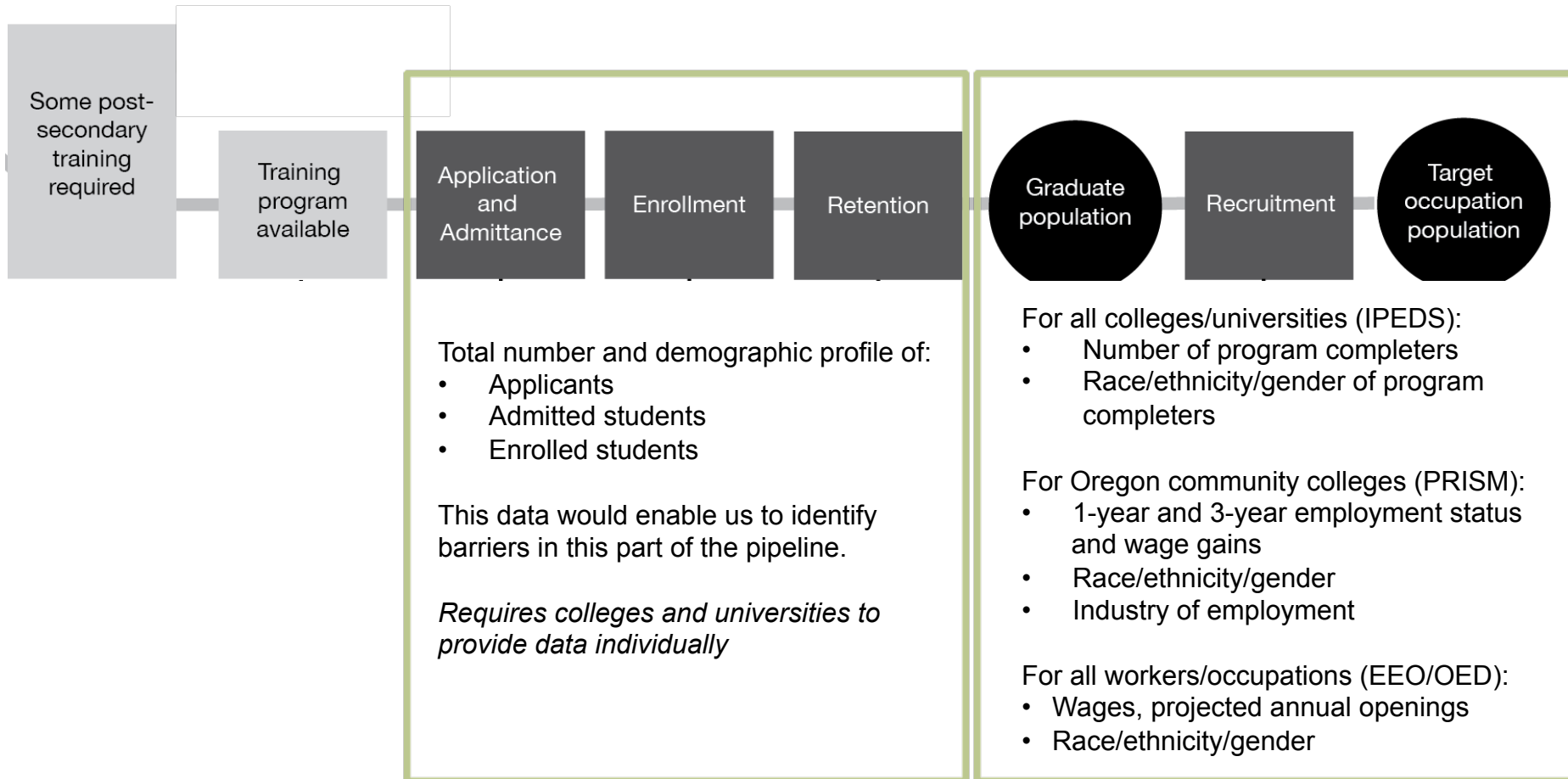
Pipeline Demographics Analysis – *Sample Data*

Is the workforce training system increasing the share of people of color in these occupations?

Race/Ethnicity of Medical Assistant Program Completers, 2008-2012



Pipeline Analysis



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...for people of disadvantaged backgrounds

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