



# *A New Educational Paradigm*

***ECC CONFERENCE***

*A NEW WAY TO TEACH COBOL & PROGRAMMING*

*JUNE, 2019*

# AGENDA

- 1 – Objectives of this presentation
- 2 – Dimensions of the COBOL problem
- 3 – Why we need a new paradigm
- 4 – Our solution

# 1 – Objectives

- ▶ Help you understand the current dimensions and challenges associated with COBOL programming
- ▶ Define a new educational and management paradigm that will help alleviate the problem
- ▶ Discuss how we can help! The NEW partnership of:

## **Academic Institutions & Business**

## 2 – Dimensions of the COBOL Problem

- ▶ **What are the problems and challenges**
- ▶ **How extensive are they**
- ▶ **What are the implications**

# COBOL is an Integral and Important Part of Today's Business

## Cobol at the Enterprise

## By the Numbers

## Apps are Growing

## Labor Pool Declining

- 96 of the top 100 worldwide banks
- 10 out of 10 of the world's largest insurers
- 23 of 25 top U.S. retailers (Gartner, 2018)
- 30 Billion business trans/ \$3 Trillion in commerce/day
- Avg American interacts with a COBOL program 13 times/day
- 240 Billions lines of existing code (Gartner, 2018)
- Micro Focus 2017 survey – new development expanding
- 1.5 Billion Lines of new lines of code per year (Computerworld, Mar, 2017)
- Avg age of COBOL programmer is 57 (Computerworld, Mar, 2017)
- COBOL programmers ww: 895,000/50% U.S. (IDC, 2018)
- No of COBOL pgmr declining 5-10% annually(IDC,2018)
- Estimated 84,000 unfilled MF positions by 2020 (Computerworld, Jun, 2018)

# The Problem for the Enterprise

- ▶ Mission critical applications in COBOL are essential to the enterprise
- ▶ COBOL is still the very best choice for certain classes of computing problem. *COBOL is not going away any time soon*
- ▶ Complexity and risk related to COBOL applications prevent them from being moved offshore
- ▶ COBOL enterprises are in the grips of a growing skills gap crisis:
  - ▶ Recent grads have no interest in COBOL as it lacks both *sex appeal* and an attractive career path
  - ▶ No interest in COBOL courses at major universities
  - ▶ Same problems exist with offshore/outsourcing providers
  - ▶ Stiff barriers to entry for individuals no longer in school who want to learn a programming language of any kind – they are trapped in current jobs, can't go back to school and can't afford one of the coding boot camps

# Implications

- ▶ What are the Problems and Challenges?
  - ✓ There are millions upon millions of lines of COBOL
  - ✓ It runs many of our most important business functions
  - ✓ We are running out of COBOL programmers
  - ✓ We are **running out of time!**
- ▶ How extensive are they?
  - ✓ It is extensive and ubiquitous
  - ✓ It is in every industry and in every major corporation
- ▶ What are the implications?
  - ✓ Potential for catastrophic interruption of business

# 3 – Why We Need a New Paradigm

- ▶ First - the old educational paradigms no longer work:
  - ▶ Few universities, colleges or community colleges teach COBOL. Two who do: Bergen Community, Touro College
  - ▶ Fewer teach PROGRAMMING - structured or otherwise
  - ▶ I know of none that teach Structured Design and Debugging!
  - ▶ Companies no longer have in-house training programs to address their specific needs
  - ▶ Some companies are starting BOOT CAMPS to train programmers, but, they are teaching JAVA or HTML - NOT COBOL



# Holes in the Current Paradigms

- ▶ Second, the current paradigms do not accommodate COBOL or mainframe applications
  - ▶ **Q:** Why is there a shortage of COBOL programmers? Why isn't Mainframe Legacy Coding being taught? Better yet, why isn't Structured Design and Programming being taught?
  - ▶ **A:** Because today's build, refactor and build paradigm doesn't work for applications that have to perform THOUSANDS of transactions per second with 100% reliability. They're fine for presentation, look and feel, user experience, but not so much for the heavy lifting of mainframe applications
- ▶ *There are classes of applications that require the use of 3GLs and mainframe speed and reliability. Therefore a paradigm that addresses this reality must be created. And we did!*

# 4 – Our Solution

- ▶ A unique business model that:
  - ✓ Screens and attracts mid-career hires (returnees to the workforce, underemployed, ex-military, career-changers) who don't care whether COBOL is sexy but want/need stable good paying jobs with a career path that's not based on job-hopping
  - ✓ Pays for their education and guarantees W-2 employment with benefits upon successful completion of the training
  - ✓ Nurtures each person in a risk-mitigated environment that enhances their long term success and career objectives
- ▶ Not a staffing or sourcing approach, but rather a Professional Services environment using a fee-for-service model
- ▶ Provides a reliable pool of qualified COBOL programmers for the foreseeable future
- ▶ Minimizes disruption in terms of application knowledge transfer

# Four Phases of Our Approach

Candidates hired as W-2 Employees after training

- **Identify Screen, Recruit Qualified Candidates**
  - Identify candidates (veterans, workforce re-entrants, Jr College, etc.)
  - Screen and select candidates with aptitude for programming
  - Recruit and hire qualified candidates (2yr contract)
  - Prepare candidates for training

- **Train, Test, and Prepare Candidates for COBOL Programmer Role**
  - Enroll candidate in either College accredited or independent COBOL bootcamp program
  - Touro college certificate program
  - On-Demand Bootcamp
  - Test candidates and select resources ready for client assignment and deployment
  - Training classes in groups of 12-15

Training costs paid by *Back In Time*

Monitor performance

Perform career planning reviews

- **Manage Resources**
  - Monitor employee performance
  - Perform 6 month and annual reviews
  - Provide additional training
  - Conduct on-going career planning with each professional
  - Obtain client satisfaction feedback

- **Deploy and Integrate Resources to Client Environment/Teams**
  - Assign resources to a chief programmer to ensure quality delivery and formalize mentorship
  - 5 trainees to 1 chief programmer
  - Assign resources to client sites
  - Assign resources to client and work remotely in our Center of Excellence (Optional)

Chief Programmers hired as needed

1 per 5 Trainees

# Developing COBOL Programmers for the Business Market

We propose to provide two distinct options for developing productive COBOL resources.

The first is an instructor led classroom based program that is part (12 weeks) of an accredited college curriculum whereby the student is working toward a degree and may optionally receive a certificate for the COBOL Training.

## College Aligned – Certificate Training

- **12 Week Curriculum**
  - ✓ Mainframe Technology
  - ✓ COBOL Programming/Debugging
  - ✓ Soft Skills Training
- **Delivered as part of a College Information Technology Program**
  - ✓ Certification in Main Frames and COBOL
  - ✓ *Students work toward a BS degree*
  - ✓ *Opportunity for Gov't subsidies*
  - ✓ Delivered Onsite in NYC

# Developing COBOL Programmers for the Business Market

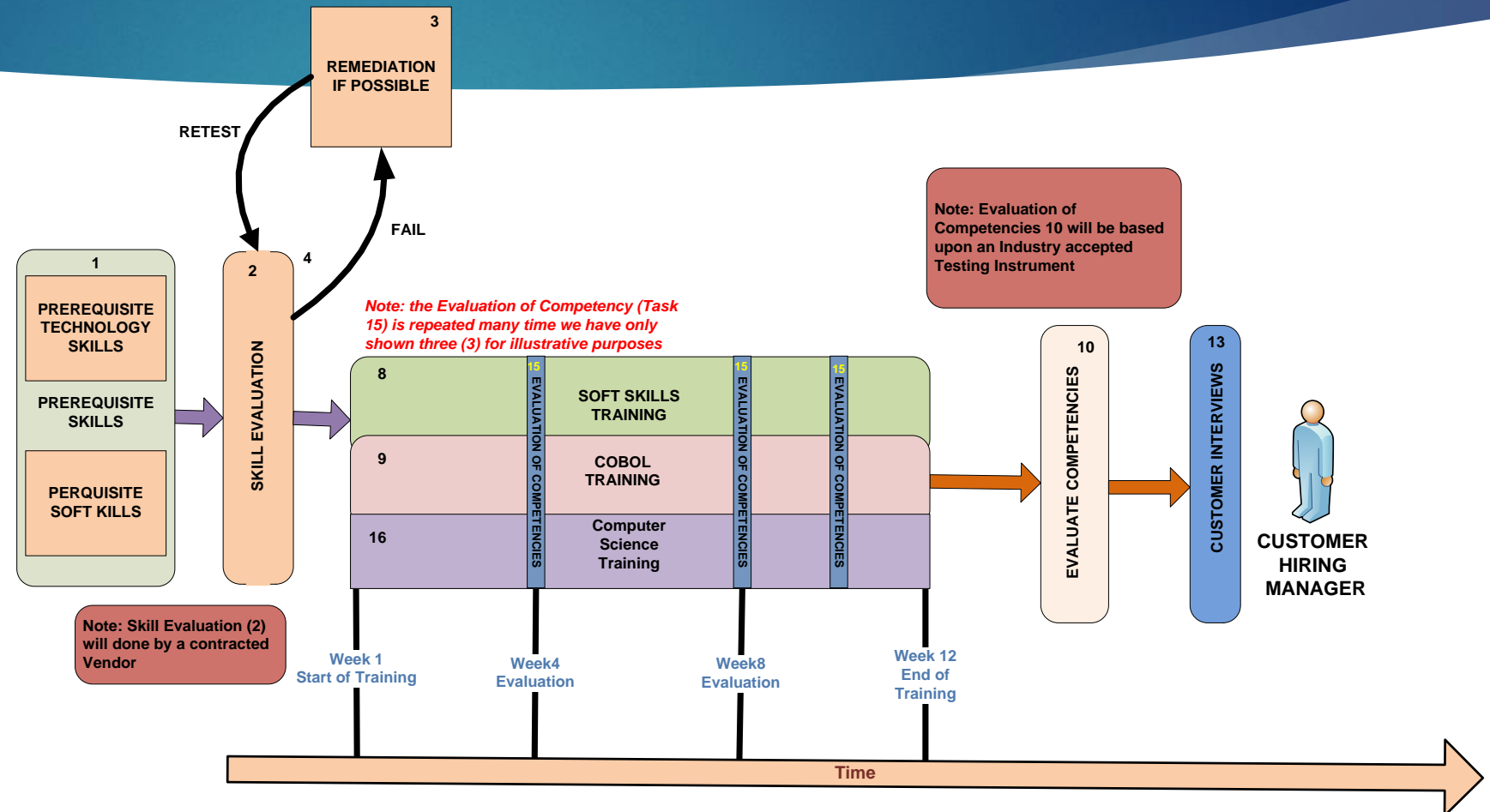
The second approach is a program delivered locally in the cities into which the graduates will be deployed. The curriculum is similar in content to the college aligned program and combines remote and classroom based techniques. Both programs include technical and soft skills learning.

## On-Demand Remote Boot Camp

- **12 week Curriculum**
  - ✓ Mainframe Technology
  - ✓ COBOL Programming/Debugging
  - ✓ Soft Skill Training
  - ✓ IBM badges
- **Delivered on-demand at locations throughout the US as necessary**
- **Classroom based/instructor lead**
- **Content can be tailored to client specifics (e.g., technical environment, vertical domain knowledge, etc.)**

# Process Flow of our Educational Approach

- Based on a partnership of business and academia
- Geared to the needs of the mid-career job seeker
- Aligned with the requirements of the COBOL enterprises that will use them
- Based on teaching both PROGRAMMING & COBOL



# Summary

- ▶ A joint Partnership with Touro College – based on a new type of Business / Academia interaction
- ▶ Addresses an increasingly major problem, but one that's largely unrecognized
- ▶ Addresses a need that will have a huge impact on American business – COBOL is one of America's most valuable and critical assets, processing more than **3.1 trillion dollars** worth of financial transactions daily
- ▶ It is time for a new solution to a legacy problem!

# If You Would Like Additional Information...



## Back In Time, Inc.

*Legacy is Now...*

**Philip Teplitzky**

2 Southerly Place, New City, NY 10956

m: 917-882-8051

Phil.Teplitzky@legacyisnow.com  
www.legacyisnow.com



## Back In Time, Inc.

*Legacy is Now...*

**Kenneth M. Coppins**

38 Mill Rd, Wilmington MA 01887

617-834-5366

KenCoppins@legacyisnow.com  
www.legacyisnow.com