

Shh Don't Say the M-Words

How to Talk About Mainframes and Modernization



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A Riddle



Visualization Exercise Example:

[How to Outsmart Your Own Unconscious Bias | Valerie Alexander | TEDxPasadena - YouTube](#)



Who would you ask for help?



90% of decisions
made unconsciously

Can process only 40
out of 11 million pieces
of information every
second

[Blind spots: Challenge assumptions - YouTube](#)

You Are Biased!



**Wide
Range of
Biases**

Programmers have no life

Height = Leadership

Women are emotional

People of Color are Angry

Wide
Range of
Technical
Biases

Mainframes = old

COBOL = hard

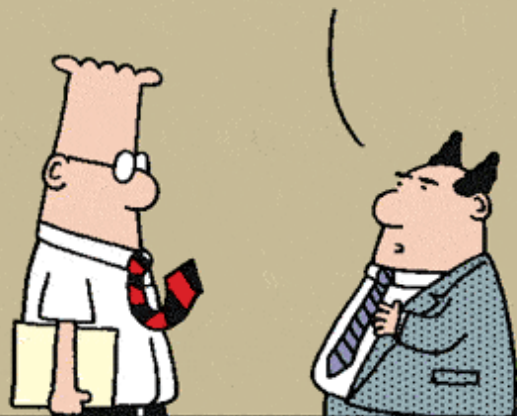
New tech = better

Modernization =
Getting off the mainframe

What do people think of
when they see the word
“Mainframe”?



WE NEED COBOL PROGRAMMERS FOR OUR MAINFRAME MILLENIUM PROBLEM.



www.unitedmedia.com

S. Adams

IF YOU SEE ANYONE WHO LOOKS LIKE A COBOL PROGRAMMER, LET ME KNOW.

TURN AROUND.



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ARE YOU A COBOL PROGRAMMER?

NO, BUT I'M OFTEN TOLD I LOOK LIKE ONE.

YOU'RE HIRED.



I'VE NEVER SEEN YOU DO ANY REAL WORK AROUND HERE, IRV. HOW DO YOU GET AWAY WITH IT?



J. Adams E-Mail: SCOTTADAMS@HOTMAIL.COM

I WROTE THE CODE FOR OUR ACCOUNTING SYSTEM BACK IN THE MID-EIGHTIES. IT'S A MILLION LINES OF UNDOCUMENTED SPAGHETTI LOGIC.



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IT'S THE HOLY GRAIL OF TECHNOLOGY!!



YOU BOYS MAY FIND A LITTLE EXTRA IN YOUR ENVELOPES THIS MONTH.

What is “Mainframe”?



What the Press Thinks



What an Engineer Thinks



What Movies Think



What an App Dev Thinks



What a Hobbyist Thinks



What it actually is

Being a MF* hacker

Chad Rikansrud

***mainframe**



A circular graphic with a teal tint. On the right side, a black rectangular sign is mounted on a wall, featuring the words "Elevator Pitch" in white, bold, sans-serif font. The sign is slightly tilted. To the left of the sign, an elevator shaft with a glass door is visible. The ceiling has two recessed circular lights. The overall scene is dimly lit, with the sign providing the primary light source.

Elevator Pitch



Mainframe is just a server, with its own strengths and weaknesses.

I wouldn't say the mainframe is right for every job anymore than I would say the cloud is right for every job.

Use the right tool for the job. You CAN pound a nail with a screwdriver, but why would you when you have a hammer?



Old tools can make a
modern technology
look old

Don't let your assumptions about
mainframes hold you back

When was the last time you really looked at
what the modern mainframe can do?



Write once / Deploy Anywhere

On Prem has the advantage of keeping control of your data.

Cloud has the advantage of unlimited scalability.

There are speed advantages to having the processors physically close together

COBOL is Pervasive



Over 800 Billion
Lines of Code

You don't hear much about it because it works. If it didn't, it would have been replaced years ago.

It's completely impractical to replace it all.

It can do all the new stuff too – new IDEs, APIs, Microservices.

What do people think of
when they see the word
“Modernization”?

What is “Modernization”?



What a Mainframer Thinks



What a Cloud Provider Thinks



What an SI Thinks



What a CEO Thinks



What a CFO Thinks



What it actually is

What is Mainframe Modernization?

Moving to Cloud

Rewriting in Java

Adding REST APIs

Refactoring into MicroServices

Adding modern interfaces

New tools like Kubernetes

DevOps and CI/CD practices



A circular graphic with a teal tint. On the right side, a black rectangular sign with white text reads "Elevator Pitch". The sign is mounted on a wall next to an elevator shaft. The elevator shaft has a metallic, paneled appearance. The background is dark, and there are some circular lights visible at the top of the shaft.

Elevator Pitch

“Restore IT systems to Operational Excellence”



The screenshot shows a website for Marianne Bellotti, a Technologist, Author & Speaker. The navigation menu includes Home, About, Books, Speaking, and More. A large photograph of Marianne Bellotti smiling at a laptop is featured. The laptop has several stickers, including one for 'Kill It With Fire'. The text 'Secretly, all software development is legacy modernization' is overlaid on the left side of the image.

Marianne Bellotti
Technologist,
Author & Speaker

Home About Books Speaking More

**Secretly, all
software
development
is legacy
modernization**

Challenge
assumption that
anything new is
better

Get them to read
Kill It With Fire

Start with the business need



Business Needs:

- Flexibility
- Faster Delivery
- Cost Reduction
- Skills
- New Features

Not a Business Need:

- Cloud
- Containers
- Microservices

Modernization is multilayered

Lens/Stage	1	2	3	4	5
Infrastructure	Mainframe	Distributed	Cloud		
			Cloud-ready	Cloud-optimized	Cloud-native
Application	Monolithic Proprietary ACID transactions	N-tier Portable Virtualised	Loosely-coupled Relational "macro" container	Components API Services Containers	Microservices NoSQL BASE transactions
IT Process	Waterfall	Iterative	Agile	DevOps	DevSecOps
Management	Initial	Managed	Defined	Measured	Optimizing
Culture	Departmental	Directed	Collaborative	Trusted	Performance

Most modernization focuses on Application, Process or Infrastructure

All modernization has pieces across all 5 lenses

The goal is “operational excellence”, not Stage 5

Modernization should be lots of small projects

PROJECT TYPE	SUCCESSFUL	CHALLENGED	FAILED
Developed from scratch	26%	54%	20%
Developed using components	37%	46%	17%
Purchased application (COTS)	44%	36%	20%
Flow Like Modernization	71%	28%	1%

Big Projects are hard to sell and doomed to fail

Start small, Show value along the way

The “modern” definition of success (OnBudget, OnTime, Customer Satisfied) also shows that Flow modernization projects do much better than other project types. This chart is based on the 50,000 projects in the CHAOS 2020 database.

Starting over is expensive and risky



Existing applications represent a business investment

Why rebuild the house if what I wanted was a new kitchen?

COBOL is not Hard to Learn



COBOL was created with accessibility to the layperson in mind

Literally accountants and secretaries wrote earliest COBOL applications

No One Path

Choose Your Own
ADVENTURE!

Different paths for different companies

Different paths for different applications