17935: Breakfast & Learn: Is there really a mainframe skills issue?

Andy Bates – CICS TS Product Manager

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And Featuring…

- Will Yates
- CICS TS Test Architect

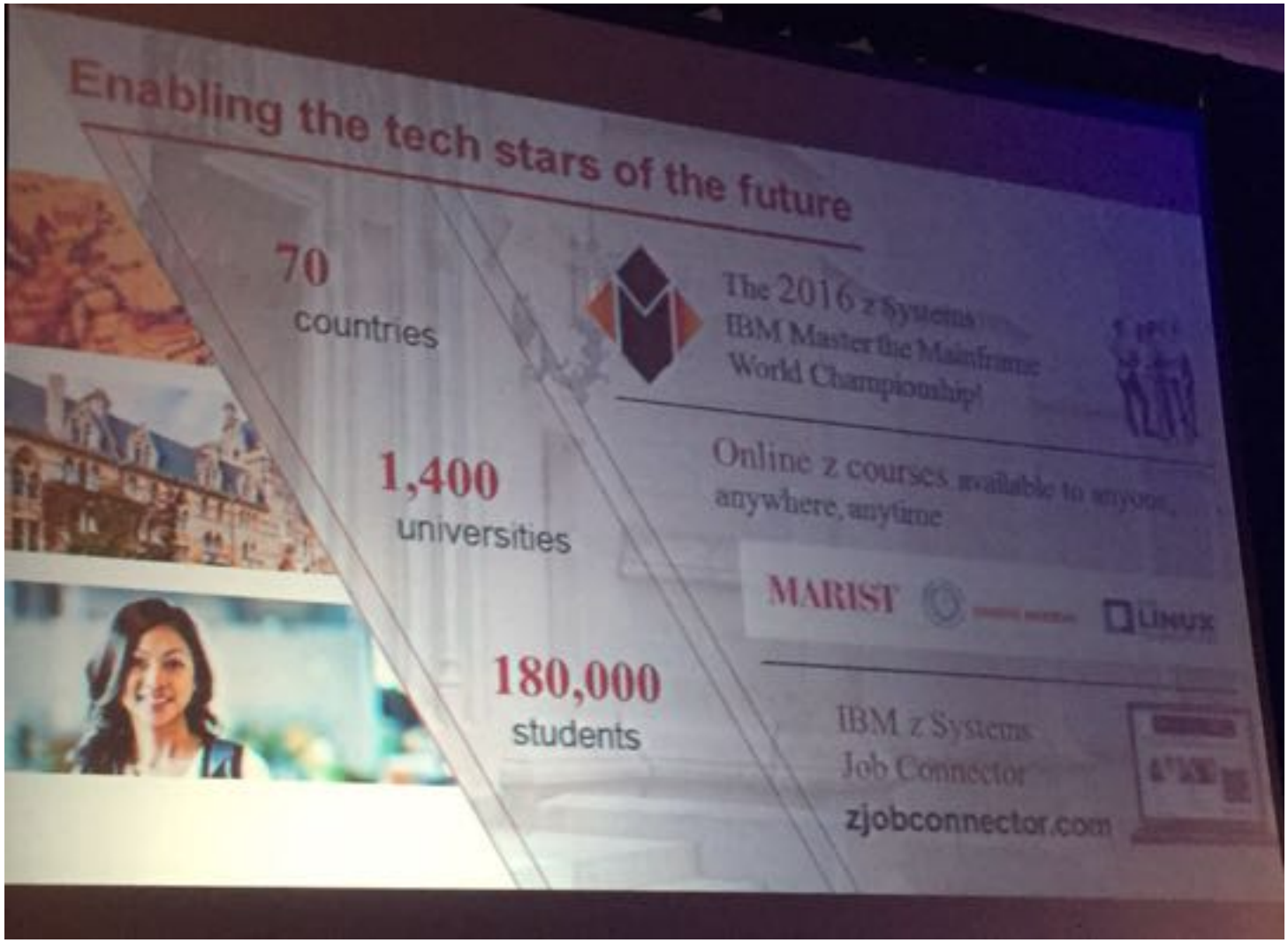
And Featuring…

- Ian Burnett
- CICS Performance Team Leader

And Featuring…

- Dr. Chris Poole
- CICS TS Software Engineer

What Does IBM think?



What Does IBM think?

Mainframe Modernization and Skills: The Myth and the Reality

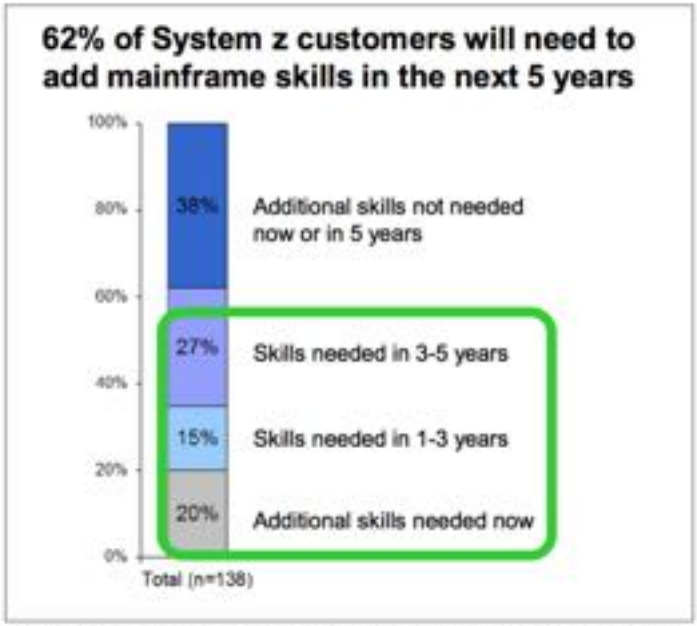
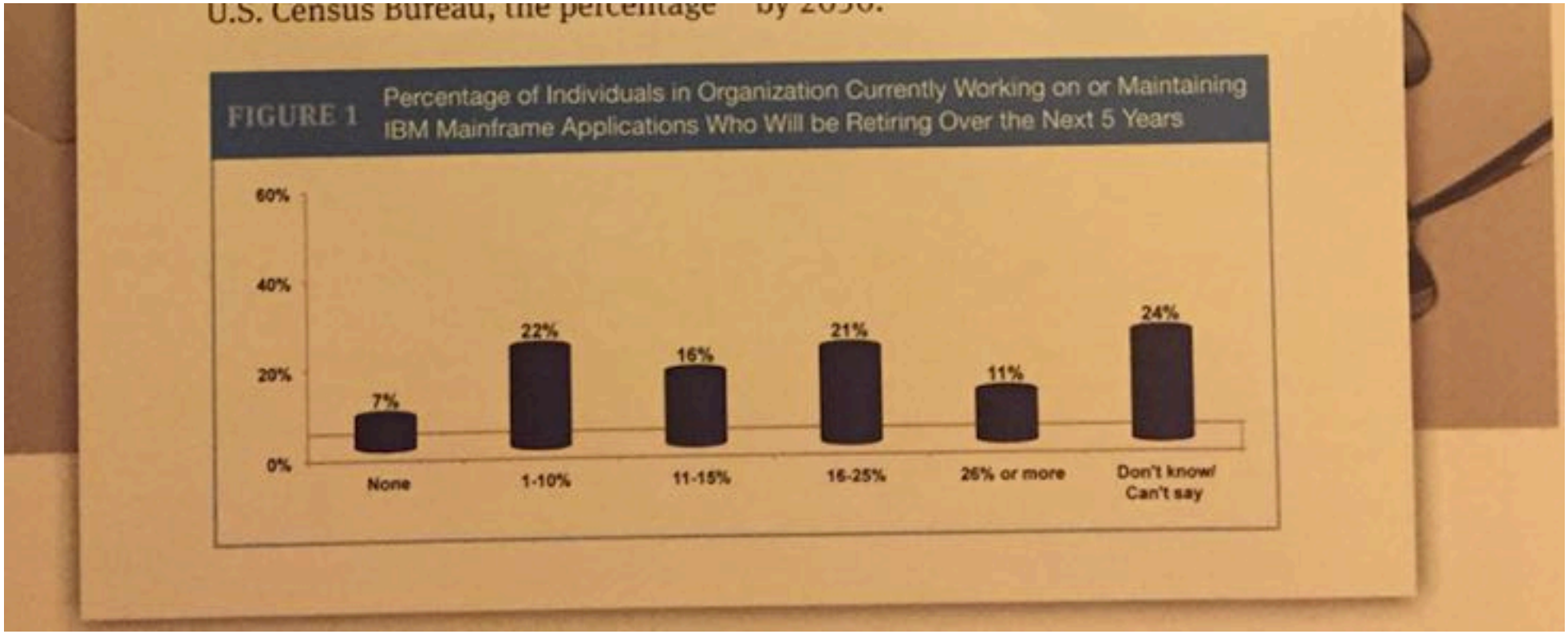


Figure 2 By the numbers: Mainframe skills will be needed

Is the mainframe a *modern* platform?

In April 2014, IBM® celebrated the 50th anniversary of the first mainframe computer, the System/360 (see Figure 1). Growth over that time has been such that today, much of the world's

What Does SHARE think?



What do the Vendors say?

MAINFRAME SKILLS SHORTAGE? NO PROBLEM

By Jonathan Adams, Vice President of Data and Performance Management, Mainframe Service Management, BMC Software

Based on BMC Software's annual survey of our mainframe customers, 81 percent of those surveyed in 2011 said they were somewhat or very concerned about staffing, up from 73 percent in 2008. A shortage of mainframe training, combined with retirement and attrition, has made filling mainframe support positions a challenge. Meanwhile, global business growth and dramatic increases in transaction volumes are leading companies to rely more on the mainframe than previously projected. Fortunately, mainframe management technologies, combined with other approaches, can help IT organizations meet this challenge.

What do the Vendors say?

February 18, 2014

Two-Thirds of CIOs Believe Looming Mainframe Skills Shortage Will Hurt Their Business

Global Survey Shows Limited Progress is Being Made on Preparing for Skills Shortage Risks

About the Compuware Mainframe Solutions

Compuware's Mainframe solutions help the world's leading organizations maximize develop
deliver better service. The Solutions are available within the Compuware Workbench, an o
features an intuitive and easy-to-use graphical user interface. The Workbench makes com
simpler to perform for both experienced mainframers as well as those new to the mainfram

What do the Vendors say?

2014 Predictions: CA Technologies sees skills issue driving problems

We cover the predictions from major service and technology vendors as they come in

Date: 9 Dec 2013

What does Google say?

Business Issues, Applications, Cloud, IT Infrastructure

CIOs frustrated by mainframe app conversion expense

IT mainframe skills shortage getting worse.

Blog-post by John Dodge, Wed, 03/12/2014 - 12:15

What does Google say?

ZDNet | MENU | EU

Shortage of mainframe skills looms but companies remain in denial

Like the rabbit caught the a car's headlights the IT industry does not know which way to jump to sort skills shortage.

By Colin Barker | February 18, 2014 -- 10:49 GMT (10:49 GMT) | Topic: Big Data

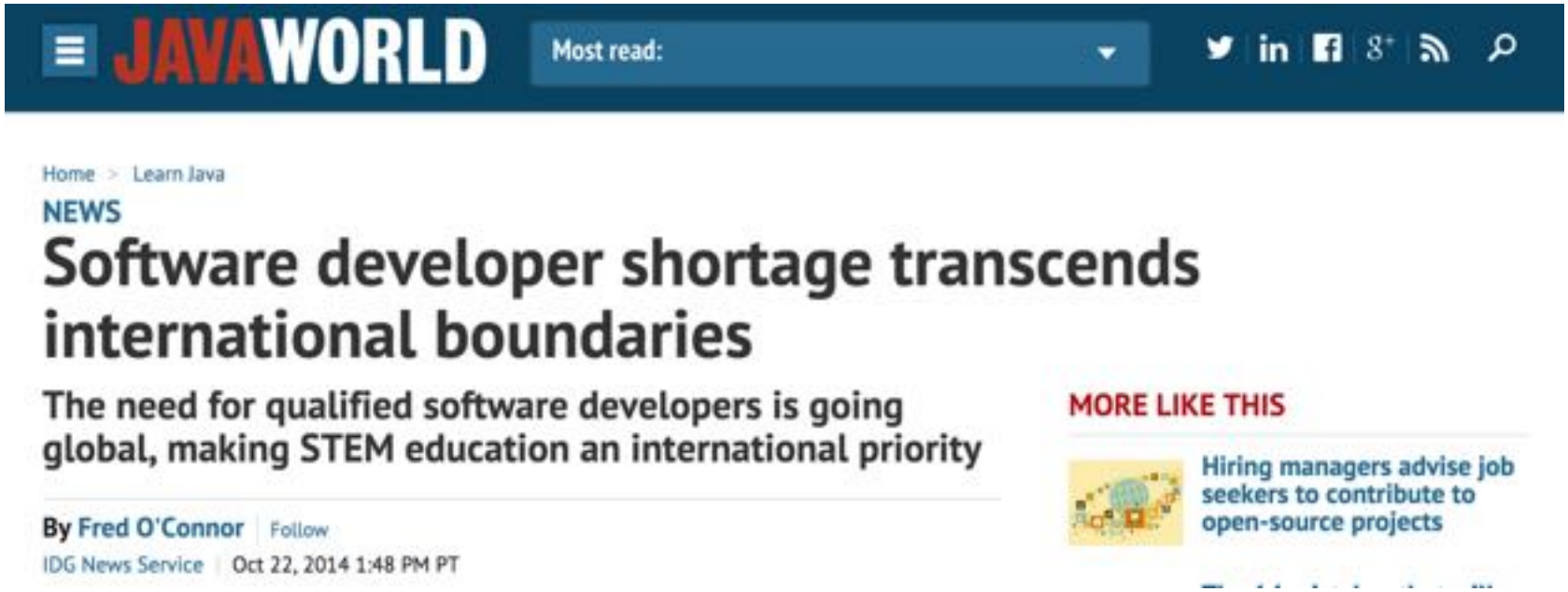
What does Google say?

CIOs scared mainframe skills shortage will hurt their business

Global survey shows limited progress is being made on preparing for skills shortage risks

Posted by Ben Rossi on 18 February 2014

So where are all the IT skills? Doing Java??



JAVAWORLD Most read:

Home > Learn Java

NEWS

Software developer shortage transcends international boundaries

The need for qualified software developers is going global, making STEM education an international priority

By Fred O'Connor | Follow

IDG News Service | Oct 22, 2014 1:48 PM PT

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Hiring managers advise job seekers to contribute to open-source projects

Then they must be doing Mobile, right??

Forbes ▾ | New Posts +22 | Most Popular | Lists | Video | 10 Stocks to Buy Now

Ayo Omojola
Contributor

ENTREPRENEURS 7/15/2013 @ 10:35AM | 19,316 views

The Shortage Of Developer Talent Is Crushing Mobile

+ Comment Now + Follow Comments

Mouna Kenzaoui, founder and CEO of Martinsen Mayer

BUSINESS DISCOVERY siliconrepublic PORTFOLIO PEOPLE

Software skills shortage drives a boom for IT contractors

by John Kennedy

A shortage of people with skills in Java, Android and iOS development willing to work on a permanent basis is contributing to a boom in IT contracting in Ireland, a prominent IT recruiter revealed.

Maybe Cloud??

Tackling the Cloud Skills Shortage

By Himanshu Sharma | *Jan 16, 2015*

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Windows then. It must be Windows.

The Register®
Biting the hand that feeds IT

DATA CENTRE SOFTWARE NETWORKS SECURITY INFRASTRUCTURE BUSINESS HARDWARE SCIE

Migration skills shortage looms as Server 2003 DEATH DATE approaches

179 days to escape Microsoft's day of doom

19 Jan 2015 at 11:15, Paul Kunert

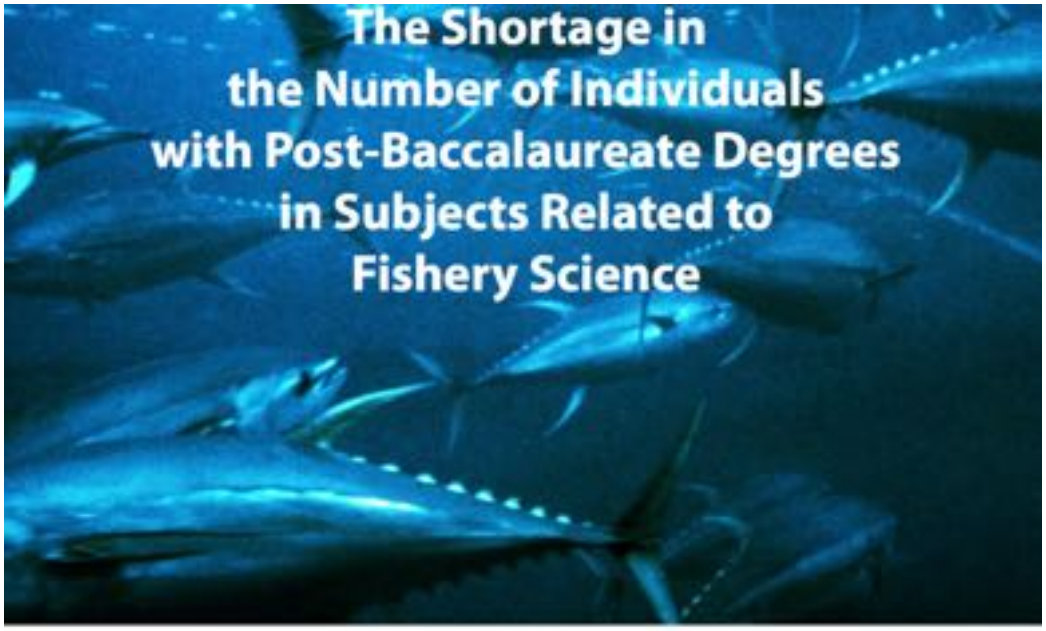
19

Something smells fishy here…

Skills shortage threatens Territory fishing industry

Updated 1 Jul 2014, 12:05pm

The development of the Northern Territory's fishing industry is being held back by a labour and skills shortage.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

U.S. DEPARTMENT OF EDUCATION

September 2008

OK, A light bulb is beginning to come on….

See more news releases in Utilities | Domestic Policy | Labor & Union

Massive Shortage of Electricians Predicted for U.S.

NECA, IBEW Act Today to Ensure Tomorrow's Skilled Electrical Workforce

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Contributor

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I cover labor market and education trends.

full bio →

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America's Skilled Trades Dilemma: Shortages Loom As Most-In-Demand Group Of Workers Ages

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For the last three years, according to ManpowerGroup, the hardest segment of the workforce for employers to staff with skilled talent hasn't been registered nurses or engineers or even web developers. It's been the skilled trades – the welders, electricians, machinists, etc. that are so prevalent in manufacturing and construction.

New electrical classifications made to address skills shortage

Maybe people should retrain….

April 2015

What to do about England's desperate shortage of qualified teachers

This looks serious! This is a political Issue!

Some articles are sympathetic….

Harvard Business Review

ECONOMY

Employers Aren't Just Whining – the "Skills Gap" Is Real

by James Bessen

AUGUST 25, 2014

Every year, the Manpower Group, a human resources consultancy, conducts a worldwide "Talent Shortage Survey." Last year, 35% of 38,000 employers reported difficulty filling jobs

> Consider, for example, graphic designers. Until recently, almost all graphic designers designed for print. Then came the Internet and demand grew for web designers. Then came smartphones and demand grew for mobile designers. Designers had to keep up with new technologies and new standards that are still changing rapidly. A few years ago they needed to know Flash; now they need to know HTML5 instead. New specialties emerged such as user-interaction specialists

Some articles are pragmatic…

Mainframe skills shortage: tackling a crisis

By Désiré Athow May 09, 2014 Computing

How to overcome the lack of mainframe skills and maintain strategic legacy systems?

April 2015 Mainframe & web technologies, Mainframe skills & training human resources, mainframe, skills, training

Some are dismissive…

HOME SEARCH

The New York Times

The Fake Skills Shortage

NOVEMBER 25, 2012 9:02 AM

NETWORKWORLD Most read:

Home > Careers > Skills and Training

IDG CONTRIBUT

BIG IDEAS IN BIG IRON

By Bryan Smith | Follow

OPINION

The skills myth: Do complex mainframe computers really make it hard to find programmers?

IT Skills: Crisis? What Crisis?

Posted on 20. Jul, 2015 by **Derek Britton** in

News, Skills

Mind the Gap

Some are deferring…

Home > IT Management > Skills and Training

FEATURE

Mainframe Skills Shortage Five Years Off

Skills shortage 5 years out; firms unprepared

By Julia King FOLLOW

Computerworld | Apr 22, 2002 1:00 AM PT

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Mainframe skills, pay at a premium

Hard times

More than 90% of 300 companies that have mainframe staffs said in a recent Meta Group Inc. survey that they have "zero strategy" for dealing with the diminishing pool of skilled mainframe workers. Stamford, Conn.-based Meta estimates that 55% of IT workers with mainframe experience are over 50 years old.

Wait… this article is from 2002!!

TRENDING: NAND flash hits a dead end · Ballmer's phone blunder cost Microsoft $10B · Resources/White Papers

COMPUTERWORLD

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FEATURE

Mainframe Skills Shortage Five Years Off

Skills shortage 5 years out; firms unprepared

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Computerworld | Apr 22, 2002 1:00 AM PT

old.

17935: Breakfast & Learn: Is there really a mainframe skills PLANNING issue?

The IBM CICS Team's Story….

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#1 – Hire Good Young People

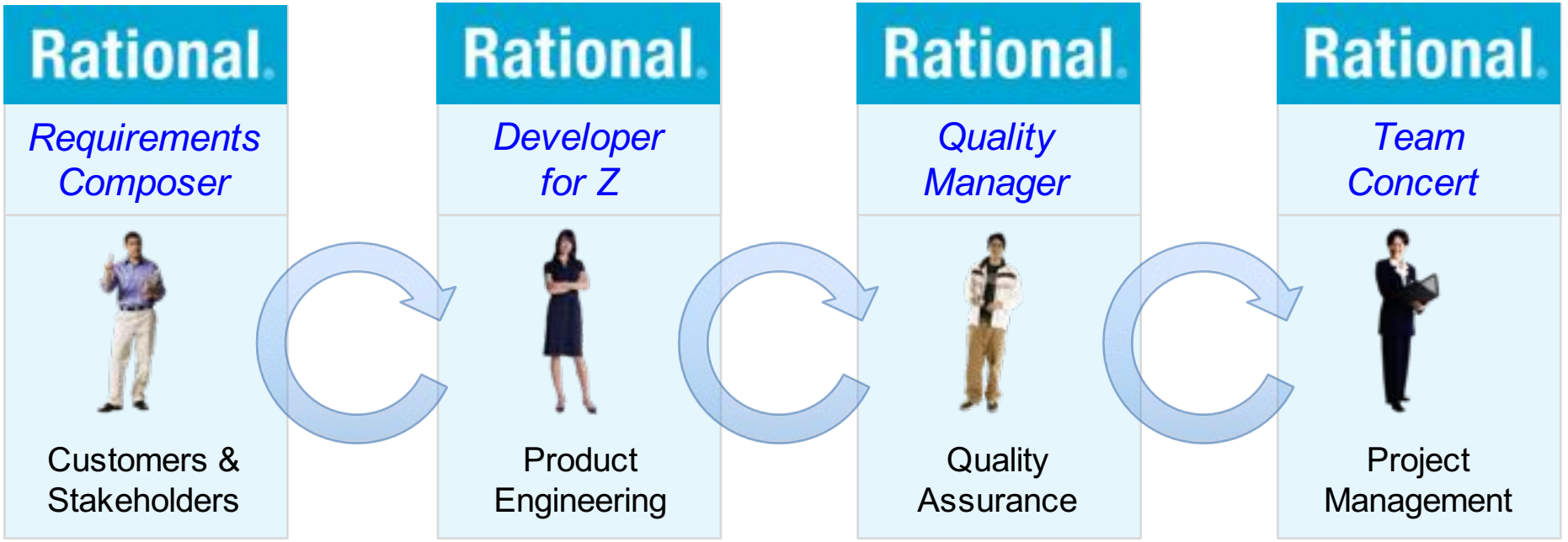
And help them become great!

https://www.youtube.com/watch?v=pKNJ-KC3vvo

- **Hire people with the expectation they will be great in a few years**
  - Requires planning – can't just use immediately on the toughest problems
  - But equally – don't just use on easy, tedious problems – give them a challenge
- **Learn from them at least as much as you teach them!**
  - New graduates look at the world in new ways – use this!
  - Many CICS innovations have come from new hires saying "I wonder if…"

#2 – Give them modern tools and processes

With tools that help them innovate



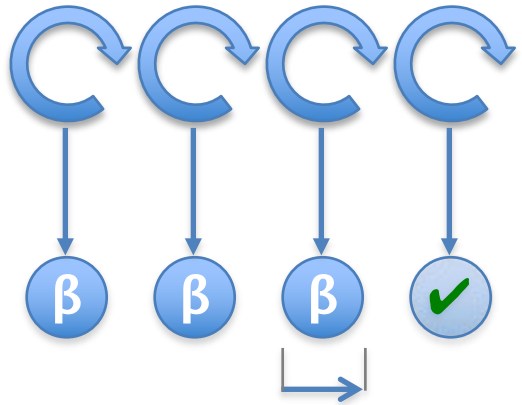
- **CICS TS Development make extensive use of modern tooling**
  - We are experimenting with IBM Watson for PMR analysis
  - We also use a good amount of open source, where it makes sense

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

#2 – Give them modern tools and processes

Processes that smooth the way and don't get in the way

- **Rational Team Concert**
  - Project planning, tracking, dashboards, RFE's
  - Source code development via EPICS and stories
- **Stories**
  - Sized in story points by whole team
  - Planned into 4 week iterations
  - Tracked by story point burn-down charts
  - Closed when defects fixed, tests automated and 100% successful
- **Testing**
  - Based on Agile Test Quadrants (Unit, FV, User, ST)
  - Collaborative test planning
  - Automated tests run daily on continuous delivery of code
  - Customer scenario testing (CiP) - product integration and multi release
- **Continuous delivery**
  - Daily builds, weekly iterations (increments), monthly betas



#3 – Empower them to make a difference

Design Thinking practices fuel creativity and enthusiasm

Hills

- Focus on problems and outcomes for users, not feature lists
- Cross-functional teams define, deliver and promote solutions

Sponsor Users

- Provide real domain expertise
- Ensure design for real target users, not imagined needs

Playbacks

- Communicate hills, focusing on user value to be delivered
- Regular playbacks internally to wider team and externally to clients

Technical Foundation

- Separate team addresses RFEs, serviceability enhancements, infrastructure maintenance, etc

There is NO mainframe skills issue

- But there is a mainframe skills PLANNING issue

- Some tips that have helped us in CICS TS:
  #1 – Hire good young people
  #2 – Give them modern **tools** and **processes**
  #3 – Empower them to make a difference

Gen Z Welcome to the Mainframe

From Desk to D-block to Denmark…

Gen z Welcome to the Mainframe

Generation what?

Gen z

Welcome to the Mainframe

The Mission

Increase clients' retention of 0-5yr hires working on z Systems

Tactics

Enlighten

Understanding the global impact of mainframe tech

Excite

Awesome case studies & interactive ideation

Empower

Forging connections to create a next gen network

The Workshop

One day exploring the amazing possibilities of working on z Systems

Agenda

Morning

Introductions
Why z Matters
Real-life Mainframe Stories

Afternoon

Innovation Challenge
Careers & Community
Wrap up and Q&A

Evening

Networking social

The Community

A virtual Gen z network reinforced by meetups at key conferences

Foundations

Social Media

Facebook group
In-geo LinkedIn groups

Events

Webcasts
Conferences

Learning Support

Resource lists and links
Peer support network

To Denmark!

1 day

1 deck

25 customers

What did we learn?

DENMARK IS A MONSOON REGION

THE BEER IS GOOD
← (and this guy can ruin a photo)

AND THE WORKSHOP WORKED

"Mainframe has a lot of things to offer that I wasn't aware of."

"Mainframe is much broader than I thought."

"Yes! I believe in it now!"

"I am very new to the mainframe, and as expected, I learned a lot."

"That was really fun and I learned a lot."

"Great to get together with other mainframers from other companies."

"I will recommend this workshop to my colleagues.“

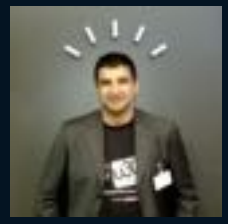
Be part of it

Tell customers about Gen z

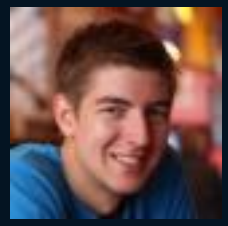
0-10yrs experience?
Join the Gen z team

Ask us for more info!

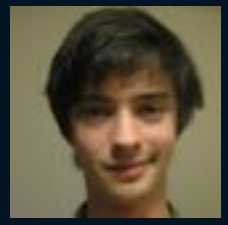
ibm.biz/ibmgenz



Indi Singh



Tony Papageorgiou



David Harris

Chris Poole

Anna Bridgen