Market Challenges

The confluence of macro, financial and market forces are creating a growth "log-jam" in the sector.

- Supply/demand imbalance in the labor markets triggered by automation and general labor shortages in every sector of the economy

- Education system struggling to adapt to meet the talent and skills needs

- Global Acceleration in edtech innovation and vast canvas of emerging technology enabled solutions

- Exorbitant valuations making it difficult to generate meaningful returns within typical hold periods through M&A activity

- A fragmented, unorganized market of new, high growth, start-up and unicorns with high potential but lacking dimension and scale

Practice Focus

Education market sub-sectors where we believe lies highest potential for transformative impact and returns of the emerging *New Landscape*

Strategic partnerships	Workforce solutions	Post-secondary

Strategic partnerships
- Private Equity and Venture Capital portfolio companies
- Market making businesses
- Academic program providers
- Job Tech businesses
- Workforce analytics
- Alternative Credentialing

Workforce solutions
- Education as a benefit management
- Workforce partnerships enablements
- HCM talent platforms
- Early career, mid-career and life-long learning in the future of work
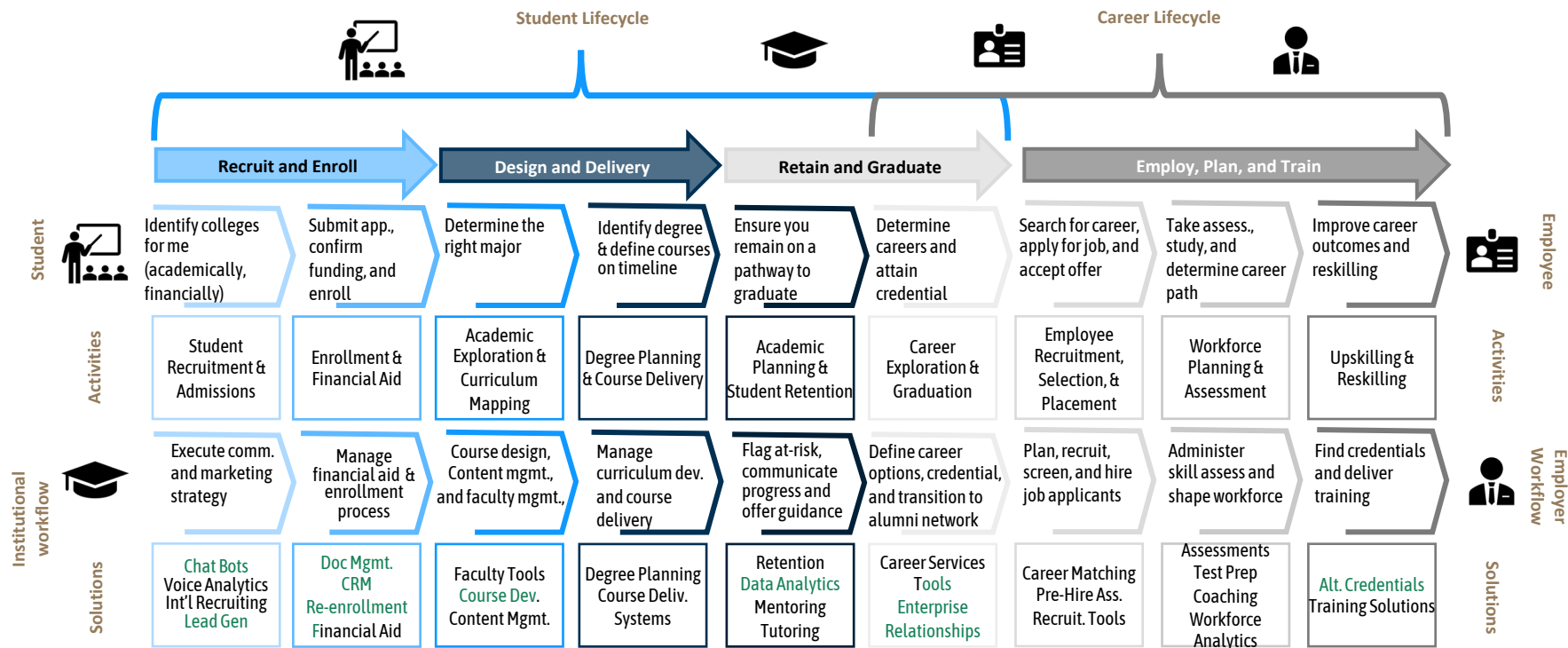- Emerging business models in HCM, enrollment and and talent pipelines and upskilling

Post-secondary
- Alternative credentials/bootcamps
- Career pathways, degree completion
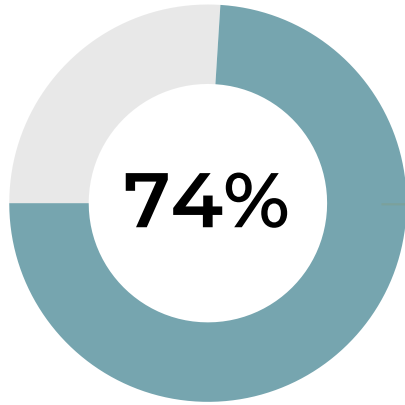- Workforce education program management
- Higher ed workforce optimization

Focusing purely on these sub-sectors while leveraging our "practitioner" expertise, we partner with PE/VC funds to refine pre-deal thesis, implement and execute the post-deal value creation plan and develop follow-on M&A strategies.

Our approach is based on mapping the Post-Secondary Credential and Career Lifecycle to seek out pockets of growth

Student Lifecycle **Career Lifecycle**

Recruit and Enroll → **Design and Delivery** → **Retain and Graduate** → **Employ, Plan, and Train**

	Student							
Student	Identify colleges for me (academically, financially)	Submit app., confirm funding, and enroll	Determine the right major	Identify degree & define courses on timeline	Ensure you remain on a pathway to graduate	Determine careers and attain credential	Search for career, apply for job, and accept offer	Take assess., study, and determine career path	Improve career outcomes and reskilling
Activities	Student Recruitment & Admissions	Enrollment & Financial Aid	Academic Exploration & Curriculum Mapping	Degree Planning & Course Delivery	Academic Planning & Student Retention	Career Exploration & Graduation	Employee Recruitment, Selection, & Placement	Workforce Planning & Assessment	Upskilling & Reskilling
Institutional workflow	Execute comm. and marketing strategy	Manage financial aid & enrollment process	Course design, Content mgmt., and faculty mgmt.,	Manage curriculum dev. and course delivery	Flag at-risk, communicate progress and offer guidance	Define career options, credential, and transition to alumni network	Plan, recruit, screen, and hire job applicants	Administer skill assess and shape workforce	Find credentials and deliver training
Solutions	Chat Bots Voice Analytics Int'l Recruiting Lead Gen	Doc Mgmt. CRM Re-enrollment Financial Aid	Faculty Tools Course Dev. Content Mgmt.	Degree Planning Course Deliv. Systems	Retention Data Analytics Mentoring Tutoring	Career Services Tools Enterprise Relationships	Career Matching Pre-Hire Ass. Recruit. Tools	Assessments Test Prep Coaching Workforce Analytics	Alt. Credentials Training Solutions

Right side labels: Employee | Activities | Employer Workflow | Solutions

TAM | Global Relevance | Capacity for Tech Enablement | Funding Sources | Regulatory Risk

Demographic shifts have redefined the purpose of higher education


74%

Of higher ed students are **NONTRADITIONAL** and need flexible learning options
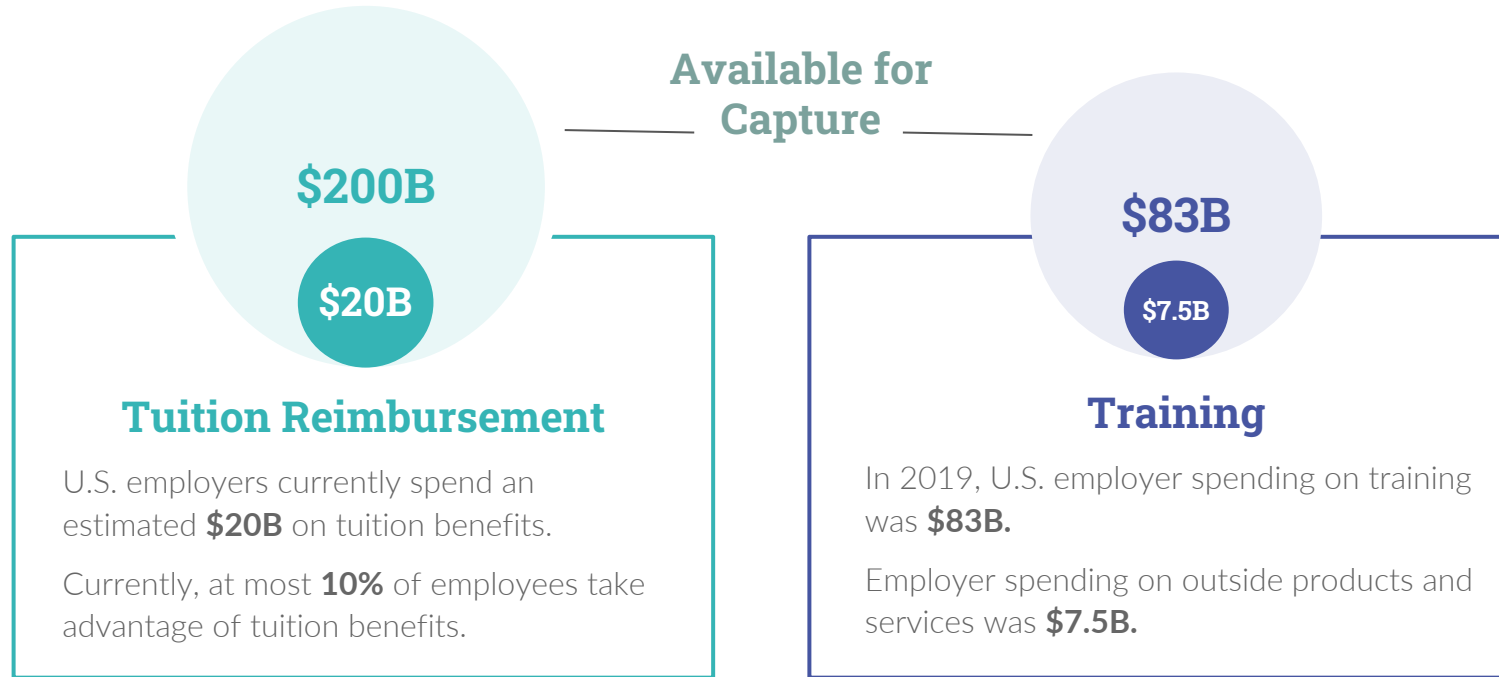
CHARACTERISTICS INCLUDE:

- Independent of parents for financial aid reasons
- One or more dependents
- Single caregiver
- Non-traditional high school diploma
- Delayed postsecondary enrollment
- Part- or full- time enrollment

From Reach Capital.

Alt Degree- Unbundling of Traditional Higher Ed
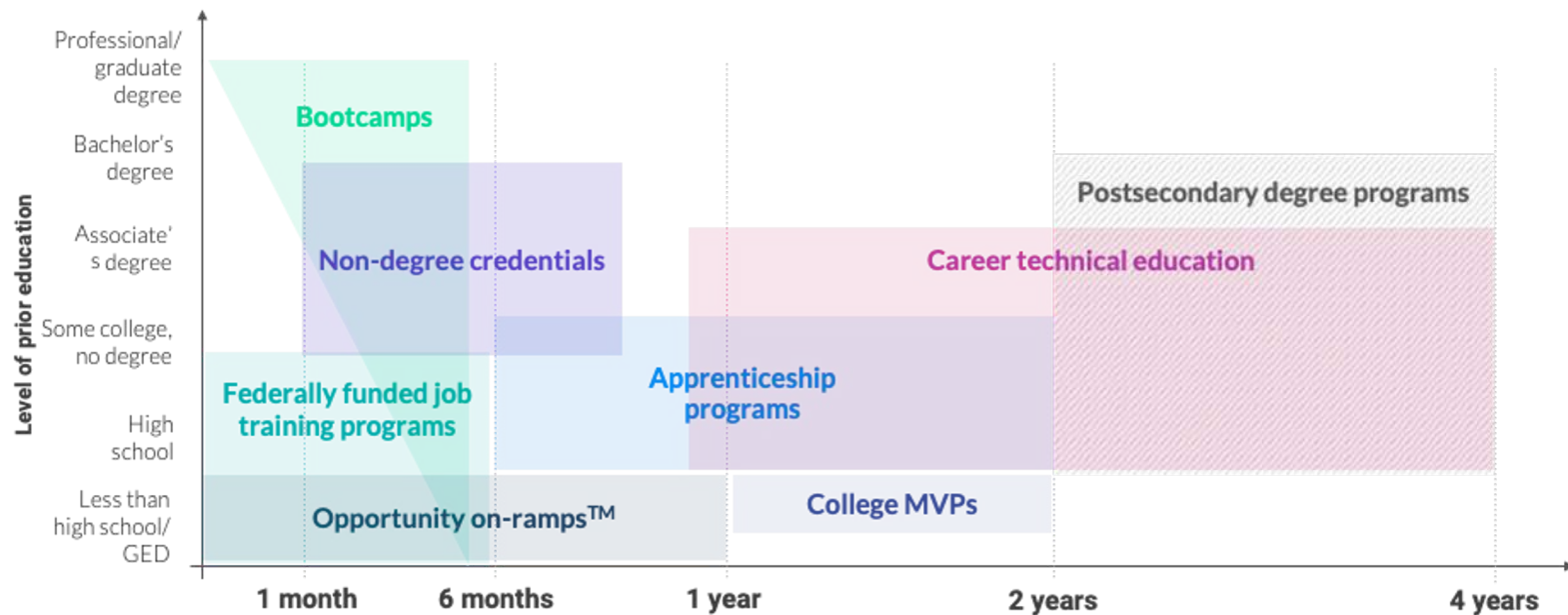
The size of each box is not indicative of the number of students each program serves.

Education-to-business is at least a $27.5 billion market today, with a potential of close to $300 billion...but

Available for Capture

$200B

$20B

Tuition Reimbursement

U.S. employers currently spend an estimated **$20B** on tuition benefits.

Currently, at most **10%** of employees take advantage of tuition benefits.

$83B

$7.5B

Training

In 2019, U.S. employer spending on training was **$83B.**

Employer spending on outside products and services was **$7.5B.**

...Colleges are ill equipped to reshape and build capacity to meet this growth, and...

NEW university partnerships established with Online Program Managers and bootcamps can fill the steep demand

Year	Value
2010	23
2011	29
2012	60
2013	58
2014	76
2015	76
2016	112
2017	135
2018	174
2019	223
2020	303
1H 2021	450

From Reach Capital.
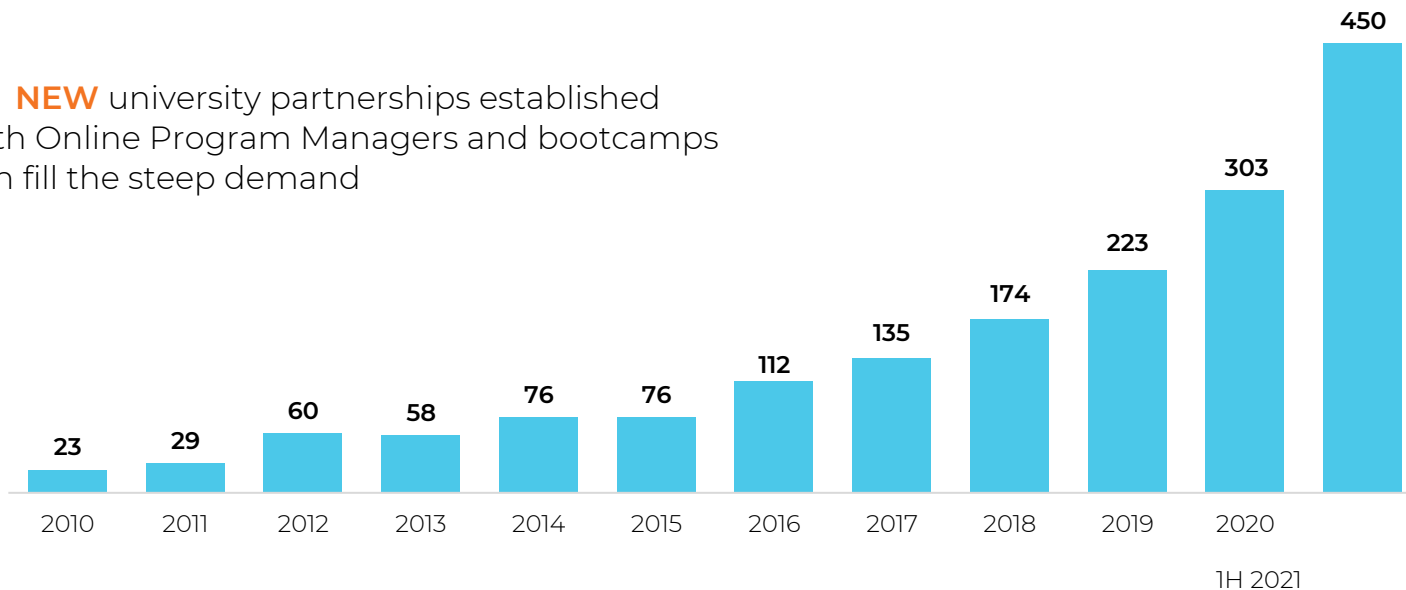
...and students are turning to third-party alternatives

4K+
COLLEGES

coursera

are using Coursera for Campus to deliver ready-made online courses

77M
LEARNERS SERVED
+65%
YOY GROWTH

59M
ENROLLMENTS
+248%
YOY GROWTH

…as the certificate landscape grows rapidly with projections to surpass degree granting conferrals in 2022

U.S postsecondary degrees/certificates conferred (in Million)

Projected

Legend:
- ■ Total certificates conferred (US)
- ■ Total degrees conferred from degree granting institution (US)
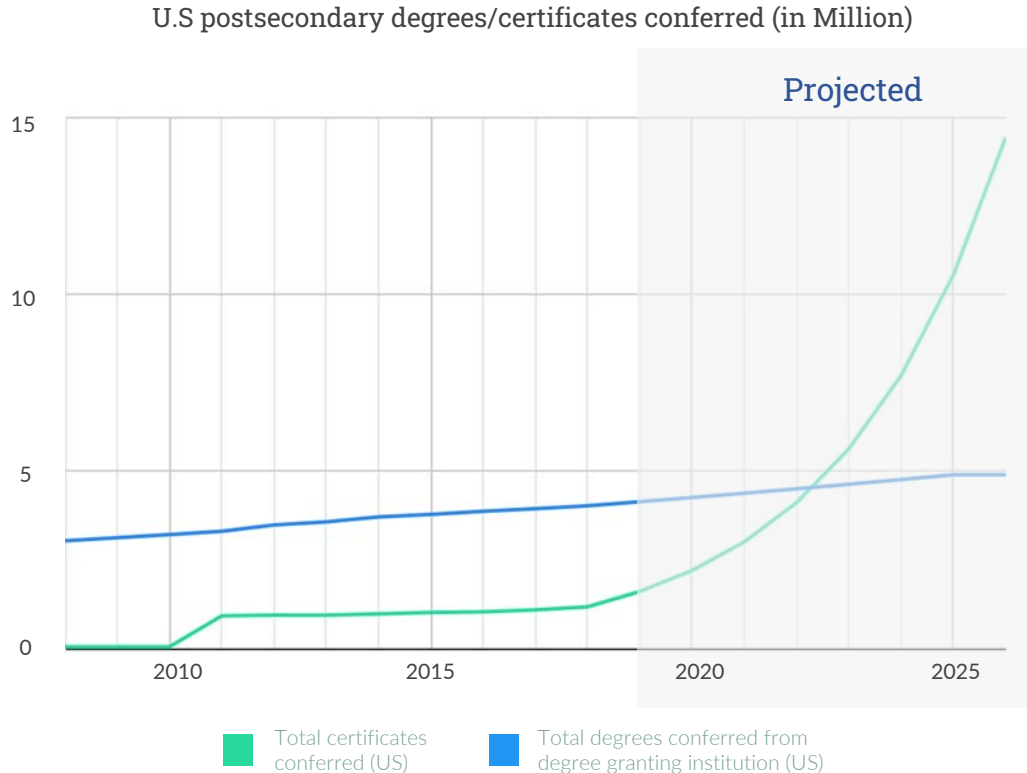
Total certificates conferred has **grown by a staggering 37 percent** between 2008 - 2018.

Certificate conferrals is **projected to surpass degree conferrals in 2022.**

Talent Supply-Demand Gap

Higher Ed...

Education Up

- Inflexible time based degree

- Pressure to serve a new 60 Year Degree mission

- Degree vs. Non Degree

- Limited technology support structure for CBL, assessment, skill mapping, credentialing and personalized learning planning

- Lack of student support structures for student success coaching and management

Employers...

Employer Down

- HCM is in nascent stages in employee skill development

- Lack of upskilling experience & internal structure

- Inability address employee skill gaps/competencies to job role

- Lack of persistent/ongoing measurement of employee learner competency linked to increased worker productivity

- Cannot centrally or departmentally design, develop and manage upskilling programs

Labor Market Trends

Boomer bust adds to worker shortage

The pandemic pushed more than 3 million baby boomers into early retirement,

Why it matters: The wave of early retirements is contributing to the labor shortage roiling the U.S. economy.

What happened: Many older workers faced layoffs. Others left the workforce to protect themselves from the risk of infection.

- It's much harder for workers in their 50s and 60s — or older — to re-enter the workforce after a period of unemployment,
- It's likely that many of those who left jobs got discouraged and chose to retire instead.
- That includes working mothers who left jobs to care for kids and immunocompromised people who stayed home. Many could return

The big picture: The total number of people who left the workforce during the pandemic — including the 3 million early retirees — is around 5.25 million

Percentage of Retirees in the U.S. Population and the Baby Boomer Retirement Trend

Percent of U.S. population

— Retirees, percent of U.S. population
--- Baby Boomer trend
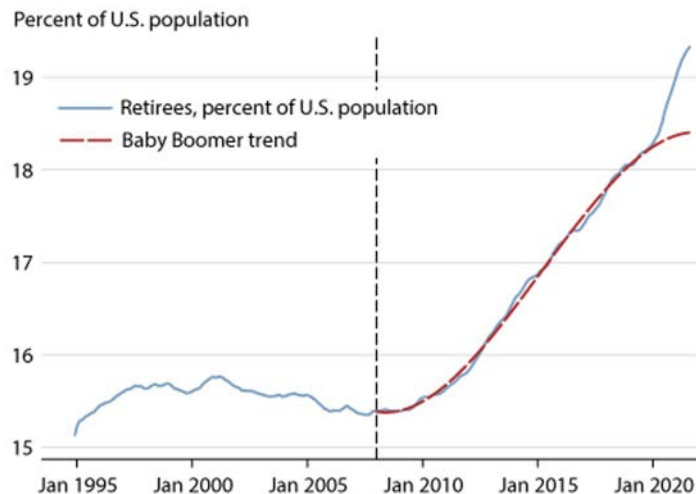
NOTE: The percentage of retirees is a 12-month moving average, and the Baby Boomer trend is a cubic trend estimated between January 2008 and February 2020.
SOURCE: Current Population Survey and author's calculations.

Axios

...Where there is a mismatch between education, employment and career opportunities...

DESPITE

10.1M

JOB OPENINGS

in June 2021,

8.7M

people were **UNEMPLOYED** in July

47%

Almost **HALF** of recent college grads are underemployed or unemployed (as of June 2021)

41%
UNDEREMPLOYED

6%
UNEMPLOYED

Sources: Wall Street Journal; Federal Reserve Bank of New York

...And employers are seeking shorter time frames than a degree

54% of employees will need upskilling by 2022, and 25% will need upskilling lasting less than six months.

Time Needed for Upskilling

1-3 Months — 12%
3-6 Months — 10%
6-12 Months — 9%
> 1 Month — 13%
> 1 Year — 10%
No Upskilling — 46%

The market is seeking ways to connect the Value Chain

College Entry	Post Secondary	Career Transition	Career	Career Lifecycle

Themes

College Entry
- Program Planning
- Major Mapping
- Career Mapping

Post Secondary
- Job role skill mapping
- Career "GPS"

Career Transition
- Job search
- Career Services gap

Career
- Career readiness
- Upskilling

Career Lifecycle
- Inskilling
- Upskilling
- Competency Mgmt.

Touchpoints

College Entry
- Students
- Advisors
- Enrollment Mgmt.

Post Secondary
- Students
- Advisors
- Faculty
- Academic Admin.

Career Transition
- Students
- Employers
- Hiring Managers

Career
- Employee
- Managers/directors
- HCM/Talent development

Career Lifecycle
- Employee
- Managers/directors
- HCM
- HR talent development

Non-Degree Programs

Workforce Analytics

Intermediaries

Learning Exchange Platforms

Credentialing Platforms

Recruiting Platforms

HCM Talent Management

HCM-ATS

HR Management

The market is seeking ways to connect the Value Chain

College Entry	Post Secondary	Career Transition	Career	Career Lifecycle

Themes

College Entry	Post Secondary	Career Transition	Career	Career Lifecycle
• Program Planning • Major Mapping • Career Mapping	• Job role skill mapping • Career "GPS"	• Job search • Career Services gap	• Career readiness • Upskilling	• Inskilling • Upskilling • Competency Mgmt.

Touchpoints

• Students • Advisors • Enrollment Mgmt.	• Students • Advisors • Faculty • Academic Admin.	• Students • Employers • Hiring Managers	• Employee • Managers/directors • HCM/Talent development	• Employee • Managers/directors • HCM • HR talent development

Non-Degree Programs

Workforce Analytics

Intermediaries

Learning Exchange Platforms

Credentialing Platforms

Recruiting Platforms

HCM Talent Management

HCM-ATS

HR Management

EMPLOYERS
- Assess and project talent demand & composition
- Access talent supply for talent pipeline
- Compare wage & other metrics relative to competitors

HIGHER EDUCATION
- Higher education reform & program quality
- Program alignment of to in-demand job roles
- Labor market job/skill identification feedback job ready students

STUDENTS
- Can benefit from talent marketplace for planning purposes

STATES & POLICYMAKERS
- Inform decisions on short/long range economic development
- Develop state economic incentive programs
- Identifying regional industry emerging skills needs
- State agency data interoperability facilitates state specific research for strategic planning

JOBSEEKERS & WORKFORCE AGENCIES
- State external talent marketplace
- Connect labor supply/demand
- Develop skills profiles & career paths
- Connect with real-time employer demand
- Use data/AI to inform Upskilling and placement

Disconnected Systems

Data, AI & Job Tech Well Positioned

...and HR has New Clout

- HR departments are **gaining clout** as companies grapple with return-to-work plans and the war for talent

- Listings for HR jobs are spiking — **up 53%** from before the pandemic (Indeed)

- The rise C-suite **Chief People Officers**

- **Modern issues** that newly muscular HR departments must grapple with bridging talent gaps in high in-demand job roles. **Automation will play a key role**

From Axios

Employers want to see programs that integrate work and learning...

Top three **employer-recommended priorities** for colleges and universities:

1   **INCORPORATE**
real world projects and engagements
with employers and the world of work

2   **GIVE**
academic credit for experience and on-
the-job learning

3   **INCLUDE**
more industry and employer validation of
curriculum

Source: Northeastern University Center for the Future of
Higher Education and Talent Strategy

From Reach Capital..

...but employers still struggle to hire

A disconnected environment

8.5
Million

Potential workers who are unemployed

10.9
Million

Record jobs open

The rate at which unemployed people are getting jobs is lower than it was pre-pandemic, and it's taking longer to hire people

Capital Markets

Redesign Title Page
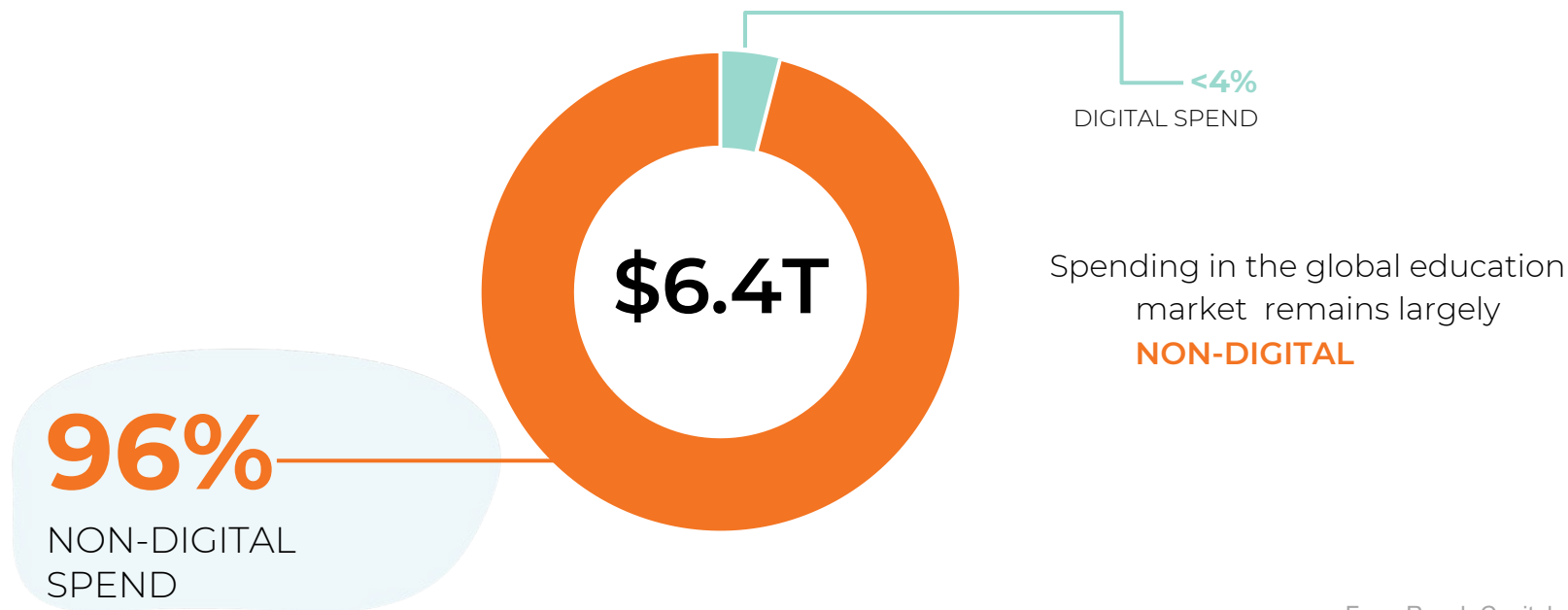
...amidst unprecedented funding for more edtech unicorns and highly valued startups

Age of Learning®
$300M raise at $3B valuation

GUILD
$150M raise at $3.8B

newsela
$100M raise at $1B

PAPER
$100M raise at Undisclosed*

Handshake
$80M raise at $1.5B

Outschool
$75M raise at $1.3B

class
$105M raise at $804M

7 of the **LARGEST U.S. EDTECH INVESTMENTS** to date in 2021 went to K-12 and higher ed startups

Investments in the Ed Tech industry are at record highs...

U.S. edtech investing on track to **MORE THAN DOUBLE** in 2021

2.5x

$3.2B
(1H)

$5.5B
(Projected)

$1.2B

$1.5B

$1.7B

$2.2B

2017   2018   2019   2020   2021

Sources: Pitchbook, EdSurge

From Reach Capital
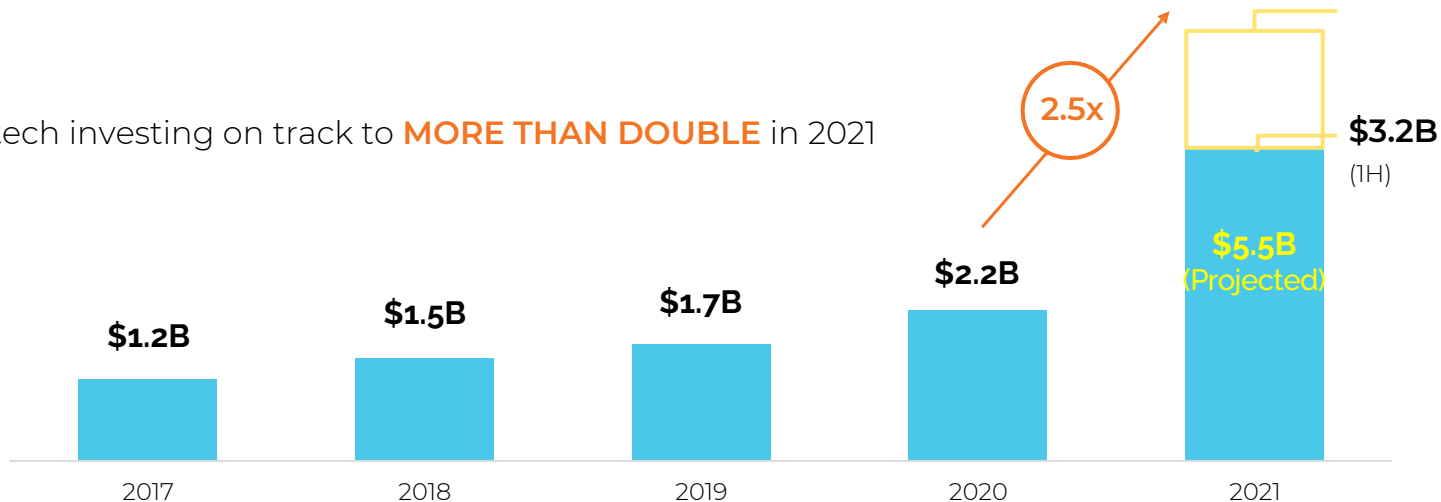
...as big exits via IPOs and M&A transactions accelerate

2021 IPOs

coursera

$5.8B
valuation

PowerSchool

$3.5B

duolingo

$3.7B

INSTRUCTURE

$2.9B

2021 M&As

edX

$800M

transaction size

nearpod

$650M

Clever

$500M

epic!

$500M

From Reach Capital.

Emergence of
Job Tech

Job Tech Ecosystem

~$375B Annually Bridging the Education-to-Employment Gap

Job Seekers

Employers

Platforms for Employers

~$16b

Platforms for Job Seekers

~$4b Marketplaces (Job boards, temp worker platforms

~$1b

Talent Discovery (Based on Skill, Fit etc.)

~11b

Talent Engagement (Career Coaching, Skill Recognition etc.)

~$5b

Talent Selection (Competency Skills Assessment, Interview Platforms etc.)

~$2b Pathways to Employment (Avenica, TalentPath, WhiteHat)

Labor Market Information

To date, most JobTech companies are tech-driven **point solutions solving select problems** like identifying or certifying talent. The next generation of JobTech companies provide full-stack pathways to employment, where employers identify high quality talent directly from sources (e.g., colleges), train them, and audit their capabilities before hiring talent full time

From Achieve Partners

...but the market is fragmented and confusing

INTERMEDIARIES	DEGREE/NON-DEGREE PROGRAMS	LEARNING EXCHANGE PLATFORMS	COMPETENCY-SKILLS MAPPING
GUILD, InStride, EdAssist (Smarter Education Management, A Bright Horizons Solution at Work), LEARN IN, straighterline	UDACITY, Lambda, PATHSTREAM, codecademy, skillsoft, Galvanize, KORU, TRILOGY Education Services, SKILLSHARE., Acadium	coursera, Udemy, edX, degreed., PLURALSIGHT, campuswire, edcast	AstrumU, DevSkiller, TALENTGUARD

NEXT GEN LEARNING TECH	WORKFORCE ANALYTICS	SKILLS FRAMEWORKS	CREDENTIALING PLATFORMS
Class for Zoom, Class.edu, NovoED, instilled by PeopleFluent, Engageli	burningglass TECHNOLOGIES, Emsi	o*net, sn Open Skills Network, NIOSH, NICCS	GENERAL ASSEMBLY, badgr, Credly

We've analyzed over 200 workforce education companies in over 10 categories
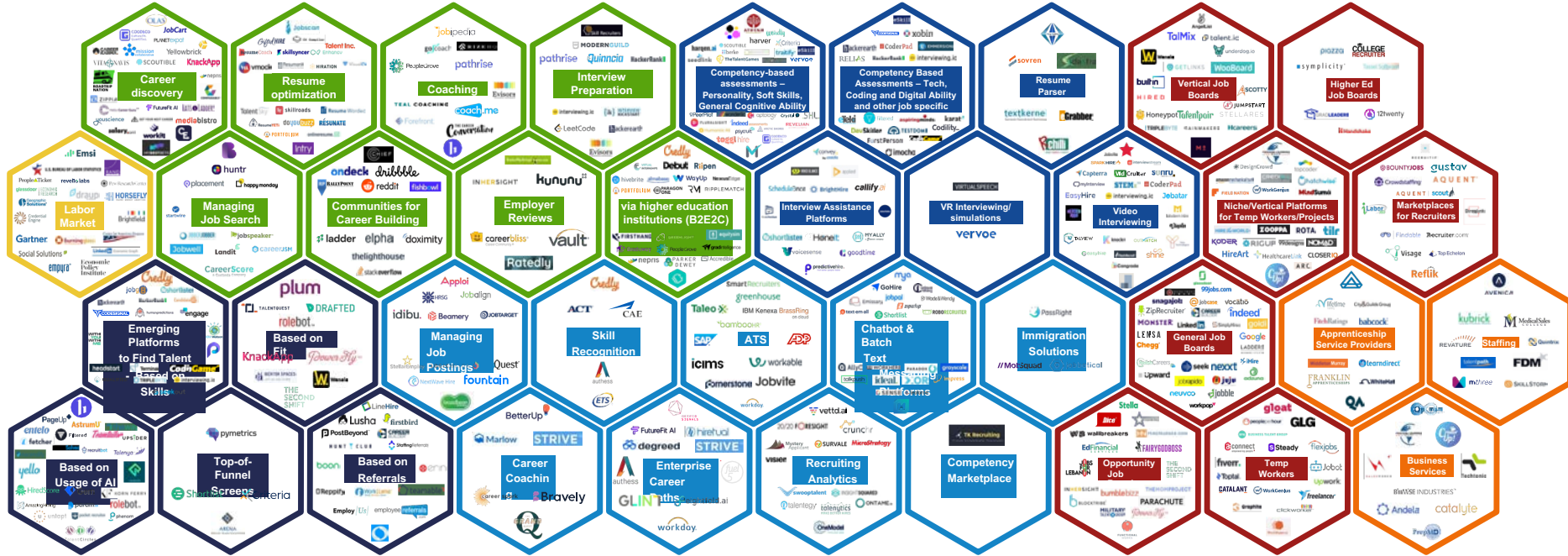
Seed Stage

PE backed

Workforce Market- Table

Total Investment	Workforce Category	# Companies	High	Low
	Capitalization by Category			
1,056,700,000	Learning Exchange Platforms	8	390,000,000	3,000,000
1,153,769,600	AI Based Recruiting & Hiring	13	638,000,000	7,100,000
1,350,000,000	Corporate HCM-Talent Management	12	396,800,000	3,000,000
3,916,974,993	Staffing Agencies		1,100,000,000	1,200,000
70,800,000	Skills Mapping	7	21,000,000	3,000,000
83,001,690	Internships	4	37,300,000	1,900,000
134,100,000	Talent Search (corporations)	4	87,500,000	3,000,000
164,640,455	Competency-based assessments – SEL/Soft Skills/Cognitive Abil..	12	83,300,000	3,100,000
220,800,000	Recruting Analytics	4	216,500,000	2,500,000
327,460,000	Labor Market Analytics and Info	12	180,000,000	650,000
519,800,000	Workforce Management Intermediaries	6	378,000,000	5,800,000
606,300,000	HR/Talent Management	9	3,600,000	283,300,000
612,500,000	Job Seeker Platforms	9	434,000,000	3,100,000
695,700,000	Next Gen Learning Platforms	11	550,000,000	4,000,000
725,400,000	ATS	10	255,500,000	1,900,000
781,300,000	Career Coaching	8	566,900,000	1,000,000
$4,742,040,070	Non-Degree Programs- Workforce education content	37	1,000,000,000	4,200,000
Total Invested	Null			

Companies, High and Low broken down by Total Investment and Workforce Category. The view is filtered on Exclusions (Total Investment, Workforce Category), which keeps 20 members.

$17.2 Billion invested in Workforce & Job Tech

- 170 Companies
- 18 Categories
- Mean Average Investment 1.6 billion

Total Investment
- 1,153,769,600
- 1,350,000,000
- 3,916,974,993
- 70,800,000
- 83,001,690
- 134,100,000
- 164,640,455
- 220,800,000
- 327,460,000
- 519,800,000
- 606,300,000
- 612,500,000
- 695,700,000
- 725,400,000
- 781,300,000
- 4,742,040,070

$4,742,040,070
Non-Degree Programs- Workforce education content
$143,698,184

781,300,000
Career Coaching
111,614,286

725,400,000
ATS
80,600,000

164,640,455
Competency-based assessments – SEL/Soft Skills/Cognitive Ability

220,800,000
Recruiting

695,700,000
Next Gen Learning Platforms
128,640,000

327,460,000
Labor Market Analytics and Info
40,932,500

1,153,769,600
AI Based Recruiting & Hiring
96,147,467

1,350,000,000
Corporate HCM-Talent Management
103,846,154

519,800,000
Workforce Management

612,500,000
Job Seeker Platforms
76,562,500

134,100,000
Talent Search

83,001,690
Internships

70,800,000
Skills Mapping
10,114,286

606,300,000
HR/Talent Management
75,787,500

Thank you.

Graveyard

Growing enrollment

New edtech unicorn creations by year

14
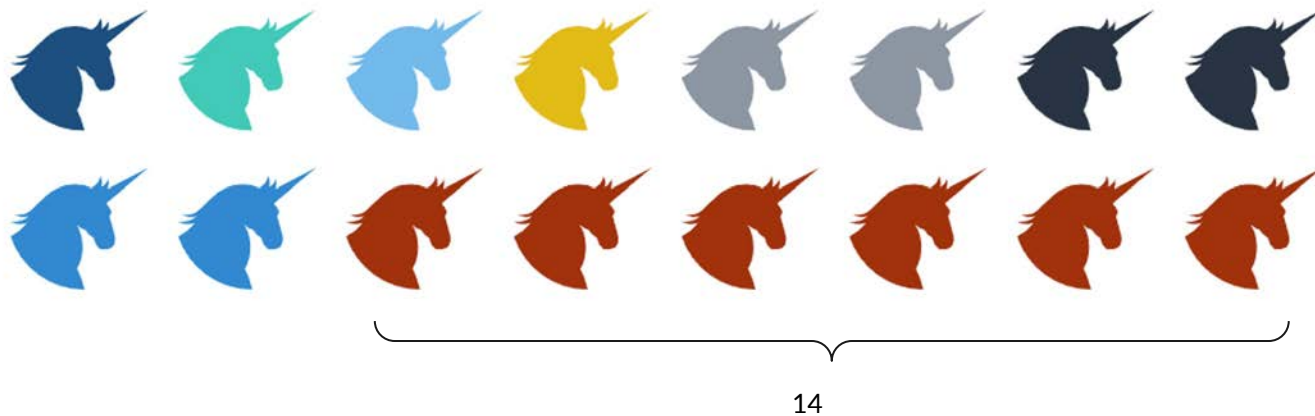
● 2014 ● 2015 ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021*

Unicorns defined as companies valued at $1 billion or more

Jobtech Market Map

Legend:
- Labor market information
- Platforms for job seekers
- Marketplaces
- Pathways to employment
- Platforms for Employers – Talent Discovery
- Platforms for Employers – Talent Selection
- Platforms for Employers – Talent Engagement