




SMALL LIBRARY

BIG PARTNERSHIPS

2019 New York Library Association Conference

- 
-
1. Assessment
 2. Development
 3. Community Partners
-

The background of the slide is a dark, textured surface filled with numerous interlocking gears of various sizes. The gears are rendered in a monochromatic, metallic style, with some appearing more prominent than others. The overall effect is one of mechanical complexity and interconnectedness.

PARTNERSHIP

An arrangement where two or more parties cooperate to advance their mutual interests.

PARTNERSHIPS

NURTURED BY THE PHELPS LIBRARY IN 2018

Innumerable members of all ages from our community
Administrators and Educators from Belarus – partnership as leaders in STEAM Education
American Legion – Missing Man Table
Assemblyman Brian Kolb – Workforce and Economic Development
Assemblyman Harry Bronson – Workforce and Economic Development
Association of Rural and Small Libraries – Libraries as Education
Business Ventures – volunteers
Canandaigua Chamber of Commerce – partnerships in general, following a mixer at PLS
Chili Public Library – makerspace development
Chord Teacher – FLX Maker Fest
Clifton Springs Library – sharing a school district; FLX Maker Fest
Clifton Springs Rotary Club – elevating librarianship
Clifton Springs YMCA – Healthy Kids Day; FLX Maker Fest
Clinton Essex Franklin Library System – Makerspace Development and incorporation of STEAM into library programming
Clyde-Savannah Central School District – Summer STEAM Camps through PLS
Clyde-Savannah Library – Summer STEAM Camps through PLS
Coalition on Alcoholism & Addictions of the Finger Lakes – development of a traveling exhibit on the recognition of drug paraphernalia and grant collaboration
Comfort Keepers – presentation at library
Dan Schneiderman – Maker Faire Rochester, FLX Makerfest, NYLA, FL STEM Hub, numerous maker events and activities
Dan Wheeler, High School Tech Teacher – FLX Maker Fest, sharing of time, tools and technology, advocacy; nominated for FL STEM Hub Award
Doug Latch – volunteer instructor
Ellie Metzger, Midlakes Biology Teacher – sharing of time, tools and technology for the betterment of education
Empire Resource Recycling – FLX Maker Fest
Feathertree Felt – FLX Maker Fest
Finger Lakes Advanced Manufacturers' Enterprise – partners in bridging the technical skills gap and elevating the level of librarianship and role of libraries

Finger Lakes Community College – partners in bridging the technical skills gap
Finger Lakes Digital Inclusion Coalition – collaborator for summit preparation, advocacy
Finger Lakes Institute – partner in stream monitoring of Flint Creek
Finger Lakes STEM Hub – partner in STEM Education
Finger Lakes Workforce Investment Board – grant collaborator
FIRST Robotics Team Tan[x] 3003 – FLX Maker Fest
Gail Loveland – volunteer instructor, FLX Maker Fest
Geneva City School District Librarians and students grades 9-12 – “CTE Expert” for staff and students
Geneva City School District Teachers – presenter for staff development day
Gleason Industries – partner in bridging the technical skills gap
GW Lisk Co. – FLX Maker Fest, grant collaborator, partner in bridging the technical skills gap
Harbec, Inc. – FLX Maker Fest
Hobart William Smith Colleges – FLX Maker Fest
IFLS Library System (Inspiring and Facilitating Library Success), Wisconsin - presenter
Infinite Scope – FLX Maker Fest
Interlock Rochester – FLX Maker Fest
Jon Kriegel, retired teacher and engineer – makerspace consult, Rochester Engineering Society, partner in education
Koch Industries – grant recipient
Law Office of Michael Robinson – Class at the Phelps Library
Lyons Central School District – Summer STEAM Camps through PLS
Lyons Public Library – Summer STEAM Camps through PLS
Maker Faire Rochester – FLX Maker Fest, volunteer at MFR
Making and STEAM Round Table – leading, as President, the Statewide initiative to promote Making and STEAM in libraries through the New York Library Association
Mary Tatem – volunteer instructor
Matt Sickles – community partner in education
Mid York Library System – consult in STEAM, training libraries in maker education

Midlakes 3rd Graders – field trip destination
Midlakes Elementary – Personalized Learning STEAM Camp
Midlakes Elementary School Library – sharing of time, tools and technology, advocacy; makerspace consultation; teacher training; nominated for FL STEM Hub Award
Midlakes Literacy Teachers – providing resources for students
Monroe Community College Workforce & Economic Development - presenter
Nation of Makers – partner in Rosie the Riveter 3D Community Print
Nation of Makers – partner in Rosie the Riveter 3D Community Print
Nazareth College – makerspace consult
New York Library Association – Conference Curator, Making and STEAM Round Table President, Advocacy
New York State STEM Education Collaborative – conference presenter
Newark Central School District – Summer STEAM Camps through PLS
Newark Public Library – Summer STEAM Camps through PLS
Nick Hargather – STEM Explorers, FLX Maker Fest
North Rose-Wolcott Central School District – Summer STEAM Camps through PLS
Northern Onondaga Public Library – makerspace consult
Ontario County Workforce Development – partner in education and outreach
OptiPro – STEM Explorers
Patriot Energy - Ambit – FLX Maker Fest
Phelps Community Center – ongoing partnership, STEAM Camps for School Age Program, summer program for kids, grant collaboration
Pioneer Library System - Leading the Libraries are Education Task Force; Digital Inclusion Coalition
Preston Foundation
Red Creek Central School District – Summer STEAM Camps through PLS
Red Creek Library – Summer STEAM Camps through PLS
Roc City Laser – FLX Maker Fest
Rochester Global Connections – international partnership with Belarusian educators in STEAM

Rochester Museum and Science Center – grant collaborator
Romulus Central School District – participant in the Makerspace night
Rose Free Library – Summer STEAM Camps through PLS
Seamist Designs – FLX Maker Fest
Second Seasons Consignment Shop – grant collaborator
Senator Helming – STEM Explorers, advocacy
Seneca Waterways Council – various STEAM events and activities, FLX Maker Fest
Siemens Industries – FL STEM Hub and STEM Explorers
Sodus Central School District – Summer STEAM Camps through PLS
Sodus Central School District – Summer STEAM Camps through PLS
Sodus Library – Summer STEAM Camps through PLS; consultant on book repair
South Tier Library System – presenter for their LEAD program
Susan Vose – Volunteer instructor
Terra Science – grant collaborator
The Britting Family – support of STEAM activities
The Scouts – library lock-ins, volunteers
The Strong National Museum of Play – makerspace consult
Upstate Research Rocketry Group – FLX Maker Fest
Victor Farmington Library – FLX Maker Fest
Village of Phelps – community partner, grant collaborator
Waterloo Central School District – makerspace consult
Wayne Finger Lakes BOCES – volunteer students
Wayne Finger Lakes BOCES School Libraries Division – presenter
Wayne Finger Lakes P-TECH Program – partner in education
Wayne Finger Lakes Regional Principals – consult re: innovative libraries of the future
Western New York Library Resources Council - conference presenter
Wolcott Free Library – Summer STEAM Camps through PLS
Wood Library – makerspace visit
Yarnthusiast – FLX Maker Fest

It's mostly about

THEM



UX

How a user interacts with and
RESPONDS TO
an interface, service
or product.



The driving force
behind all our
decisions is
EMOTION.

It's human nature.



**How do
I want
them to
react?**



VISCERAL




BEHAVIORAL



REFLECTIVE

A GUIDE TO DEVELOPING AND NURTURING **PARTNERSHIPS**



The background of the slide is a dark, textured pattern of interlocking gears of various sizes, creating a mechanical or industrial aesthetic.


Goals & Identity

Community Outreach

Data

Communication

Boundaries

The background of the entire slide is a dark, textured pattern of interlocking gears of various sizes, creating a mechanical or industrial aesthetic.

Goals & Identity

Community Outreach

Data

Communication

Boundaries

1.

**What is your
GOAL?**

2.

Who are
YOU?

Leah Hamilton



educate

collaborate

cultivate

grow

THANK YOU

FOR SUPPORTING OUR COMMUNITY'S GROWTH
AND ACCESS TO AWARD-WINNING EDUCATION,
INNOVATION AND DISCOVERY FOR ALL AGES.



THE PHELPS LIBRARY & STEAM LAB MAKERSPACE
8 BANTA STREET, SUITE 200
PHELPS, NEW YORK 14532

(LOCATED IN THE COMMUNITY CENTER BLDG)

FOR DETAILED INFORMATION ABOUT THE PHELPS LIBRARY,
PLEASE VISIT WWW.PHELPSLIBRARY.ORG OR CALL 315.548.3120



A workshop or classroom setting. In the background, there's a sewing machine on a table, a mannequin, and some materials. A red ladder is visible near a window. The floor is wooden. In the foreground, there are black stools and a table with various items, including a blue cloth and a yellow sun-shaped object.

STEAM INITIATIVE

BRIDGING THE TECHNICAL SKILLS GAP



STEAM Lab Makerspace – Clean Technology



STEAM Lab Makerspace – Dirty Technology

The background of the entire slide is a dark, textured pattern of interlocking gears of various sizes, creating a mechanical or industrial aesthetic.

Goals & Identity

Community Outreach

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Boundaries

3.

Who is your
AUDIENCE?

Phelps Library STEAM Scholarship



4.

**Who is the
DECISION
MAKER?**

5.

Who are the
**OTHER
STAKEHOLDERS?**

The background of the entire image is a dark, textured pattern of interlocking gears of various sizes. The gears are rendered in a dark charcoal or black color, creating a complex, mechanical aesthetic. The lighting is slightly uneven, giving the gears a three-dimensional appearance.

Goals & Identity

Community Outreach

Data

Communication

Boundaries

6.

**What is the
NEW
INFORMATION?**

The background of the image is a black field filled with vertical columns of green digital code, resembling a computer terminal or data stream. The code consists of various characters, including letters, numbers, and symbols, arranged in a way that suggests a flow of information.

DATA

A NEW PATHWAY TO SUCCESS

COMMUNITY ISSUES

Pressure of College Culture

Lack of Workers with Skills

Disconnect with Social Services

Workers Fail Drug Tests

Lack of Awareness of Opportunities

Workforce & Economic Development

S U C C E S S

IN THE NEW ECONOMY

HOW PROSPECTIVE COLLEGE STUDENTS CAN GAIN A COMPETITIVE ADVANTAGE

1 · 2 · 7

Master's +

Bachelor's

Technical Skills

30% (4+ years of College)

82.7%

<http://www.p12.nysed.gov/irs/statistics/hsgrads/2010/table1.pdf>



100 STUDENTS

17



**WORKFORCE
MILITARY
BASEMENT MAN CAVE**

30



HIRED INTO THEIR FIELD OF STUDY



53!



17

53

30

The image is a vertical composition. The top half features a dense, intricate collage of various mechanical gears, cogs, and watch movements in shades of grey and silver, set against a dark background. The bottom half shows a person's hands holding a thick, open book. The book's pages are aged and yellowed, and a bright, warm light emanates from the center where the pages meet, creating a lens flare effect. The person holding the book is wearing a red garment. The overall theme suggests a connection between traditional knowledge (the book) and modern technology or engineering (the gears).

RETHINKING HIGHER EDUCATION



WHAT IS APPRENTICESHIP?

Apprenticeship is a time-honored approach to training skilled workers through a combination of on-the-job training and classroom instruction. Each apprenticeable occupation has its own standard training outline which details the on-the-job training and classroom instruction required. Apprentices are full-time employees who produce goods or services while they learn the skills of their trade. They are supervised by a journeyman worker on the job and take related classroom instruction at night or on weekends. A graduated pay scale assures that salary reflects the degree of skill achieved.

WHO MAY OPERATE AN APPRENTICESHIP PROGRAM?

Apprenticeship programs are conducted by employers, jointly by employers and unions, or by groups of employers. The State Department of Labor registers apprenticeship programs, working with forward-looking businesses across the state to develop the skilled workforce of the future.

REDUCED TURNOVER

Being an apprentice assures workers that their jobs have a future. Their satisfaction helps keep them on the job for you.

BETTER EMPLOYEE RELATIONS

You establish a mutually beneficial association with the apprentices who work for you.

Apprenticeship programs approved by New York State enjoy the respect of industry and labor alike, and are nationally recognized and therefore portable.

WHAT JOBS ARE APPROPRIATE FOR APPRENTICESHIP PROGRAMS?

Apprenticeship opportunities are available for a wide range of positions, from skilled crafts to health care, information technology and advanced manufacturing. Call your Apprentice Training Representative to see which trades are related to your job functions, or look online at www.labor.ny.gov/apprenticeship/general/occupations.shtm for a list of apprenticeable occupations in New York State. Our Occupational Analyst staff can

www.labor.ny.gov/apprenticeship

What is a Registered Apprenticeship?

- A structured occupational training program that combines on-the-job training and related instruction.
- Apprentices learn the practical and conceptual skills required for a skilled occupation, craft or trade.
- In other words, it's the work based learning or On-the-Job Training "degree".
- Upon completion, apprentices receive a national portable credential from New York confirming that they are a highly skilled professional in their occupation or trade.

Each Registered Apprenticeship Program must have...

- **2000 hours of on-the-job training**
 - Most programs last about 4 years, but can range from 1 to 6 years.
- **A minimum of 144 related instruction hours**
 - **Types of Related instruction:**
 - Technical or Academic High Schools
 - Adult Night School
 - Community College
 - Universities
 - Correspondence Courses
 - On-Line Courses

COLLEGE

A minimum of 120 credit hours

Avg. 4 years to completion

DEBT of \$35,000/yr avg.
PLUS interest

Must find a job in an oversaturated job market

APPRENTICESHIP

A minimum of 144 related instruction hours (plus 2000 hours of OTJ training)

Avg. 4 years to completion

INCOME of \$35,000/yr avg.
PLUS benefits
PLUS \$0 debt

Graduate with a secure job

The Skills Gap in U.S. Manufacturing: 2015 & Beyond

Manufacturing Institute

Figure 1: Skills gap in the U.S. manufacturing industry, 2015-2025

The skills gap is widening

Over the next decade nearly 3 ½ million manufacturing jobs will likely be needed and



The implications are significant

Every job in manufacturing creates another 2.5 new jobs in local goods and services.

For every \$1 invested in manufacturing, another \$1.37 in additional value is created in other sectors.



Source: Deloitte analysis based on data from U.S. Bureau of Labor Statistics and Gallup Survey.

By 2025 the skills gap is expected to grow to **2 million**

In 2011, **600K** jobs were unfilled due to the skills gap



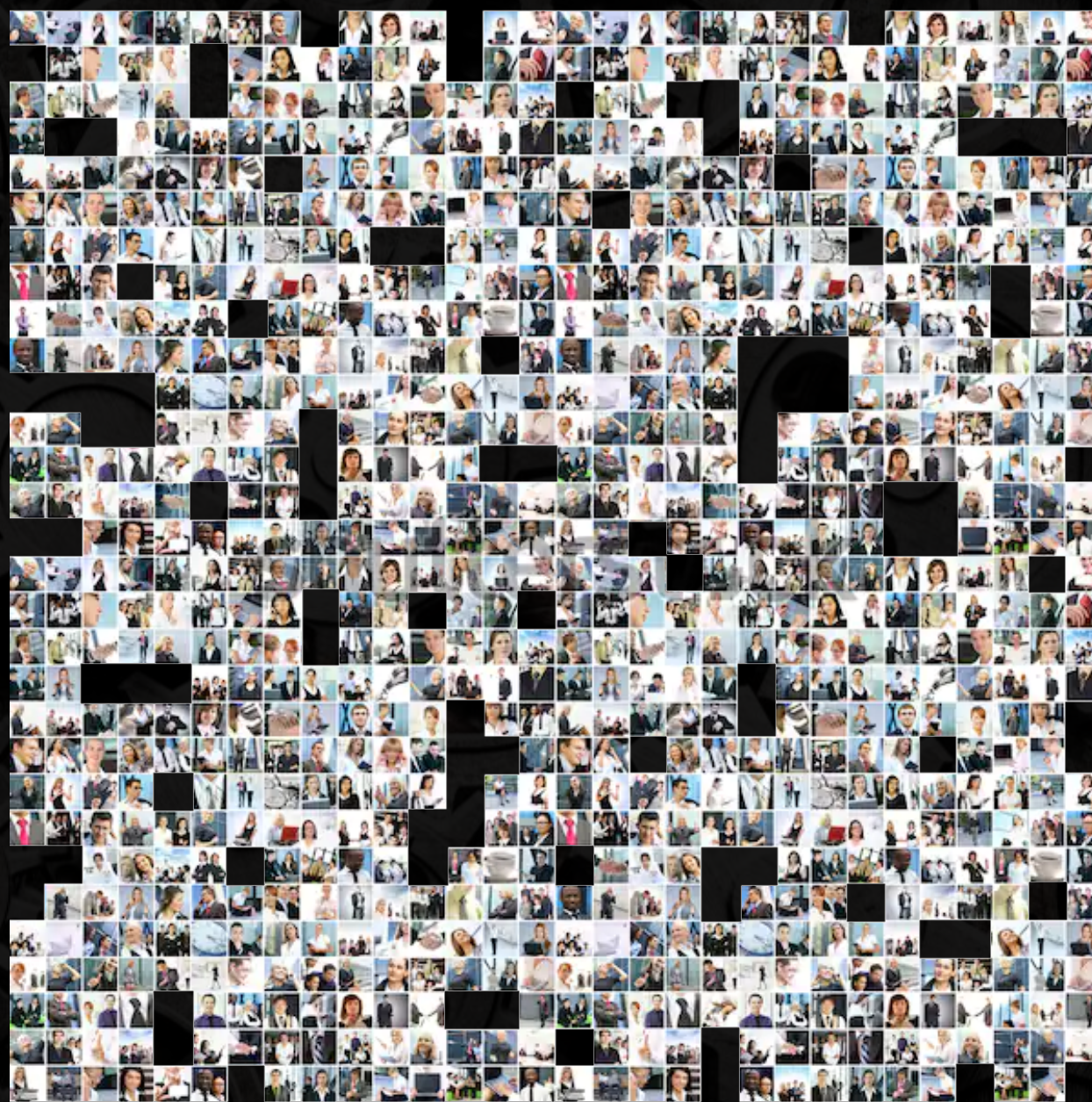
Anticipate the Changing World of Work



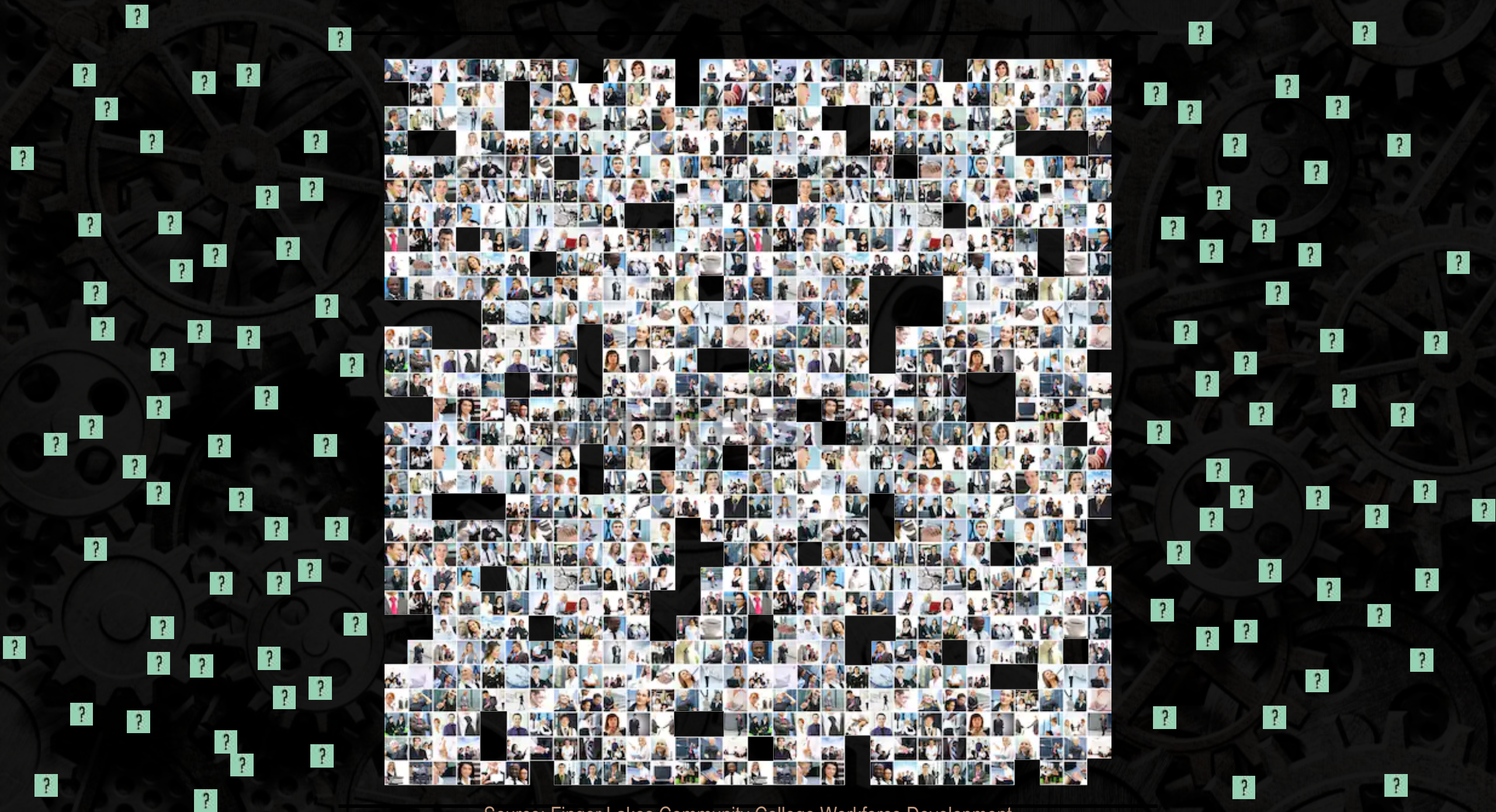
Source: Finger Lakes Community College Workforce Development



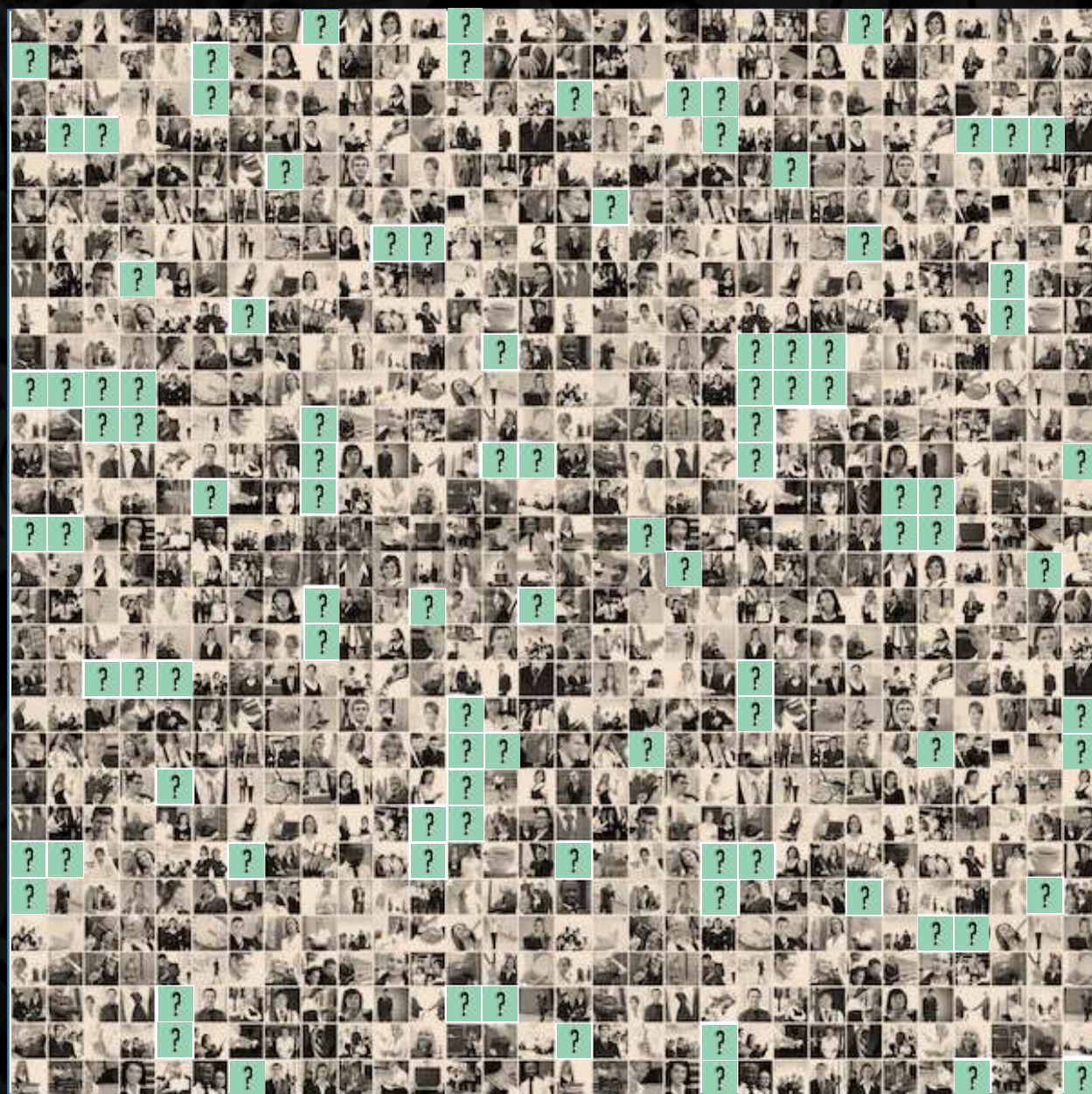
Source: Finger Lakes Community College Workforce Development



Source: Finger Lakes Community College Workforce Development



Source: Finger Lakes Community College Workforce Development



Source: Finger Lakes Community College Workforce Development


Many 4-year college grads will vie for jobs that

DO NOT EXIST

when they start college



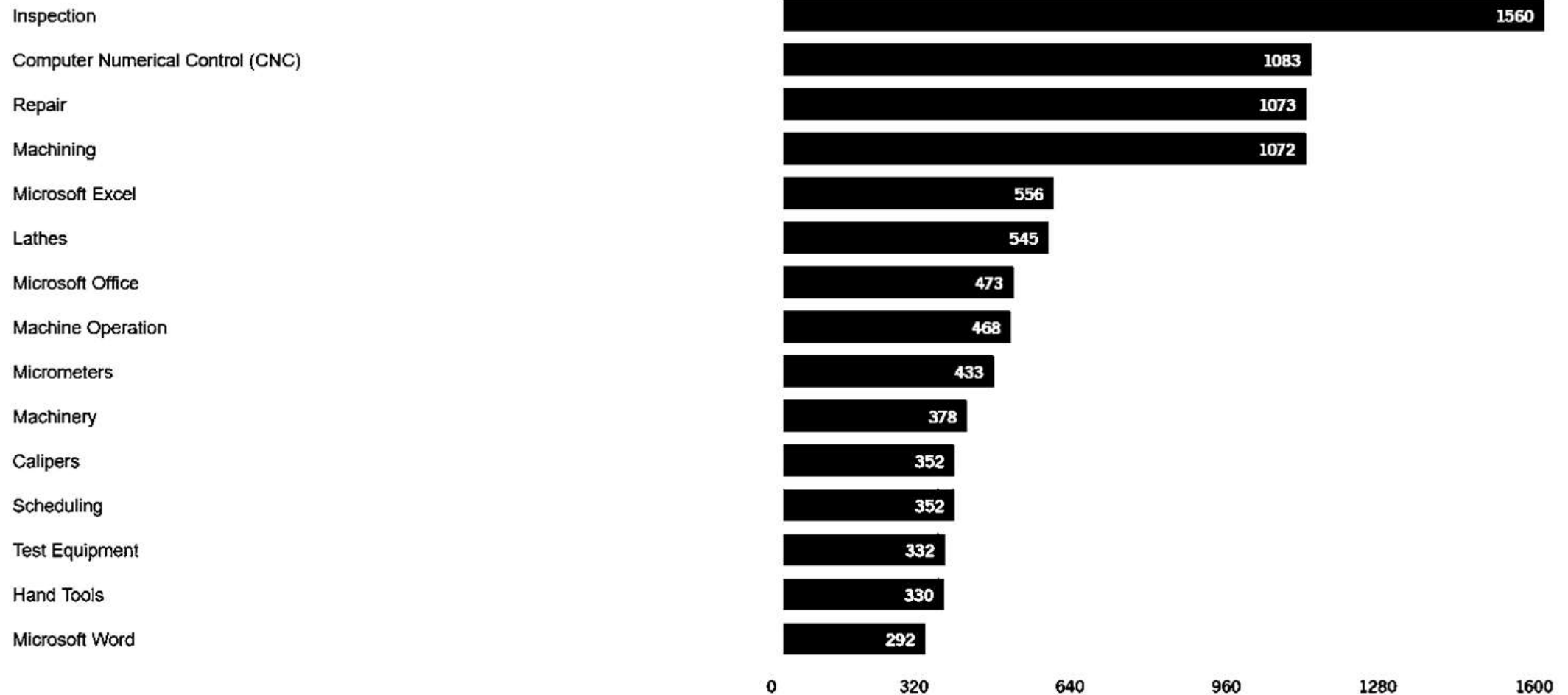
RETHINKING LIBRARY PRACTICES



Where can we as libraries
better meet the needs
of our communities
beyond traditional services?

Aggregate Cluster: Manufacturing

6. REAL-TIME LABOR MARKET DATA



MOST IMPORTANT SKILLS IN 3-5 YEARS

| | |
|-------------------------|------|
| Adaptability | 62 % |
| Initiative | 49 % |
| Critical Thinking | 49 % |
| Creativity & Innovation | 46 % |

2016 WORKFORCE DEVELOPMENT SURVEY

Verbal Communication

Reading Comprehension

Writing Skills

Basic Arithmetic/Math Skills

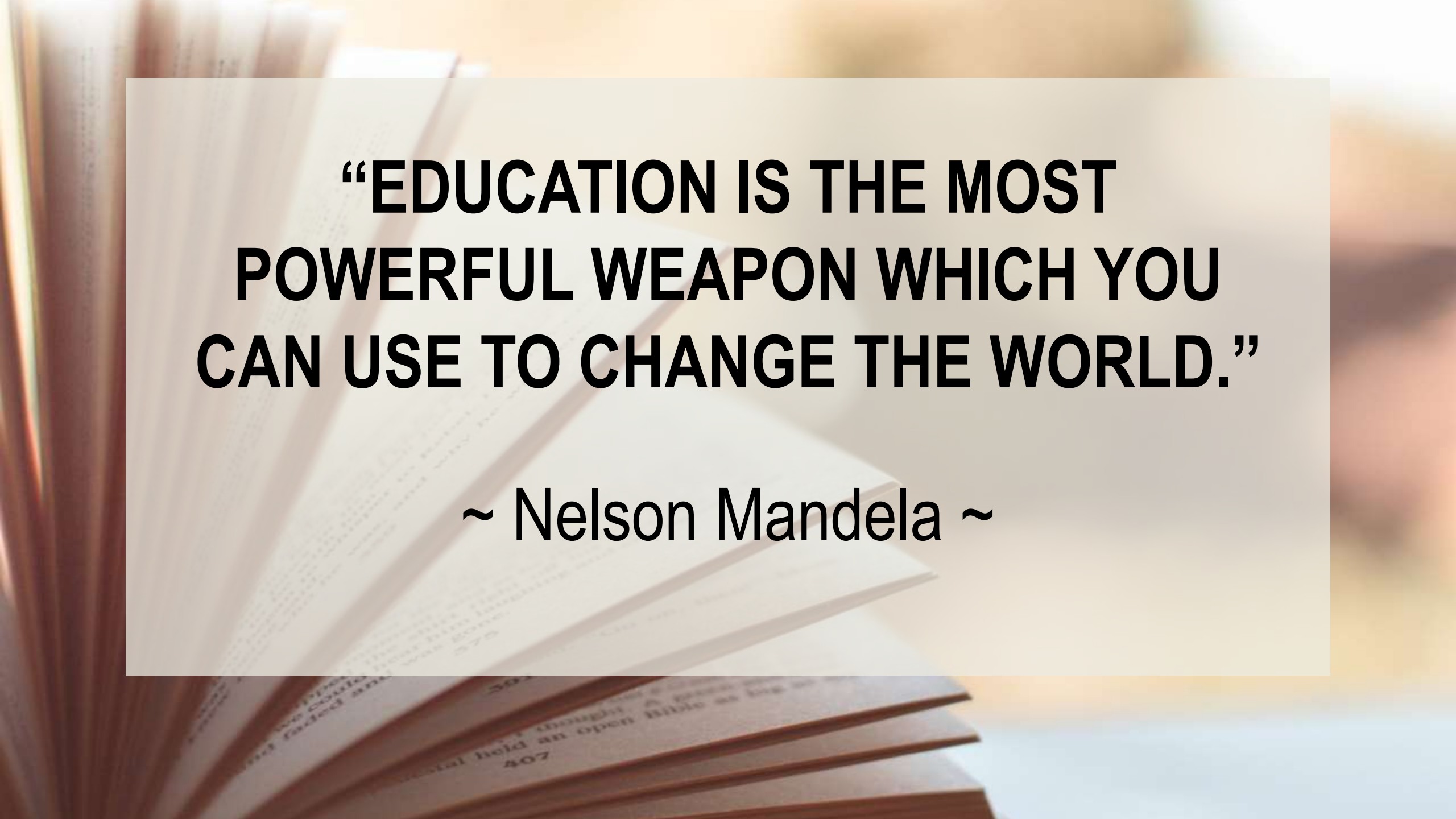
Logical Thinking

Problem Solving

www.pachamber.org/assets/pdf/workforce-development-survey-2016.pdf

ONLY 20% OF EMPLOYERS

felt that students entering the workforce with 4-year college degrees have the necessary skills and training to meet the demands and needs of today's employers.

The background of the image is a close-up, slightly blurred view of an open book. The pages are white with black text, and the book is bound in a dark cover. The lighting is warm, creating a soft glow around the edges of the pages. The text overlay is centered and reads:

**“EDUCATION IS THE MOST
POWERFUL WEAPON WHICH YOU
CAN USE TO CHANGE THE WORLD.”**

~ Nelson Mandela ~

The background of the entire image is a dark, textured pattern of interlocking gears of various sizes. The gears are rendered in a dark charcoal or black color, creating a complex, mechanical aesthetic. The lighting is slightly uneven, giving the gears a three-dimensional appearance.

Goals & Identity

Community Outreach

Data

Communication

Boundaries

7.

**Maintain
communication.**

8.

**Know when
to move on.**

The image is a vertical composition. The top half features a close-up of various mechanical gears and cogs, some metallic and some with red accents, set against a dark background. The bottom half shows a person's hands holding an open, thick book. A bright, golden light emanates from the center of the book, creating a lens flare effect. The person is wearing a red garment. The overall theme suggests a connection between technology/mechanics and knowledge/faith.

COMMUNITY PARTNERS

TOGETHER WE ARE STRONGER



The Community
Libraries & Schools
Higher Ed Institutions
Organizations
Manufacturers
Municipalities
Students

VOLUNTEERS

AND THE PHELPS LIBRARY





Students and Teachers



Parents

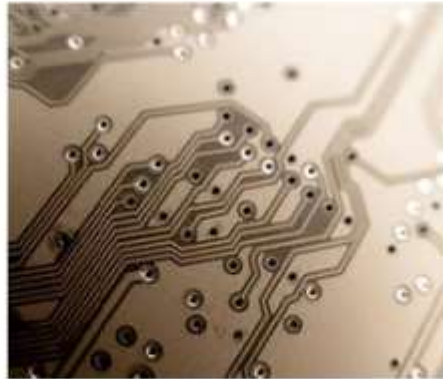
MANUFACTURERS

AND THE PHELPS LIBRARY





Finger Lakes **Advanced Manufacturers' Enterprise**
Building Minds that Make It





Field Trips and Job Shadowing



Local Businesses

EDUCATORS

AND THE PHELPS LIBRARY





Career Day



STEAM Camps



W FL PTECH @WFLPTECH · Jan 9

#WFLPTECH students (Ss) at Phelps Library STEM lab today. Each week we visit 2-3 times bringing new groups of Ss to experience this unique and awesome place. Check out more on their website.



W FL PTECH @WFLPTECH · 21 Dec 2018

#WFLPTECH Ss got to use the really cool VR game-wear at the Phelps Library #STEM Lab.



1

ORGANIZATIONS

AND THE PHELPS LIBRARY





Empire State STEM Learning Network

<http://www.nysstemeducation.org/empire-state-stem-learning-network/>



Rochester Global Connections and Educators from Belarus

Social Services in Libraries



MUNICIPALITIES

AND THE PHELPS LIBRARY



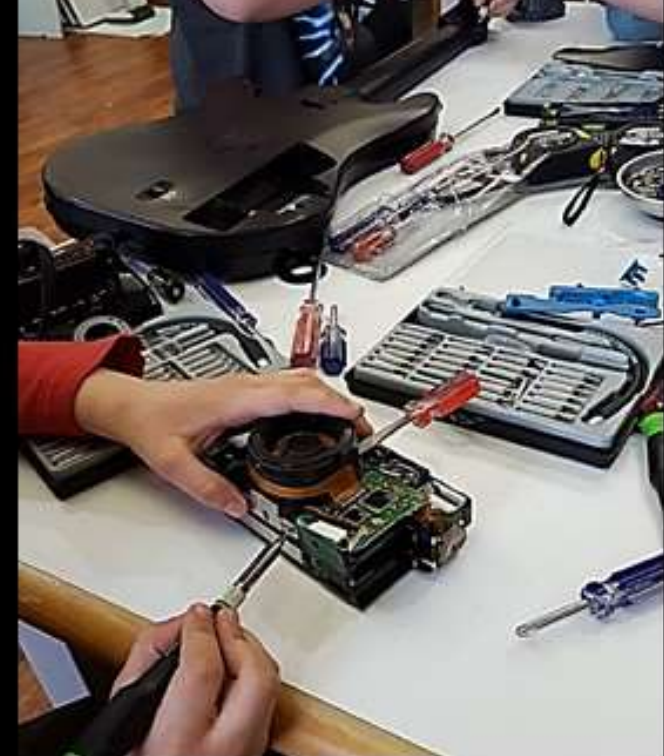
STUDENTS

AND THE PHELPS LIBRARY





The STEM Explorers!
Teaching technical and advanced
manufacturing skills to 3rd-6th graders
at the Phelps Library



STEM SKILLS DEMONSTRATED



HELPING
OTHERS



COMMUNICATION
SKILLS



INNOVATION
SHARING



MICROSCOPIC
INVESTIGATION



ROBOTICS
SKILLS



RASPBERRY PI
PROGRAMMING



SAFETY
SKILLS



ARDUINO
PROGRAMMING



MEASURING
SKILLS



COMPUTATION
SKILLS



PLANNING
SKILLS



ENVIRONMENTAL
SCIENCE



BUILDING
SKILLS



DISCOVERY
SKILLS



PROBLEM
SOLVING



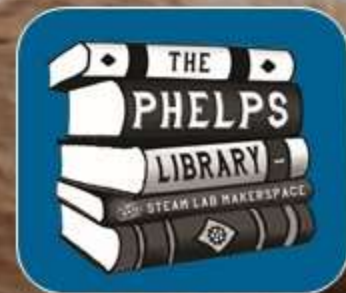
OBSERVATION



EXPERIMENTATION



EXPLORATION

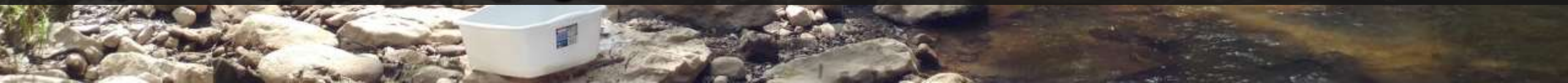




Water Jet Cutter



Stream Monitoring





CROSS-SECTOR

PARTNERSHIPS



SAVE THE DATE!

FLX MAKER FEST

PRESENTED BY THE PHELPS LIBRARY

SATURDAY
MAY 4 2019

WWW.PHELPSLIBRARY.ORG/FLXMF-HOME

SPONSORED BY
LISK
Activating the World

The FLX Maker Fest is a day for DIY Making, Discovery, & Innovation with hands-on learning in Science, Technology, Engineering, Arts, and Mathematics (STEAM), technical skills, and projects for ALL ages.

THIS IS A FREE FAMILY-FRIENDLY EVENT
FOR ALL AGES! 11AM-5PM.



Event will be held at the
Phelps Library & STEAM Lab Makerspace
8 Banta Street, Phelps, NY 14532



phelpslibrary.org/flxmf-home





WHY?



“Envisioning and making the future must be a massively public endeavor.... everyone needs to be a part of the conversation about the future and become actively engaged in making that future.”

MARINA GORBIS

“THE FUTURE AS A WAY OF LIFE.” (2016)



BUILDING PARTNERSHIPS

UNITING COMMUNITIES

Phelps Library & STEAM Lab Makerspace, Phelps, New York

CONTACT INFO FOR LEAH HAMILTON:

lwynne14@gmail.com

PRESENTATION LINK:

www.phelpslibrary.org/NYLA19