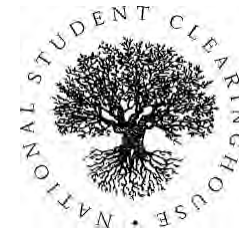**PESC** STANDARDS

Empowering The Mobility of Digital Academic Records

Spring Summit – 4th May 2017

Extending the Capacity of Higher Education to Scale The Output of Verified Workforce Ready Graduates

iQ4

XΩA
Cybersecurity Workforce Alliance

NATIONAL STUDENT CLEARINGHOUSE

Executive Summary – PESC Award Submission

- CWA – mentored scalable 3-credit virtual internships:
  - Acceleration, awareness, experience and workplace readiness

- Experiential, competency based model proven **solving real world problems** Solving real world problems
  - Transportable across sectors and faculty –

- Leveraging the NIST Frameworks and NICE taxonomy
  - Faculty thinks Performance – industry wants to see KSAs learning outcomes for Job Roles and Progression

- NSC MyHub & iQ4 integration – transportable verified academic and co-curricular experience, KSAs, Badges, Certificates, Progression,…..

Standards and Verified Driven Value to All Stakeholders
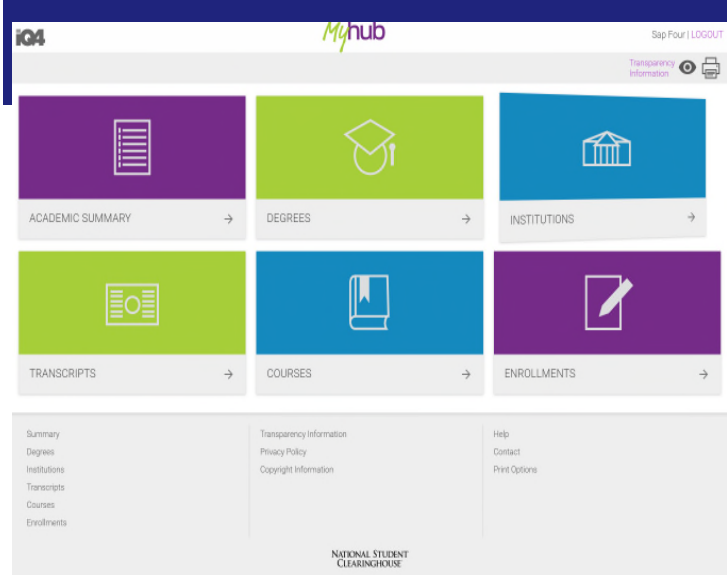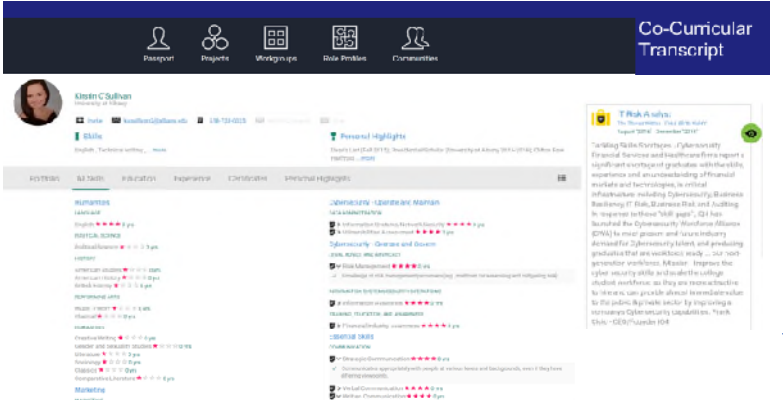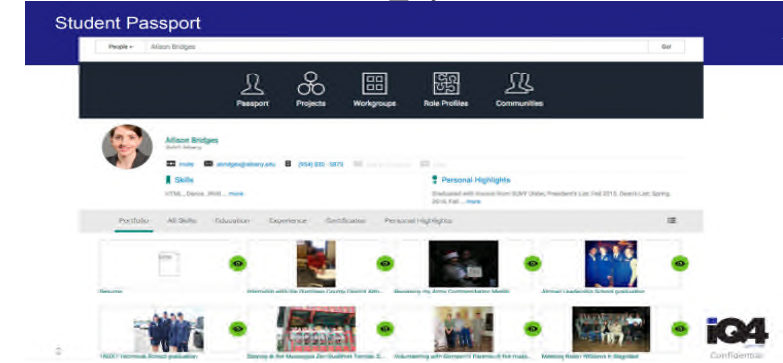
Academic Career

- For Transfers
- For Employers
- For Anything

The lack of cyber skills is a critical issue for employers

Currently Cisco estimates **1mm unfilled security job world wide**

- **Cyber security skills shortage a critical issue for the public and private sector**

- **"Most organizations do not have the people or the systems to monitor their networks consistently or determine how they are being infiltrated"** [1]

- **The regulatory landscape and nature of attacks change rapidly**

- **The projected dramatic increase in IoT and continued increase of sophisticated state-sponsored cyber will further increase vulnerability**

Source: ISACA

Sources:
(1)   Mitigating the Cybersecurity Shortage - Cisco

ΧΩΑ

Cybersecurity Workforce Alliance

Leadership Coalition in Cyber Workforce Development

Founding Members

- Federal Reserve Bank NY
- Morgan Stanley
- Goldman Sachs
- Bank NY Mellon
- Fidelity Investments
- Deloitte & Touche LLP
- Capgemini
- JPMorgan Chase
- Express Scripts
- Citizens Bank
- US Bank
- FS Roundtable
- Fidelity
- Bank of America
- American Express
- Standard Chartered Bank
- Dilworth Paxson LLP
- RANE Network

NICE
NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION

FCC

CUNY — The City University of New York

NATIONAL STUDENT CLEARINGHOUSE

PESC

sifma
Invested in America

FSSCC

SUNY — The State University of New York

NASA

IMS GLOBAL Learning Consortium

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Mission

Improve the cybersecurity skills and scale the college/university student workforce so they are more attractive to hire and can provide almost immediate value to the public and private sectors by improving a organization's Cybersecurity resilience and capabilities.

Outcomes

Align and enhance applied-learning curricula to develop skills in cybersecurity and information risk

Reduce the amount of training for college hires

Increase Awareness and Experience

Align Professional Certificates to Role Profiles

4 Cornerstones and Governance

Technology
Development & Mobility Platform

Engagement & Scale
Extending the Worplace into the classroom

iQ4
...great minds

CUNY The City University of New York

SUNY The State University of New York

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NICE
NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION

FCC

sifma
Invested in America

NASA

NIST

Standards
Taxonomy, Student Data

PESC

Business Case
ROI, Plug and Play
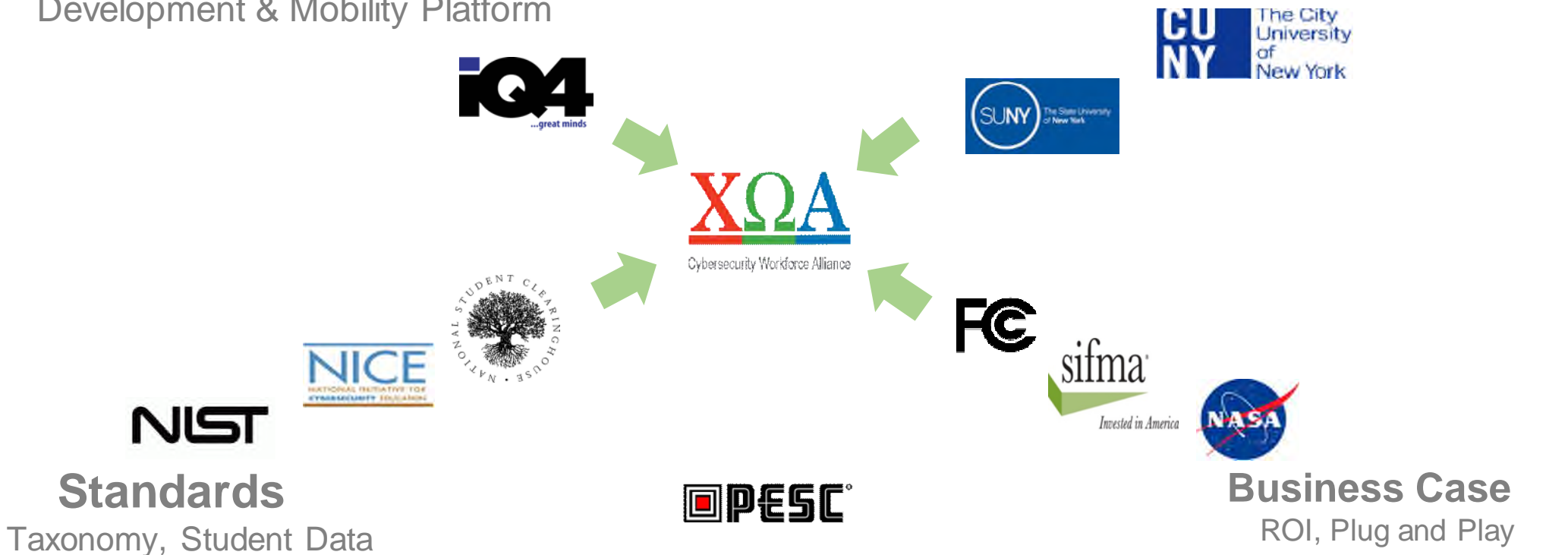
iQ4 AND NATIONAL STUDENT CLEARINGHOUSE
AWARDED 1ST PLACE IN 18TH BEST PRACTICES COMPETITION

EXTENDING THE CAPACITY OF HIGHER EDUCATION TO SCALE THE OUTPUT OF VERIFIED WORKFORCE-READY
GRADUATES

Collaboration on Standards
Mapping Education's Supply to Industry's Needs

CWA Workforce Workgroup Map

1,235 Cyber taxonomy definitions

514 *common across* *all Digital/IT*

44 Cyber/Gov'ce/Risk/Compl' roles

20 Common KSA's to all roles and "knowledge Units" for academic learning outcomes

> 56% KSA's in roles found in Professional Certificates

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FSSCC
Financial Services Sector Coordinating Council
for Critical Infrastructure Protection and Homeland Security

FCC
FEDERAL COMMUNICATIONS COMMISSION
· USA ·

UTC
Utilities Technology Council

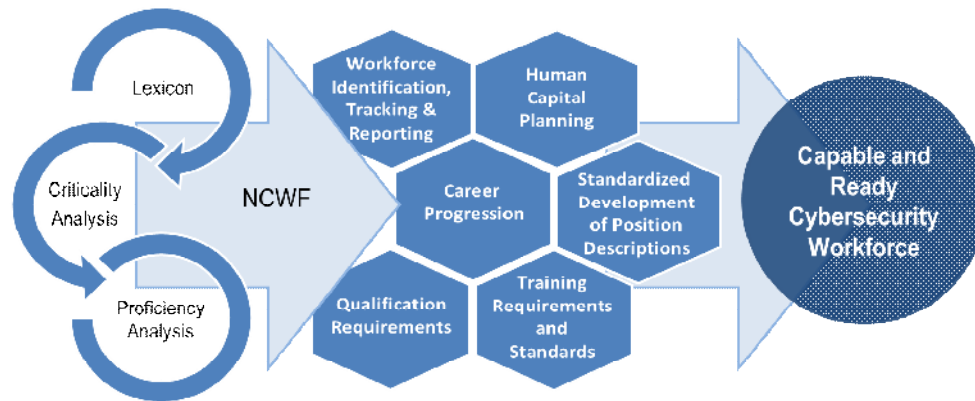Cross Sector Taxonomy – Transportable Role Definitions, Specialty, Competency, Knowledge, Skill, & Abilities

Education can design courses for Learning Outcomes (Knowledge Units) that industry wants

Professional Certificates Mapped to learning and roles

Digitally Badged / Validated Skills & Experience Passport

Standards Based Real World Epic–Challenges

Taxonomy Link - for Roles, KSAs & Learning Outcomes

Scaling the Integration of Academic and Applied Learning

Founders Hosts
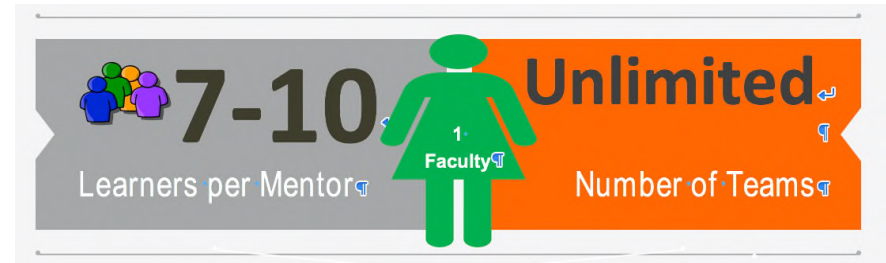

Participating Schools

sCALE

CWA Mentors 1.5 hours per week for 12 weeks

Membership

Jan 2015   14

May 2017 > 550

Federal Reserve Banks (NY, Chicago, Boston), Goldman Sachs, Morgan Stanley, NASA, JPM Chase, American Express, Bank of America, Blackstone, Bay Networks, Capgemini*, Citizens Bank, Deloitte, Express Scripts, Bank NY Mellon, Standard Chartered Bank, BNP Paribas, US Dept. Interior, Dilworth Paxson LLP, Dolus Counter Fraud, Coalfire, Red Owl, & Many More!

Scalability -Take The Workplace To The Classroom – Capacity and Expertise For Education

Mentors Assess Progression & Performance
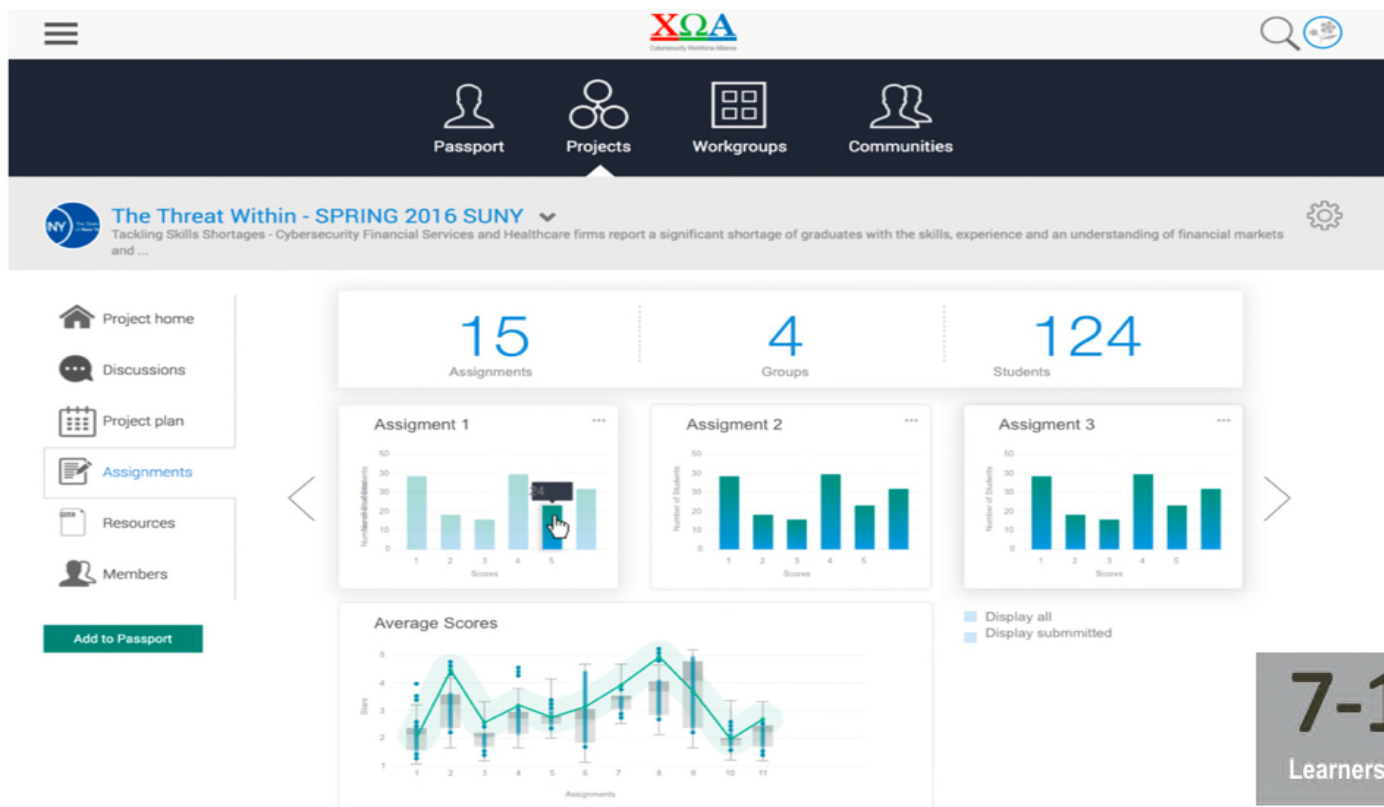
Team & Roles-based Virtual-Mobernships™ = Experiential Learning Projects
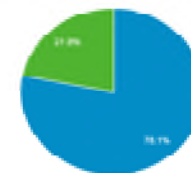
Individual's Proficiency Profile by Line of Business and Job Family with Career Pathways Below

Dashboard Analytics - Competency and Skills Analysis

A Baseline analysis and organizational areas of opportunities

B Measured performance and progression mapping

AGENDA

1:00 - 2:20 PLENARY SESSION

Welcome to the Federal Reserve Bank of NY

Keynote Speakers:

RUTHE FARMER
Senior Policy Advisor for Tech Inclusion
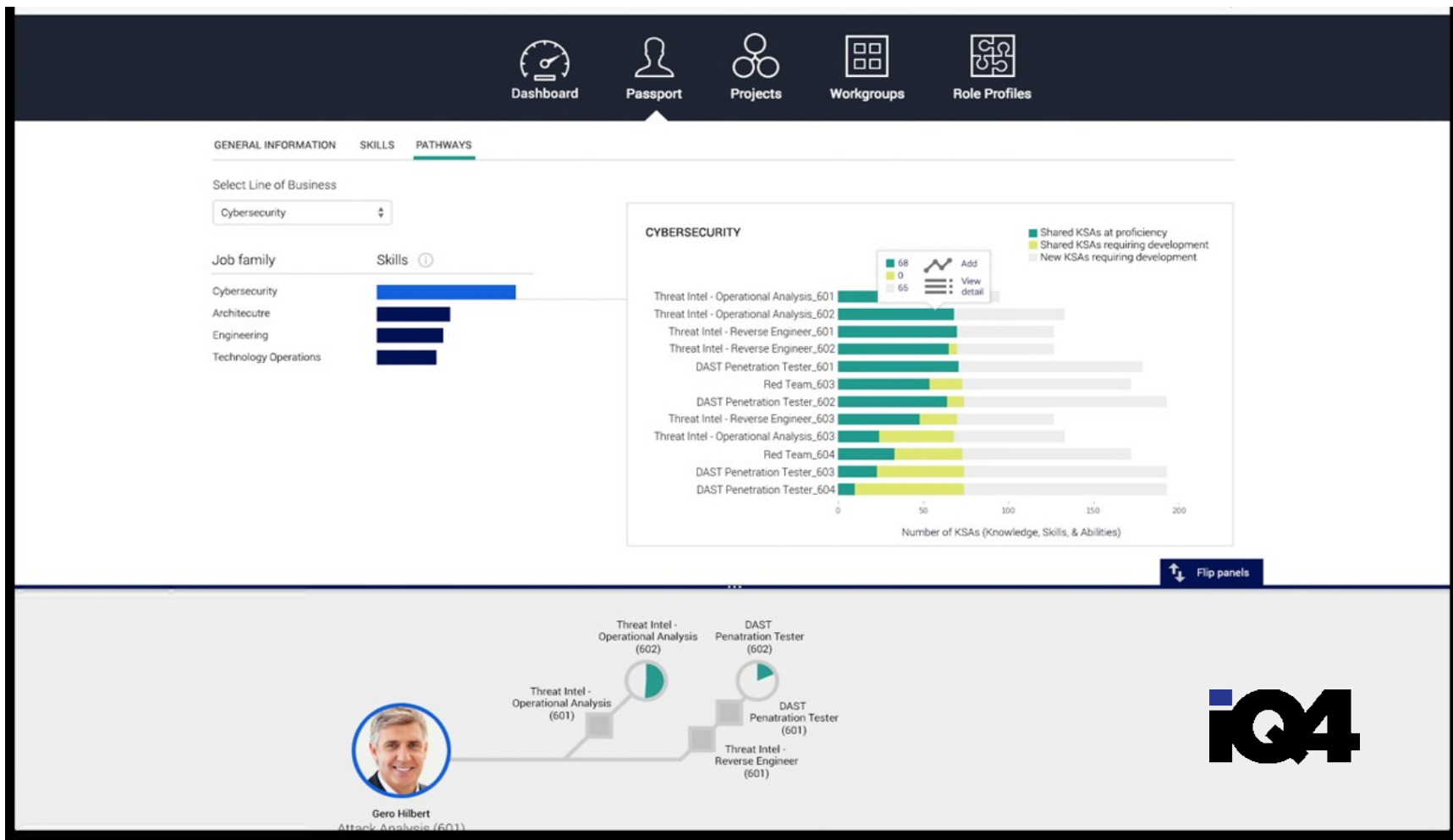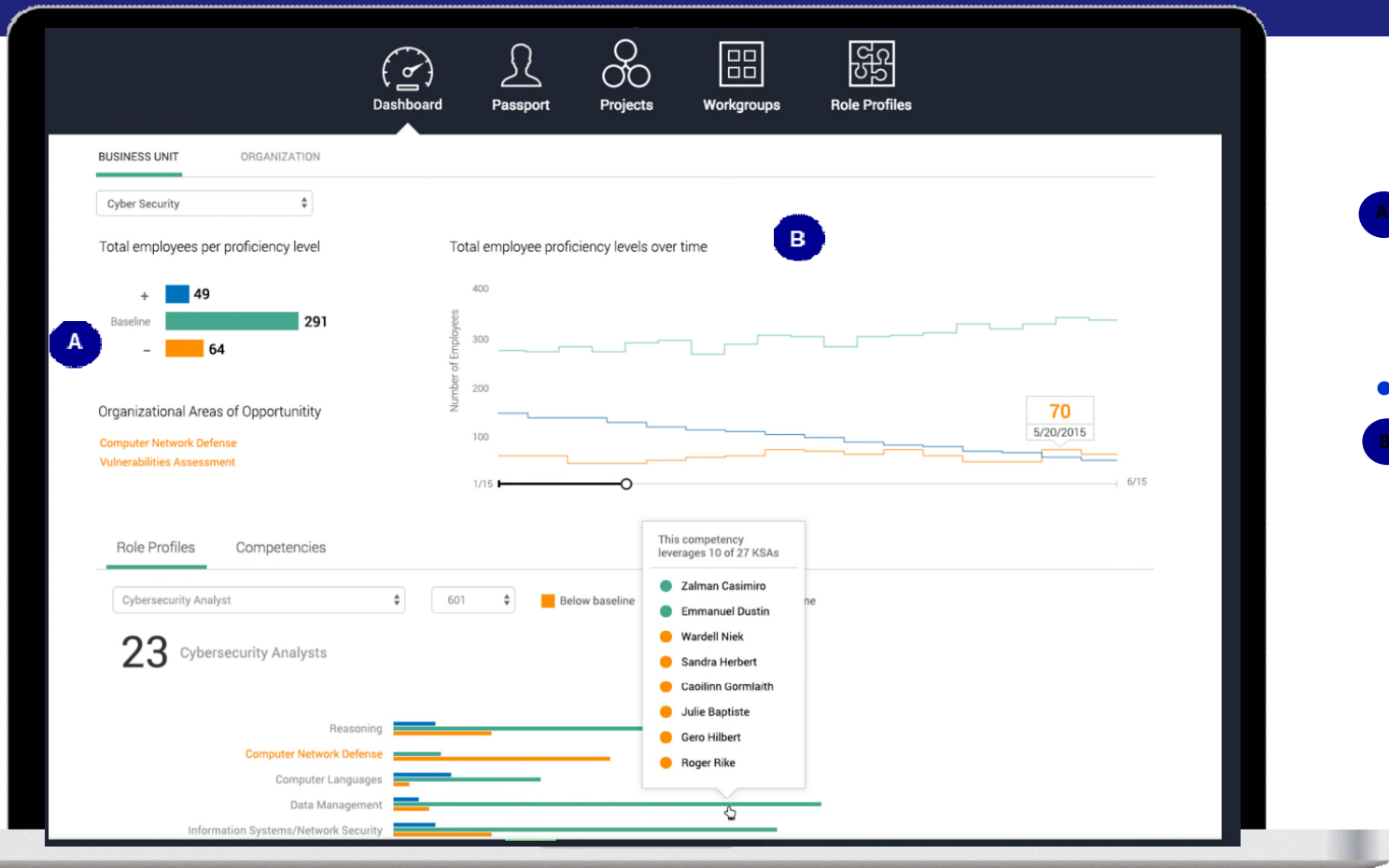White House Office of Science & Technology Policy

CHARLES CAMARDA, PH.D.
Astronaut and Sr. Advisor for Innovation, Office of the Chief Engineer
NASA

Student Presentations:
SUNY | UNIVERSITY AT ALBANY
CUNY | JOHN JAY COLLEGE OF CRIMINAL JUSTICE

2:20 - 2:30 BREAK

2:30 - 3:30 STRUCTURED NETWORKING

Hosted by **SCOTT MCMILLAN**
Chief People Officer & Head of Global HR Services
CapGemini

3:30 - 4:00 CLOSING SESSION & CYBER 101 AWARDS

Hosted by **PHIL VENABLES**
Partner & Chief Information Risk / Security Officer
Goldman Sachs

"This is how you develop an industry-driven partnership with higher education". - *(Employer)*

The Power of the Mentor Network? ..... "Priceless" (Student)

I have been in college for 4 years and have never taken a class that helped with my understanding of the professional world the way this did. (Student)

In the labs you can fail and fix things easily by just pressing the delete button and starting all over again until you get it right. You just can't do the same with this course as it is an inter-personal team challenge. (Student)

This is where the rubber hits the road between education and the workplace
(Educator)

Measuring Success Across The Board

SUNY Fall 2016 – Student Activity counts through Sat Dec 17 09:16:41 2016
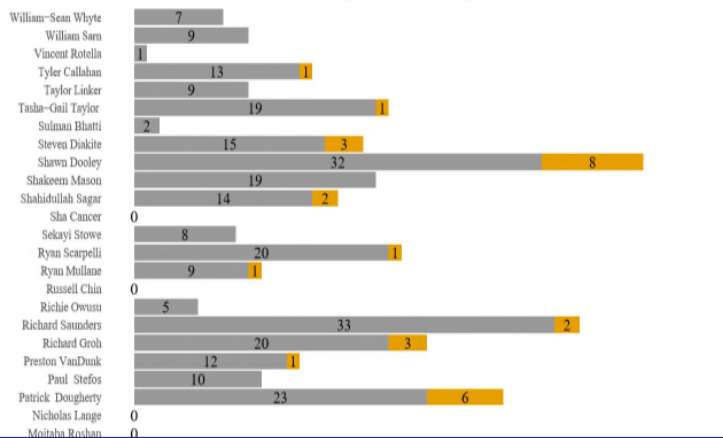
- Over **400K** Hits On Site*
- Students Have Received Internships/Full-Time Offers At:

FBI

PwC

Bank NY Mellon

Deloitte.

International Securities Exchange

HARVARD RESEARCH

K2 Intelligence

Goldman Sachs

GAMING

Pharma Co

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

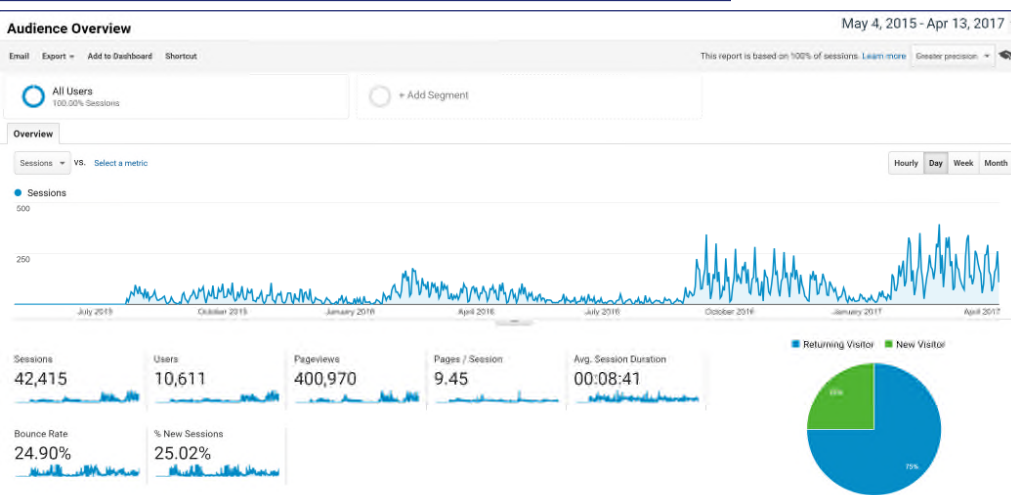**Accelerating Workforce Readiness - Cutting Time To Productivity**

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WIN.....

Students

Millennials engaged aware, inspired.

Knowledge and domain experience from "virtual Internship" to punch above the rest.

Jobs and careers.

WIN.....

Academia

Offer courses augmented by experience.

Scale the resource pool.

Attraction, retention and broader engagement with employers.

WIN.....

Industry

Cut the cost and time to hire and time to productivity while increasing retention.

Eliminate the war-for-talent.

Greater Assurance and Protection.

WIN.....

Government

Acceleration of competent cross sector workforce resource pool.
Metrics – inputs, outputs and jobs.

Cost to economy cut. Better protection.

Prosperity dividend from skills export.

The 21st Century's Mobile Resume: Student Passports

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DEMO

MY Education,
MY Information,
MY Hub

Myhub℠

LOGIN | CREATE ACCOUNT

Find Your Enrollment Information
Review Your Degree Information
Learn about Reverse Transfer Degrees
Understand Who Can See Your Academic Records

Myhub℠

Data powering my education & career

CREATE YOUR ACCOUNT NOW
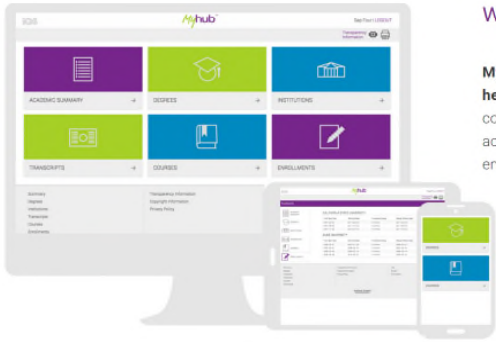
What is Myhub?

Myhub is your doorway to all your student-level academic records held by the National Student Clearinghouse®. You can see the content of your actual records as well as who has had authorized access to your records and why (e.g., graduate school application, employment screening).

CREATE YOUR ACCOUNT NOW

iQ4   *Myhub*   Sap Four | LOGOUT

Transparency Information

| ACADEMIC SUMMARY → | DEGREES → | INSTITUTIONS → |
| TRANSCRIPTS → | COURSES → | ENROLLMENTS → |

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Transparency Information

Courses

- ACADEMIC SUMMARY
- DEGREES
- INSTITUTIONS
- CERTIFICATES
- COURSES
- TRANSCRIPTS
- ENROLLMENTS
- TRANSPARENCY INFORMATION
- PRIVACY POLICY

CALIFORNIA STATE UNIVERSITY

Description	Name Number	Semester	Begin Date End Date	Grade	Grade Effective Date	Number Of Credits	Course Exchange
'Biology'	BIO 433	Fall	2011-09-02	A	2011-11-25	3	Collins School
'Chemistry'	CHEM 432	Spring	2012-03-01	A	2012-06-05	3	Collins School

DUKE UNIVERSITY

Description	Name Number	Semester	Begin Date End Date	Grade	Grade Effective Date	Number Of Credits	Course Exchange
Biology I For Science Majors	BIOL 1406	Spring	2006-03-06	A	2006-05-31	3	Lone Star College System District
Molecular Biology	MBIO 101B	Fall	2006-09-15	A	2006-11-30	3	Lone Star College System District
Beg Spanish I	SPAN 1411	Fall	2006-09-15	A	2006-11-30	3	Lone Star College System District

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Myhub

Transparency Information 👁 🖨

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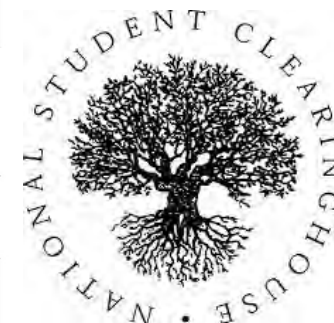- ENROLLMENTS
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Confidential

Any Questions?

Student Passport

Co-Curricular Transcript

Academic Career

- For Transfers
- For Employers
- For Anything

Join The CWA Movement Today
Solve a Workforce Problem
Get the young into work

CWA@iQ4.com

peter@iQ4.com   USA (609) 373-2425 U.K. +44(0) 7788 715517
frank@iQ4.com 201 914 4655