

# Digital Skills

Our Challenge and our  
Charge



We Live in a  
Changing,  
Competitive  
Digital World





# A Few Realities

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Competition for Skills  
Competition for Pay  
Continual State of Disruption

# LinkedIn Emerging Jobs Report Says...

Below are the three fastest-growing jobs LinkedIn looked at YOY across the Americas, Europe and Asia:

## United States

1. AI Specialist (+74%)
2. Robotics Engineer (+40%)
3. Data Scientist (+37%)
4. Full Stack Engineer (+35%)
5. Site Reliability Engineer (+34%)
6. Customer Success Specialist (+34%)
7. Sales Development Representative (+34%)
8. Data Engineer (+33%)
9. Behavioral Health Technician (+32%)
10. Cybersecurity Specialist (+30%)
11. Back End Developer (+30%)
12. Chief Revenue Officer (+28%)
13. Cloud Engineer (+27%)

## Canada

1. AI Specialist
2. Site Reliability Engineer
3. Data Engineer

## Mexico

1. Agile Coach
2. Customer Success Manager
3. Cybersecurity Specialist

## Brazil

1. Social Media Manager
2. Cybersecurity Engineer
3. Sales Representative

## United Kingdom

1. AI Specialist
2. Data Protection Officer
3. Robotics Engineer

## Germany

1. AI Specialist
2. Site Reliability Engineer
3. Customer Success Specialist

## France

1. Data Protection Officer
2. AI Engineer
3. Realtor

## Australia

1. AI Specialist
2. Cyber Security Specialist
3. Robotics Engineer

## India

1. Blockchain Developer
2. AI Specialist
3. Javascript Developer

## Singapore

1. AI Specialist
2. Robotics Engineer
3. Full Stack Engineer

# The Positions We Need are in Demand

Skills / Certifications	Amazon	Apple	Cisco	Google	HTML	Java	Python	Microsoft
USA - open jobs requiring / preferring these skills / certifications	18,994	6,991	7,620	56,518	44,131	55,722	64,939	409,960

Source: indeed.com, Nov 2020

**29,754**

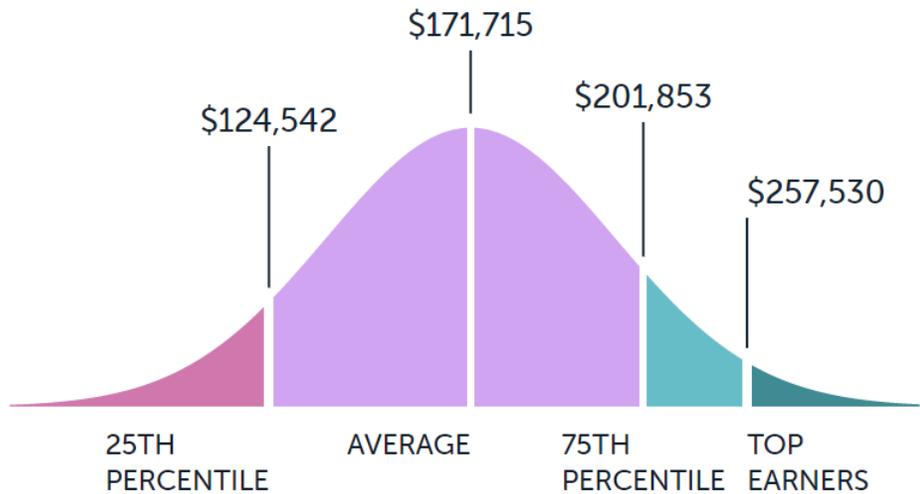
Source: glassdoor.com, Nov 2020



Number of open jobs requiring **Microsoft Azure** skills in their job description & requirements. (+1,688 new jobs in the last 24 hrs).

# And Highly Compensated

Salary Range for AI Engineers - USA



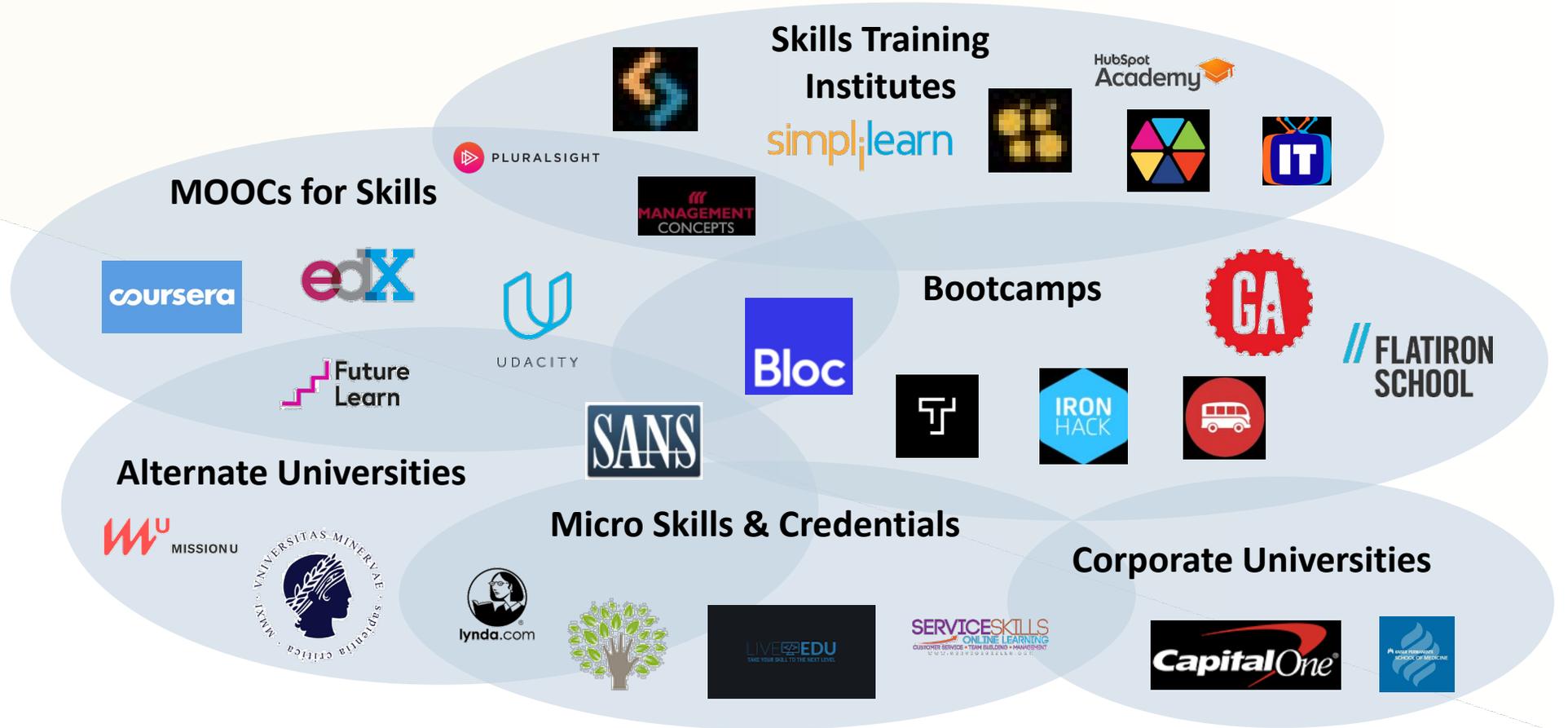
Source: Payscale, February 2020

# And We Can't Keep Up...

Title	Kent State Avg	Mercer 25 Perc	Mercer Mean	Mercer Median
Applications Developer	61,972.17	73000	83022	82000
Business Systems Analyst	56,181.60	66819	76260	75000
Dir, IT Service Management	108,616.43	125000	144986	140683
Exec Dir, Info Technology	152,387.28	191201	221244	215498
IT Security Analyst	57,962.60	71870	83910	81058
Lead Applications Developer	85,677.32	106766	118990	118600
Lead Database Analyst	108,961.78	118001	129163	129130
Mgr, Information Technology	72,249.92	94735	111274	110692
Sr Network Design Engineer	80,611.93	92349	104819	104441

# The Shadow Education Sector

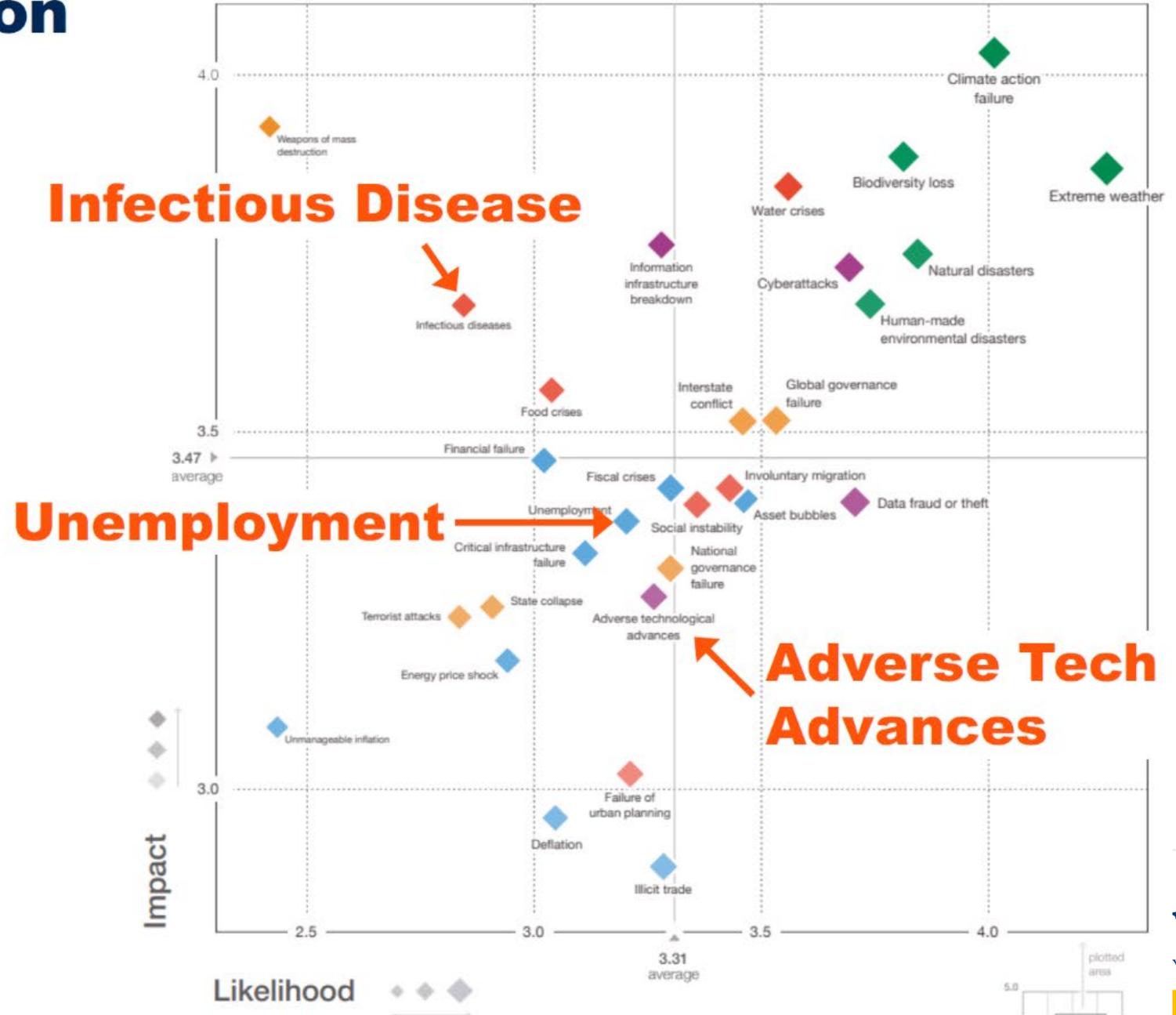
- Over 500+ providers
- Millions of students
- Global
- Online, in-person & blended



# Some Threats Are An Opportunity or Even Obligation For Higher Education



## Risk Landscape 2020



8 Source: [The Global Risks Report 2020](#), World Economic Forum



# Is Our Workforce Changing, Competitive, Digitally Fluent... Ready?

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Staying Ready for  
the Opportunity

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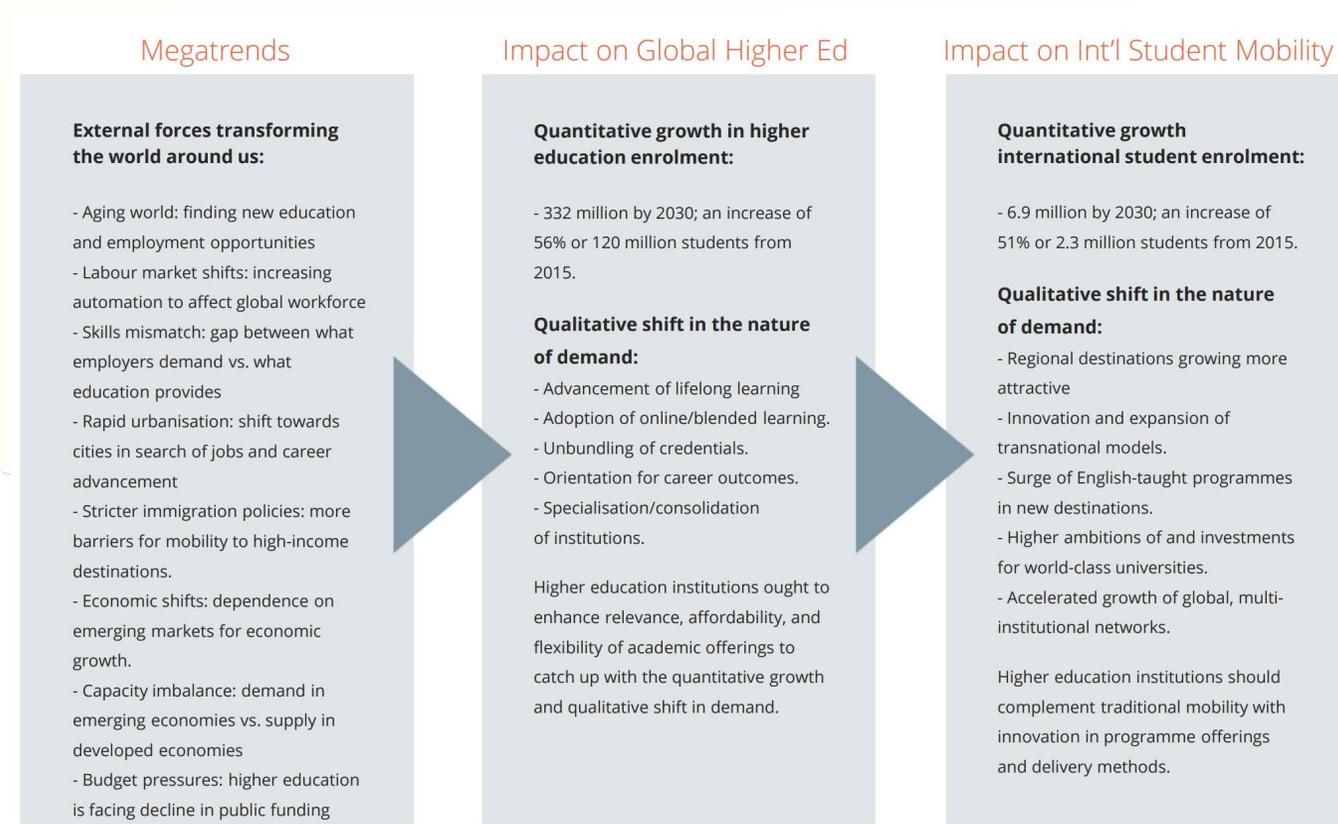
"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next 10. Don't let yourself be lulled into inaction."

Bill Gates

# Higher Education Predictions 2030 – Pre-Covid

- Holo-classroom
- More Online courses
- Robotic infused learning
- Globalization of HigherEd
- Portable AI learning devices

TechGenYZ, 2018



## Megatrends

### External forces transforming the world around us:

- Aging world: finding new education and employment opportunities
- Labour market shifts: increasing automation to affect global workforce
- Skills mismatch: gap between what employers demand vs. what education provides
- Rapid urbanisation: shift towards cities in search of jobs and career advancement
- Stricter immigration policies: more barriers for mobility to high-income destinations.
- Economic shifts: dependence on emerging markets for economic growth.
- Capacity imbalance: demand in emerging economies vs. supply in developed economies
- Budget pressures: higher education is facing decline in public funding

## Impact on Global Higher Ed

### Quantitative growth in higher education enrolment:

- 332 million by 2030; an increase of 56% or 120 million students from 2015.

### Qualitative shift in the nature of demand:

- Advancement of lifelong learning
- Adoption of online/blended learning.
- Unbundling of credentials.
- Orientation for career outcomes.
- Specialisation/consolidation of institutions.

Higher education institutions ought to enhance relevance, affordability, and flexibility of academic offerings to catch up with the quantitative growth and qualitative shift in demand.

## Impact on Int'l Student Mobility

### Quantitative growth international student enrolment:

- 6.9 million by 2030; an increase of 51% or 2.3 million students from 2015.

### Qualitative shift in the nature of demand:

- Regional destinations growing more attractive
- Innovation and expansion of transnational models.
- Surge of English-taught programmes in new destinations.
- Higher ambitions of and investments for world-class universities.
- Accelerated growth of global, multi-institutional networks.

Higher education institutions should complement traditional mobility with innovation in programme offerings and delivery methods.

# 4.1 million (re) learners?

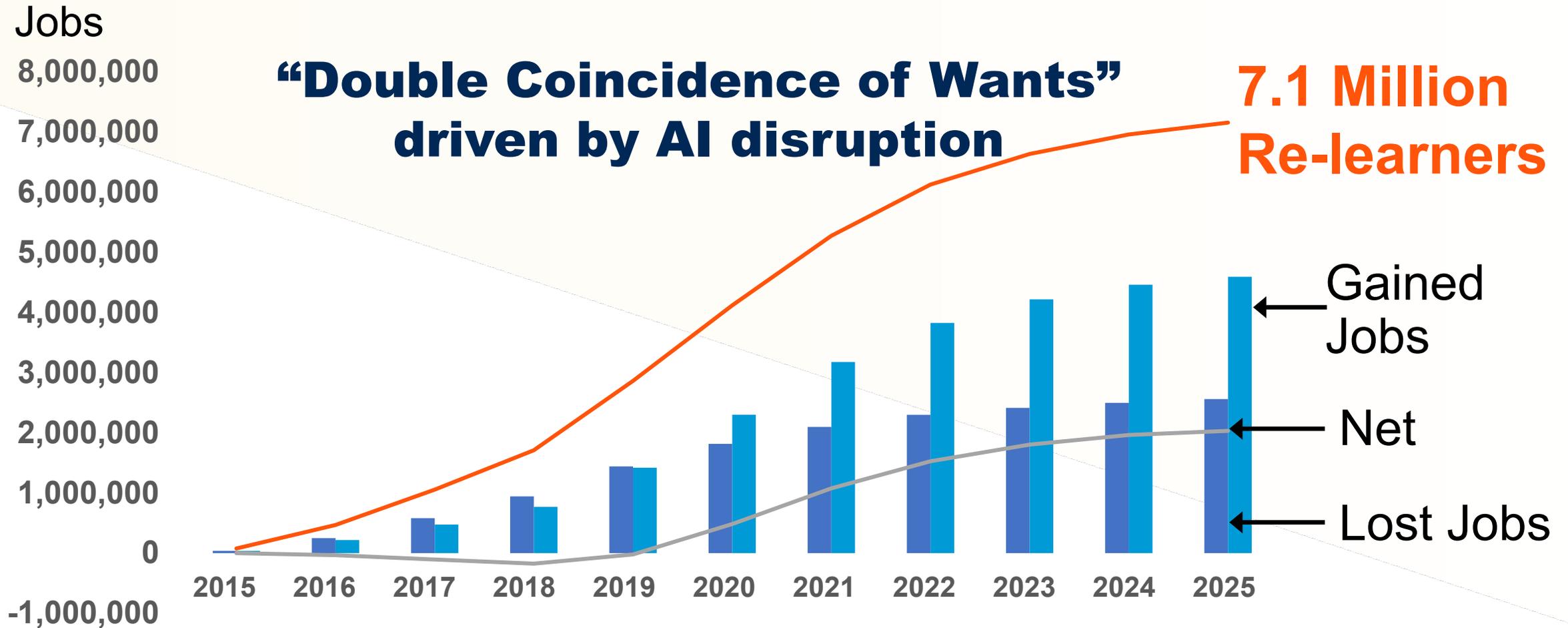
“Double Coincidence of Wants”

In 2020, AI becomes a positive net job motivator, **creating 2.3 million jobs**, while **eliminating only 1.8 million jobs**.

Analysis by: Svetlana Sicular, John-David Lovelock

“Top Strategic Predictions for 2018 and Beyond: Pace Yourself, for Sanity’s Sake,” (G00340316)

# The Supply of Re-learners Grows



**It is NOT about jobs, it IS about SKILLS**



**What Skills?**  

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## Top 10 Business Trends

Analytics Everywhere

New Business Models

Online Differentiation

Ethical Use of Data

Corporate Collaboration

Ecosystem

Collegiate Esports

Developing Digital Dexterity

Reinventing Credentials

Creative Financing

## Top 10 Strategic Technologies Trends

Artificial Intelligence

Next Generation Security

Smart Campus

Nudge Tech

Digital Credentials

Cross-Life-Cycle-CRM

5G/Ecosystem Infrastructure

New Display and Visualization

Career Software

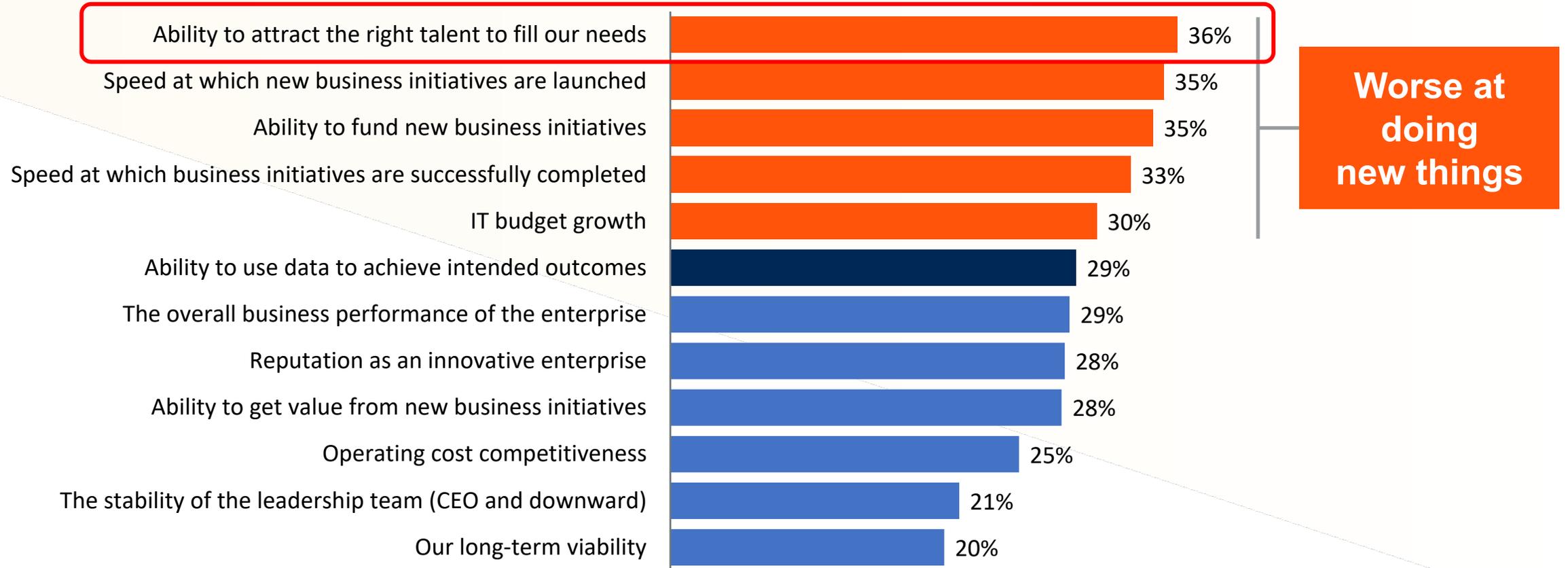
Faculty Information Systems



2020

# Effect of Change & Disruption

Percent of respondents behind where they would have been



Worse at doing new things

Q: What was the effect of the disruption, on your enterprise's abilities? Showing Far behind where we would have been had it not been for the disruption + Behind where we would have been had it not been for the disruption

n = 926 — 945 (varies by performance measure), Organization faced any disruption, excluding "not sure"

# 79%

of CEOs say a **lack of key skills** is threatening the future growth of their organization

Source: PwC 22<sup>nd</sup> Annual  
Global CEO Survey Trend  
Series: Talent Trends 2019

# Skills for the Future Workforce

Sense-Making

Social  
Intelligence

Novel &  
Adaptive  
Thinking

Cross-Cultural  
Competency

Computational  
Thinking

# Skills for the Future Workforce

## Sense-Making

*ability to determine the deeper meaning or significance of what is being expressed*

## Social Intelligence

*ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interactions*

## Novel & Adaptive Thinking

*proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based*

## Cross-Cultural Competency

*ability to operate in different cultural settings*

## Computational Thinking

*ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning*

# Skills for the Future Workforce

NEW-MEDIA LITERACY

TRANSDISCIPLINARITY

DESIGN MINDSET

COGNITIVE LOAD  
MANAGEMENT

VIRTUAL  
COLLABORATION

# Skills for the Future Workforce

## NEW-MEDIA LITERACY

*ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication*

## TRANSDISCIPLINARITY

*literacy in and ability to understand concepts across multiple disciplines*

## DESIGN MINDSET

*ability to represent and develop tasks and work processes for desired outcomes*

## COGNITIVE LOAD MANAGEMENT

*ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques*

## VIRTUAL COLLABORATION

*ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team*



# From Challenges to Action

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**Develop a Pipeline**



**Develop our Workforce**



**Digital Skill Framework**

# Digital Leadership Academy



**Creativity**



**Adaptability**



**Cultural  
Fluency**



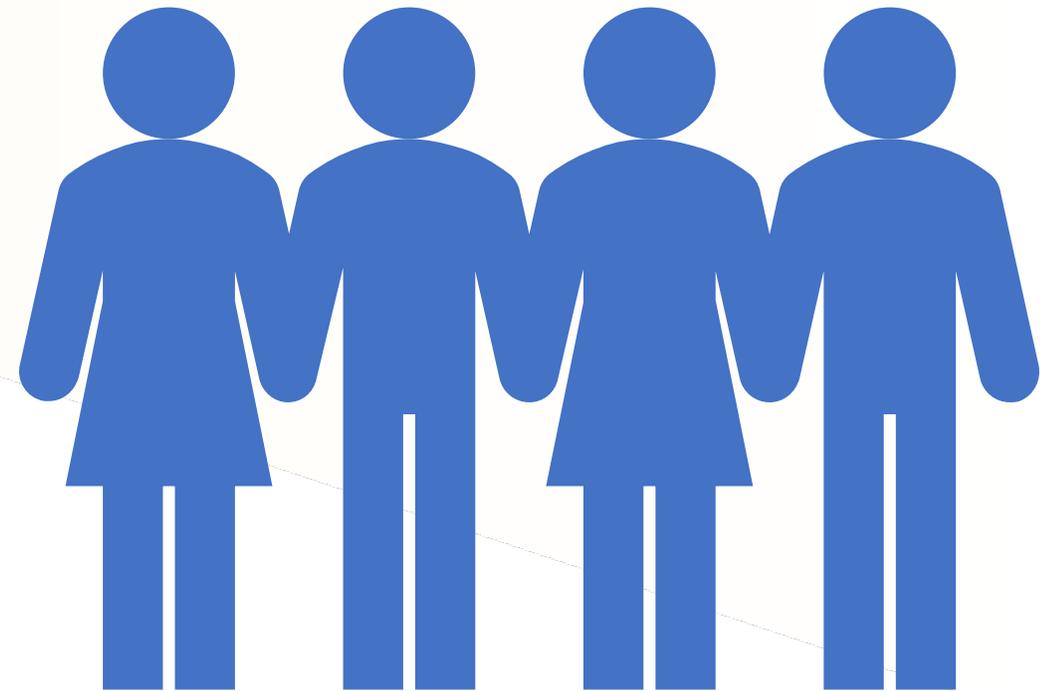
**Digital Literacy**



**Meaningful  
Experiences**

# Experiences that Provide

- **Practice of the Future Skills needed in the Workplace**
- **Multi-disciplinary Team Muscle Memory**
- **Cultural Diversity**
- **Corporate Structure**
- **Creative Challenges**
- **Process Review & Improvement**
- **Generational Engagement**
- **Digital Dexterity**
- **Data Analysis**



**Program**

**Place**

**Round**

**Reward**

**Train**

**Recruit**

**Program**

**Place**

**Round**

**Reward**

**Train**

**Recruit** ▶

Collaborate with enrollment team and deans to support recruiting and enrolling students who have interest in the program. Develop a frictionless registration and start to their collegiate careers. Establish support community and mentors.

**Program**

**Place**

**Round**

**Reward**

**Recruit**

**Train**

Rich exposure and training to tools which enhance productivity. Functional and Technical training and real-world application of skills. Multi-disciplinary & diverse teams. Practical experiences addressing IT best practices, leadership, creativity, design & innovation, critical thinking, persuasive communication, virtual work.

**Program**

**Place**

**Round**

**Train**

**Recruit**

**Reward**

Performance & role-based pay rate. Access leadership for 1:1 mentoring. Badging & non-credit credentials, enhanced portfolio, job shadowing, industry leader colloquium, letters of reference, \*certifications, \*sponsorship to attend vendor / technology forums.

**Program**

**Place**

**Reward**

**Train**

**Recruit**

**Round**

Provide broad range of functional, technical, power and team experiences through divisional and departmental projects. Engagement/internship experiences with NEO industry. Exposure to project management, incident management, change management, Lean, data analysis.

**Program**

**Recruit**

**Train**

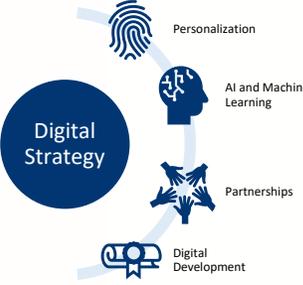
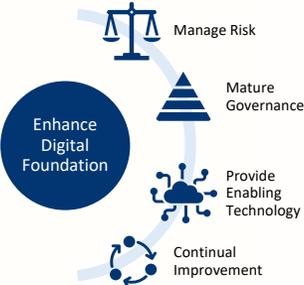
**Reward**

**Round**

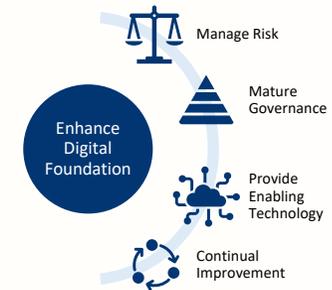
**Place**

Engage with local organizations. Partner with Kent State to promote an industry digital leadership academy advisory team. Leverage internship programs, develop student portfolio, reconnect for life-long learning and workplace skill development.

# DoIT Themes – Guiding Strategy and Initiatives



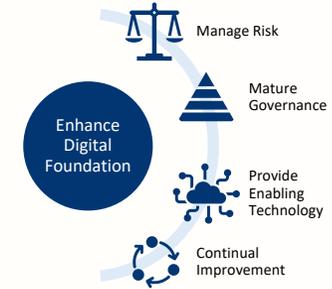
## DoIT Themes – Guiding Strategy and Initiatives



*“If you take care of your employees, they will take care of your customers and your business will take care of itself.”*

J W Marriott

# DoIT Themes – Guiding Strategy and Initiatives



Make IT About People

- Empower Action
- Develop Capabilities
- Expand & Deepen Skills
- Enhance Understanding & Engagement
- Increase Digital Fluency
- Value Difference & Diversity

# Digital Skills Framework



**Digital Fluency**



**Communication and  
Collaboration**



**Problem Solving**



**Digital Responsibility  
and Trust**



**Creativity and  
Innovation**



**Entrepreneurial Spirit**

# Digital Skills Framework



**Digital Fluency**



**Communication and  
Collaboration**



**Problem Solving**



**Digital Responsibility  
and Trust**



**Creativity and  
Innovation**



**Entrepreneurial Spirit**

*Digital Fluency* involves deeper understanding of technology, a proficiency in data use, and the ability to follow technology trends and apply those trends to a role and for the good of the organization. This is foundational.

# Digital Skills Framework



Digital Fluency



**Communication and  
Collaboration**



Problem Solving



Digital Responsibility  
and Trust



Creativity and  
Innovation



Entrepreneurial Spirit

*Communication and Collaboration* is about recognizing that people within an organization need to participate in digital teams, share projects, tasks, calendars, tools & media. They need to work effectively across cultural, social and language barriers, while learning to share openly across networks as appropriate.

# Digital Skills Framework



Technical Fluency



Communication and  
Collaboration



**Problem Solving**



Digital Responsibility  
and Trust



Creativity and  
Innovation



Entrepreneurial Spirit

*Problem-Solving* is the backbone of all employee work. Technology allows individuals to use data and systems in figuring out answers to problems. It also means problems get more complicated with the increase in information and working in a digital environment defined by ‘systems of systems’. People will need to be facile using research, analytics, rapid prototyping and feedback. They will have to be nimble and pivot to incorporate environmental changes.

# Digital Skills Framework



Digital Fluency



Communication and  
Collaboration



Problem Solving



Digital Responsibility  
and Trust



Creativity and  
Innovation



Entrepreneurial Spirit

*Digital Responsibility/Trust* is critical to understanding one's own digital footprint. In a student first, student ready university, work with our students and constituents means safety and security of those individuals is a moral imperative. Ethical use of data, administrative integrity and individual responsibility related to the benefits and risks of giving information across devices and different sites thru software. Developing a positive online identity, and building a digital reputation, while being safe leads to a skill around Digital Responsibility and Trust.

# Digital Skills Framework



Digital Fluency



Communication and  
Collaboration



Problem Solving



Digital Responsibility  
and Trust



**Creativity and  
Innovation**



Entrepreneurial Spirit

*Creativity & Innovation* remains a skill but grows to include the ability to generate new ideas or revise original ones with divergent thinking or by drawing connections thru categorization, prioritization or other segmentation. This skill uses the information available thru technology and data to make better formed decisions and allows people from different places to participate in the creative process.

# Digital Skills Framework



Digital Fluency



Communication and  
Collaboration



Problem Solving



Digital Responsibility  
and Trust



Creativity and  
Innovation



**Entrepreneurial Spirit**

*Entrepreneurial Spirit* is an important part of a digital skill set. It involves a fail-fast attitude, and a feeling of ownership. Employees can look at old problems or processes with new eyes. They challenge old ways of working and are open, co-creators with a laser focus on users and customers, and an agile way of working within an organization.

# Innovation: Develop a 'Hacker' Attitude



## Every Barrier is Penetrable

The question is not if, but how

Approach every problem, step and obstacle understanding it can be overcome

Mindset favors simplicity



## Compasses over Maps

Develop curiosity and exploration

Know where you're headed, adjust course based on situation

Love the problem, not the solution



## Nothing is Static

Maintain thirst to learn and self-improve

Embrace, don't fear change

Complacency is not an option, today's knowledge is obsolete



## Quantity is a Force Multiplier

Two heads are better than one

Embrace diverse and democratized ideas

Pool knowledge & resources, be excited about other ideas



## The only Real Credential: Competence

All that matters is what you can do & demonstrate

Take risks on people based on what they do, not what they are on paper

Find brilliant people, challenge yourself

# Competency & Badges

Mentor Name:

Badge Name:	
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Learning Outcomes:

1.
2.
3.

Activities/Projects:

1.
2.
3.

Evaluation/Criteria:

1.
2.
3.

Potential Job/s


# Competency & Badges

Skill Tags	Criteria One	Criteria Two	Criteria Three	Template Attributes		
	Criteria One - Activity Name	Criteria Two - Activity Name	Criteria Three - Activity Name	Type	Level	Time
1-3 word descriptions of the skills, competencies, or tools demonstrated by the earner now that they have earned the badge. Skill tags improve search and discoverability of badged achievements. These are the keywords that will search labor market demand that can be exposed to the badge earner. Best practice is anywhere from 8 - 15 total skill tags.	Describe the required activity to earn the badge using descriptive action phrases.			Template Attributes allow you to help differentiate between badges both within your organization and across the Acclaim platform.  OPTIONS: Experience; Learning; Validation; Certification      OPTIONS: Foundational; Intermediate; Advanced      OPTIONS: Hours; Days; Weeks; Months; Years		
<b>REQUIRED</b>	<b>REQUIRED</b>	<b>Optional</b>	<b>Optional</b>	<b>Optional</b>	<b>Optional</b>	<b>Optional</b>
<i>2D Design, 3D Design, Architecture, CAD Software, Connectivity Customization, Design, Digital Skills, Documentation, Drafting Engineering, Interior Design, Project Management</i>	<i>Complete an Autodesk AutoCAD training course or self-study training</i>	<i>Acquire real-world experience with Autodesk AutoCAD software</i>	<i>Pass a proctored exam on Autodesk AutoCAD complete with identity verification at a Certiport Authorized Testing Center</i>	<i>Certification</i>	<i>Foundational</i>	<i>Weeks</i>

# Competency & Badges

Customer Service Training 1	Customer Service Training 2	Customer Service Mastery	Change Management Basics	Project Management Basics	Lean Problem Solving
Writing Skills	Social Media Skills	Video Editing	Presentation Skills		
HD Faculty Call Certified	HelpDesk Stats Weekly	HD Standard Call Certified	HD LMS Call Certified	HelpDesk Chat Certified	
HD Workforce Management	HelpDesk Mastery	HelpDesk Student Leader	HelpDesk CSAT		
Computer Troubleshooting Basic	Computer Troubleshooting Advanced	Apple Certified Mac Technician	Dell Certified Technician	Computer Technician Basic	
Computer Technician Advanced	Computer Technician Lead	Data Backup Technician	Advanced Data Recovery Technician	Liquid Damage Cleaning	Front Counter Customer Service Lead
Microsoft Train the Trainer	Google Train the Trainer	Training Microsoft Excel	Training Microsoft Powerpoint		
Training Microsoft Word	Training Microsoft Teams	Training Adobe Spark	Training Google Docs		
Network & Telecomm Warehouse	NTS Horizontal Cable Basic	Wireless Data Service Basic	Network Data Services Basic		
Wireless Data Service Advanced	Network Data Services Advanced	Wireless Data Service Master	Network Data Services Master		

Enterprise Device Management	Enterprise Infrastructure & Cloud Management	Systems Management Beginner	Systems Management Advanced	Systems Management Master		
Database Concepts Basic	ERP Concepts Basic					
Data Analytics Beginner	Data Analytics Advanced	Data Analytics Master	Responsible Use of Data	Requirement Analysis & Development		
SQL Development Beginner	SQL Development Advanced	SQL Development Master	PL/SQL Development Beginner	PL/SQL Development Advanced	PL/SQL Development Master	
App Deployment Azure Beginner	App Deployment Azure Advanced	App Deployment Azure Master	Machine Learning	Software Developer Beginner	Software Developer Advanced	Software Developer Master
API Connectivity Beginner	API Connectivity Advanced	API Connectivity Master	Digital Accessibility Beginner	Digital Accessibility Advanced	Digital Accessibility Master	User Experience Design UX
Email Phishing Beginner	Email Phishing Advanced	Email Phishing Master	Log Analysis Beginner	Log Analysis Advanced	Log Analysis Master	
Security Procedure Documentation Beginner	Security Procedure Documentation Advanced	Security Procedure Documentation Master				

# Digital Leadership Academy & Skills Framework

*Building Blocks for a Shared Vision*



# Your Turn



## Thoughts?

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330-672-8544



## Questions?