

3 *Bank CEOs Assume a More Vocal Tech Leadership Role*

“The purpose of a business is to create and keep a customer.”

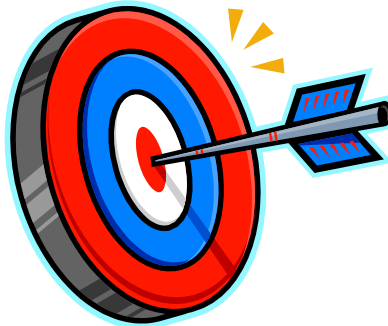
- Peter Drucker

- **Strategy** is the most important function firms perform, as it is about the decisions their leadership must make regarding the business they want to be in and the business they want to be out of; the business opportunities they want to pursue and the business opportunities they want to forgo—choices that can make or break the firm for years to come.

Panos Mourdoukoutas, Forbes, Oct. 10, 2011

The Technology Target

Too
Early



Too
Late

Strategic Planning

1. Where you were.
2. Where you are now.
3. Where you are going.
4. How you get there.

If you don't know where you are going, any road will get you there. - Lewis Carroll



The Strategic Application of Technology

- IT & Operations people must think strategically
- Strategic technology plans keep projects on course, allocate limited resources, and establish accountability
- Benchmark thyself
- Inward focus on productivity, efficiency, and decision-making ability
- *“Do not go where the path may lead, go instead where there is no path and leave a trail.”* – Ralph Waldo Emerson

#4 Smart Bankers Decide Doomsday Prepping is Not a Profitable Business

What is the right balance of cybersecurity controls and more open, convenient digital services so your bank can manage the risk-reward proposition?

The Balancing Act



Risk Recognition

- Comptroller's Handbook:
 - “The OCC recognizes that banking is a business of assuming risks in order to earn profits.”

Waffle House Index



This Waffle House in Panama City Beach, Florida, has a closed sign in the door.
(Photo: WXIA-TV, Atlanta)

Waffle House Index

TO MEASURE A STORM'S SEVERITY

The Waffle House Index

FEMA once said they get a fairly good measure how bad the situation after a storm by checking the local Waffle House. The chain is famous for keeping the business open during calamities. FEMA has even alert levels for this:

● GREEN

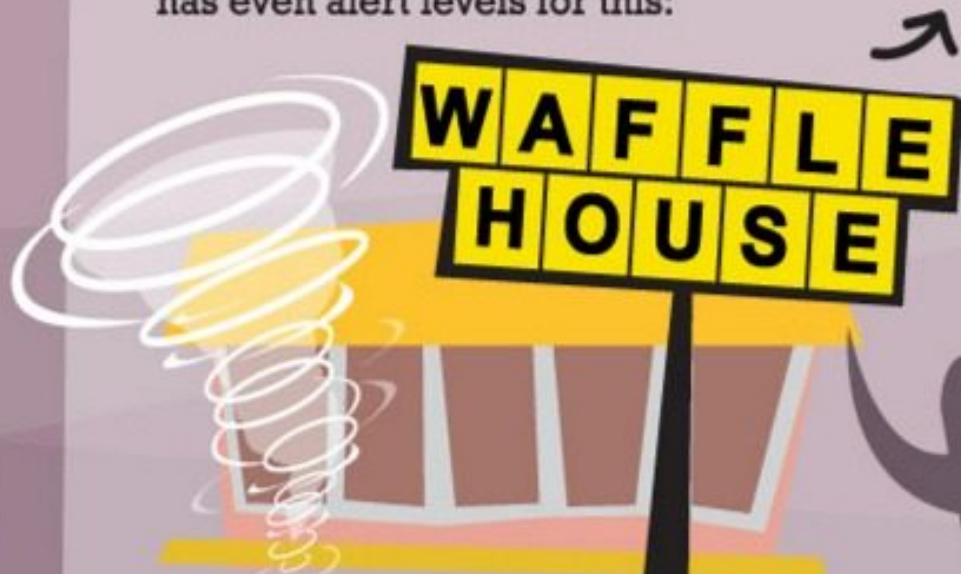
The chain is serving full menu

● YELLOW

The chain is serving limited menu

● RED

The chain is closed



"If you get there and the Waffle House is closed? That's really bad."

— FEMA Administrator

“Because innovation always outpaces regulation by at least two years, waiting on a piece of paper from the government to tell your bank what to do regarding cybersecurity is a surefire recipe for disaster.”

- *Jimmy Sawyers*

Phishing Frequency and Results



“Learned Helplessness”

“The dogs wouldn’t jump. All they had to do to avoid electric shocks was leap over a small barrier, but there they sat in boxes in a lab at the University of Pennsylvania, passive and whining.

They had previously been given a series of mild shocks and learned they could do nothing to stop them. Now, they had given up trying. In the words of the scientists, they had ‘learned helplessness.’”



Source: New York Times, Dec 10, 2014; Benedict Carey; *Architects of C.I.A. Interrogation Drew on Psychology to Induce ‘Helplessness’*

Anyone can be tricked!



Practical Security Maxims

- Most threats are not as exotic, sensational, and sophisticated as one might think
- If a business is 100% secure, it cannot function
- Smart, diligent employees are often the best security measure
- Buying more security hardware, software, and solutions is not necessarily a sound strategy

Design Your Bank's Security Systems to Assume Some Phishing Emails Will Be Opened, Some Links Will Be Clicked, and Some PII Will Be Given to the Bad Guys

***Invest Security Dollars in Testing
What Happens AFTER the Phishing
Email Link is Clicked***

Social Engineering Fail

- Social Engineering by Dummies
- Certain social engineering tactics are counterproductive, risky, and downright dangerous
- “Naming and Shaming” is not an effective security awareness strategy
- Anyone can be tricked
- Educate or humiliate?

Vendor Impersonation



Not Worth the Risk

- In a time of active shooters, bank robberies, terrorism, and domestic violence, vendor impersonation in a bank environment is a risky, unnecessarily dangerous practice
- More appropriate for a nuclear facility or military base than a bank
- There are more sophisticated and effective methods of social engineering tests



“It takes 20 years to build a reputation and five minutes to ruin it. If you think about that, you’ll do things differently.”

- Warren Buffet

Business Email Compromise (BEC)

What's in Your Mailboxes?



Anatomy of a Business Email Compromise

- Company executive received email from trusted party requesting he click a link and log in to his remote email (e.g., Outlook Web Access)
- The email was a spear phishing email which appeared to originate in China
- Executive unwittingly provided login credentials by entering the information on the fake site
- Once the spear phisher had the executive's email login, he logged in as the executive and started searching the executive's emails

Anatomy of a Business Email Compromise

- The intruder searched for the executive's normal business patterns involving wire transfer requests
- The intruder found out who the controller was in the company
- Using the executive's email, the intruder sent a wire transfer request for \$98,400 to the controller
- The wire transfer recipient was in Mexico
- Fortunately, the controller asked the executive about the request and the wire was not sent



Bank Wire
Transfer

Enter

Ctrl



Beware the “Virtual ISO”

- The counterfeit consultants of the InfoSec world
- Better to have a REAL ISO, a bank employee armed with the right training, knowledge, and access to resources
- Third-parties can support the bank’s ISO but the ISO responsibility cannot be outsourced



“Virtual” Defined

virtual

adjective

: very close to being something without actually being it

Source: Merriam-Webster

The Fallacy of the Human Firewall



DIY IPS = CIO



Ransomware €

Shift

Ransomware

All your precious Files on your computer
I have successfully encrypted!

Your files are encrypted. To get the key to decrypt files you have to pay 500
USD. If payment is not made before the cost of decrypting files will
increase 2 times and will be 1000 USD

Click below to pay us the bitcoins!!!

Pay



Three Choices (RPK)

1. Restore from an uninfected backup; or
2. Pay the ransom; or
3. Kiss your data goodbye



Backups at Risk

- Be aware that some attackers are now corrupting the backups *before* launching the ransom request, effectively taking option one (restore) off the table.



City of Baltimore Ransomware Attack

- City's network hit by cyberattack on May 7
- Hackers used the ransomware variant, "RobbinHood"
- Demanded \$76,000 in bitcoin
- Systems was projected to cost \$18.2 million



CATO Incident

Recent CATO Incident

- Local small business lost \$200,000
- Hackers infiltrated their network, gained access to their online banking accounts, and originated 41 ACH credits (direct deposits) totaling \$200,000
- Credited accounts were across the US, mostly in major cities at large banks



Cybersecurity Misinformation to Avoid

Who Are First Responders?



- FBI?
- Secret Service?
- Local Law Enforcement?
- Lawyers?
- Insurers?
- Consultants?
- Tech Support?
- Security Monitoring Firms?
- Others?

***# 5 Traditional Banks Build
a Digital Moat Around
Their Castles to Repel the
Invaders***

Open Banking: Innovation or Invasion?

Down Under Banking

- Australia has 53 banks of which 14 are owned by the government
- Greater Bank (\$7 billion) is moving its core banking system to the cloud with Data Action
- Preparing for “open banking”
- Legislated under “Consumer Data Right” to open up competition between banks, utilities, and telecom providers
- Four banks hold 95% of the market share in Australia

Source: ZDNet, 8-9-19

Open Banking Questions

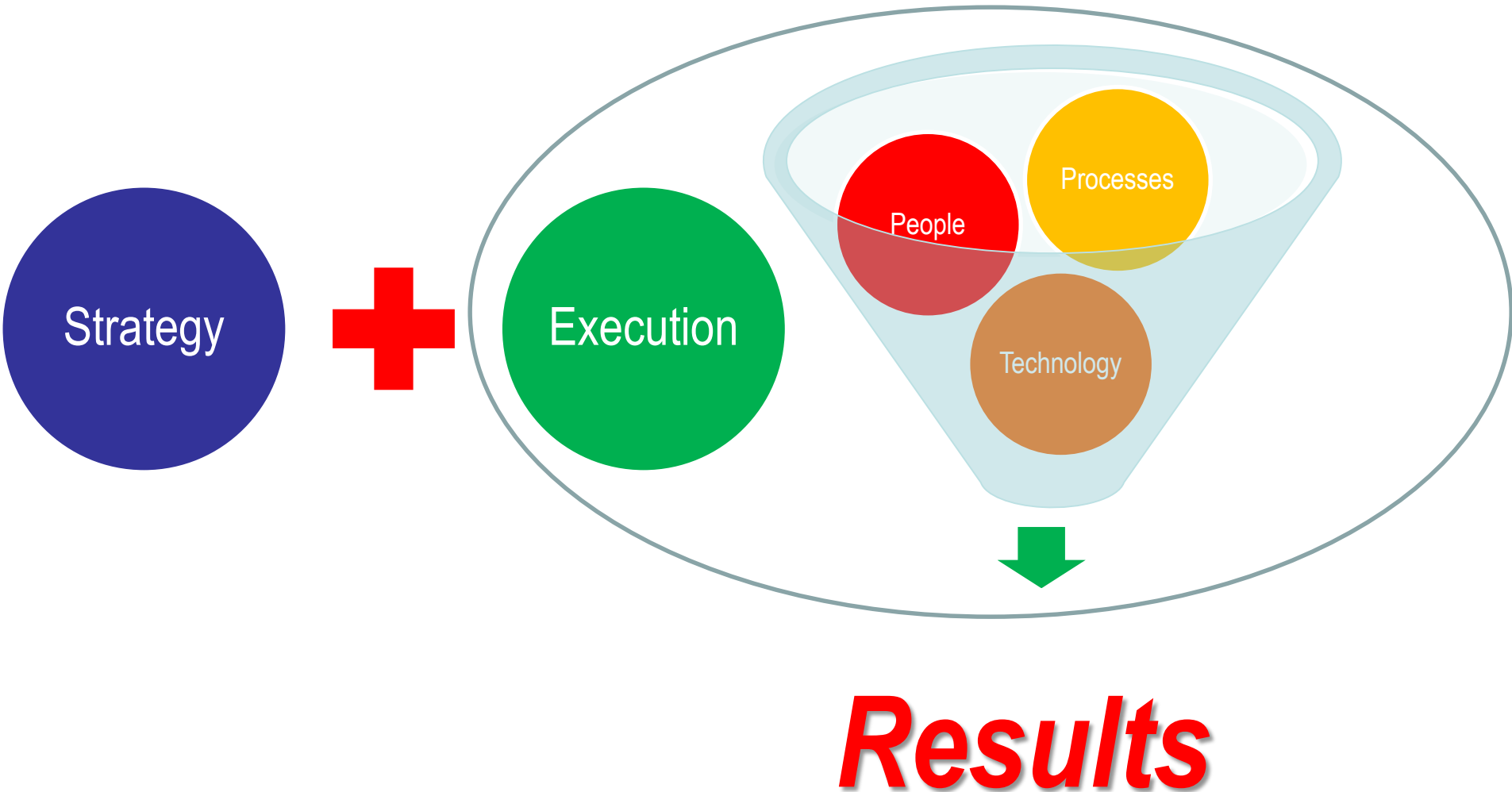
- Innovation or Communist Plot?
- Increased competition or a threat to capitalism?
- No borders banking? Global banking?
- Are today's PFMs the camel's nose under the tent for open banking?
- What are the benefits for FIs?
- What are the benefits for customers?
- Should we embrace this concept or defend against it?

#6 Business Processes Are Examined for Self- Inflicted Wounds

“If I’d asked people what they wanted they would have said faster horses.”

- Henry Ford

The Success Equation



“There is nothing a fintech is doing that a community bank can’t do with the right people, processes, and technology in place.”

- Jimmy Sawyers

Class Discussion

- Does your bank have a strategic tech plan?
- Are you involved with the plan or on the tech planning team?
- How does your bank pick its projects and allocate its resources?
- What is your bank's most successful tech goal attained?
- What is your top tech goal for the future?

7 Twenty Years of Tech Compliance Gets Revisited and Revamped

When Old Compliance Meets New Tech

- Speed bumps and social media
- FDIC FIL-30-2003
- ADA-compliant, information-only websites
- New tech...20-year old regulations

Barriers to Doing Business

- What do you require that your competition does not?
 - Frequent forced changes of online banking passwords?
 - Special characters in online banking passwords?
 - Amount of last deposit for ID?
 - Pre-printed deposit slips?
 - Signing loan documents in person?
 - Self-imposed business day cutoff times?
 - Blocked debit and credit card transactions instead of alerts?
 - Low mobile deposit limits?

8 Tech Time Wasters and Resource Hogs Are Eliminated

Biggest Time- Wasters in Banking

Biggest Time-Wasters in Banking

- Vendor Management Systems that require constant feeding and administration
- Cybersecurity news feeds that foster constant paranoia and misallocated resources
- Excessive phishing testing that kills employee productivity and is counterproductive to true cybersecurity preparedness
- Secure email solutions that do not work and frustrate bankers and their customers
- PFM solutions that don't have a market



HOW TO LIE WITH STATISTICS

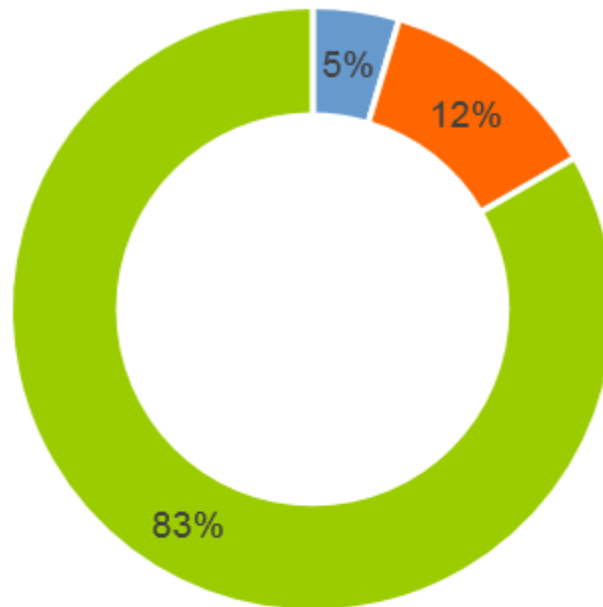
Darrell Huff
Illustrated by Irving Geis



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PFM Penetration

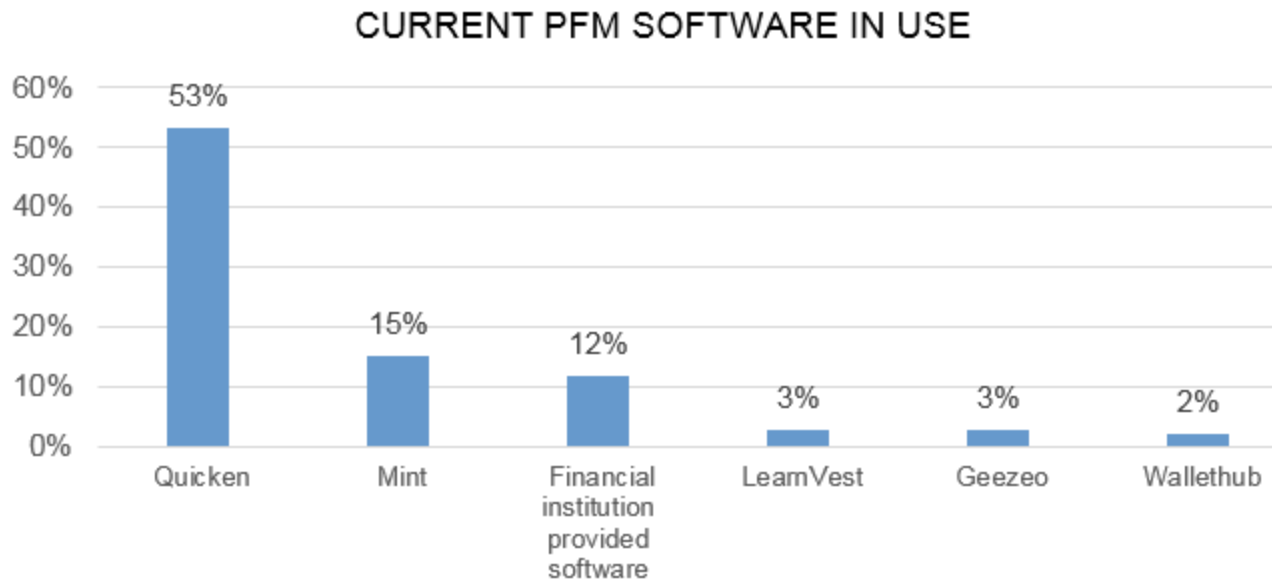
PERSONAL FINANCIAL MANAGEMENT (PFM) USAGE



- I have used financial management software in the past but not any longer
- I currently use a personal financial management program
- I have never used personal financial management software

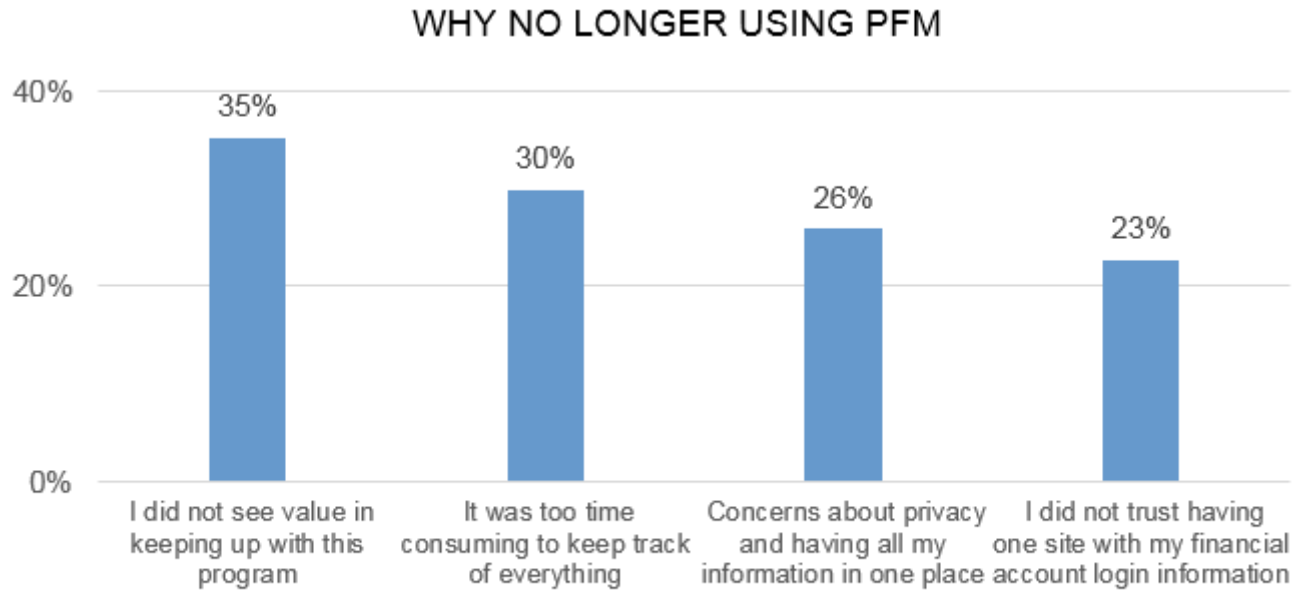
Source: Raddon Research Insights

Beating Intuit



Source: Raddon Research Insights

PFM Sustainability



Source: Raddon Research Insights

PFM Alternative

- The average consumer will not put the work in to complete a PFM app
- Consider a digital savings management/personal savings goal program instead
- Implement a simple solution that customers will embrace
- Make it fun
- Make it easy

As community banks, we must fight the urge to commoditize ourselves right out of business by making our business models emulate the large banks and non-bank competition and therefore lose our competitive advantage and service-level differentiation.

Most Popular Fast Food Chain by State