We Don’t Do That Any More

Because doing the wrong thing better is, technically…**Doing the Wrong Thing**

Peter Coffee
VP for Strategic Research

pcoffee@salesforce.com
@petercoffee

If You Start With A Drucker Quotation, It Can't Be Dumb

"There is nothing quite so useless,
as doing with great efficiency,
something that should
not be done at all."

What Are The Dumb Things We're Doing?*

A – **Assuming**

B – **Bridging**

C – **Coding**

D – **Debugging**

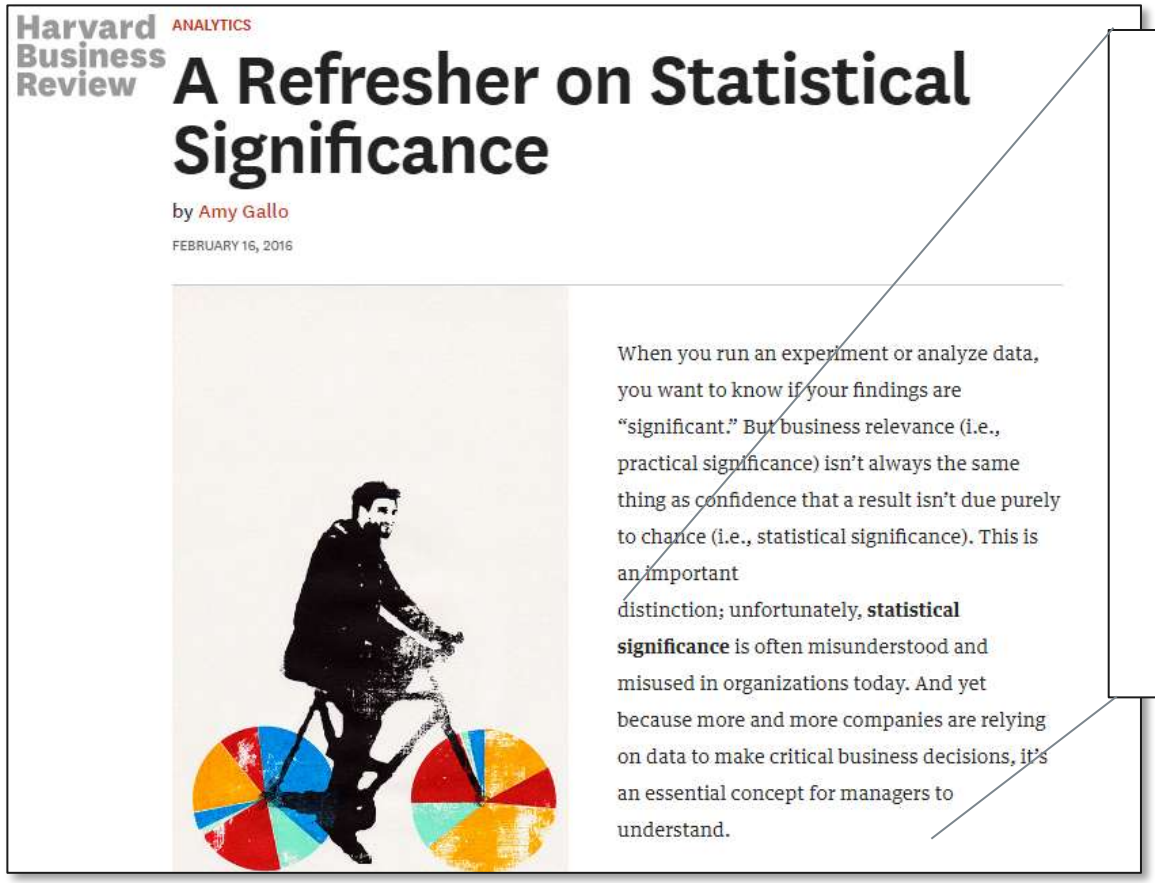
E – **Estimating & Extrapolating**

* Short forms for convenient reference. Details to come.

What Are The Dumb Things We're Doing?

Assuming: We Teach Calculus Instead of Statistics

Too much optimizing of actions based on flawed understanding



Harvard Business Review

ANALYTICS

A Refresher on Statistical Significance

by Amy Gallo

FEBRUARY 16, 2016

When you run an experiment or analyze data, you want to know if your findings are "significant." But business relevance (i.e., practical significance) isn't always the same thing as confidence that a result isn't due purely to chance (i.e., statistical significance). This is an important distinction; unfortunately, **statistical significance** is often misunderstood and misused in organizations today. And yet because more and more companies are relying on data to make critical business decisions, it's an essential concept for managers to understand.

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Bridging: We Build Castles of Data, Then Bridge Between Them

In a connected world, continuity & coherence should be intrinsic

"The distributed ledger makes it easier to create cost-efficient business networks where **virtually anything of value can be tracked and traded**–without requiring a central point of control."

- developer.ibm.com/bluemix/2016/05/09/blockchain-on-bluemix-now-beta/

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Salesforce Open-API architecture grabs the future of data

"**The Salesforce.com1 platform can push and pull data from the Blockchain APIs** used on the web application built on Heroku with Node.js.

"Using the CRM software, businesses that operate with a Bitcoin License can generate reports on their customers, their Bitcoin transactions, their tax requirements on capital gains; and pull all of this data from blockchain APIs.

"**The power is in the endless capabilities of Salesforce1 and the real-time data intensive transaction data built on Node.js**. There is so much data available from the Blockchain."

- https://domsteil.com/tag/bitcoin-and-salesforce/

Even Error-Free Storage Can Obscure Value

Why Began With "SOFTWARE": Silos Were the Side Effects

Processes captured data from activities

Programmers wrapped that data in code

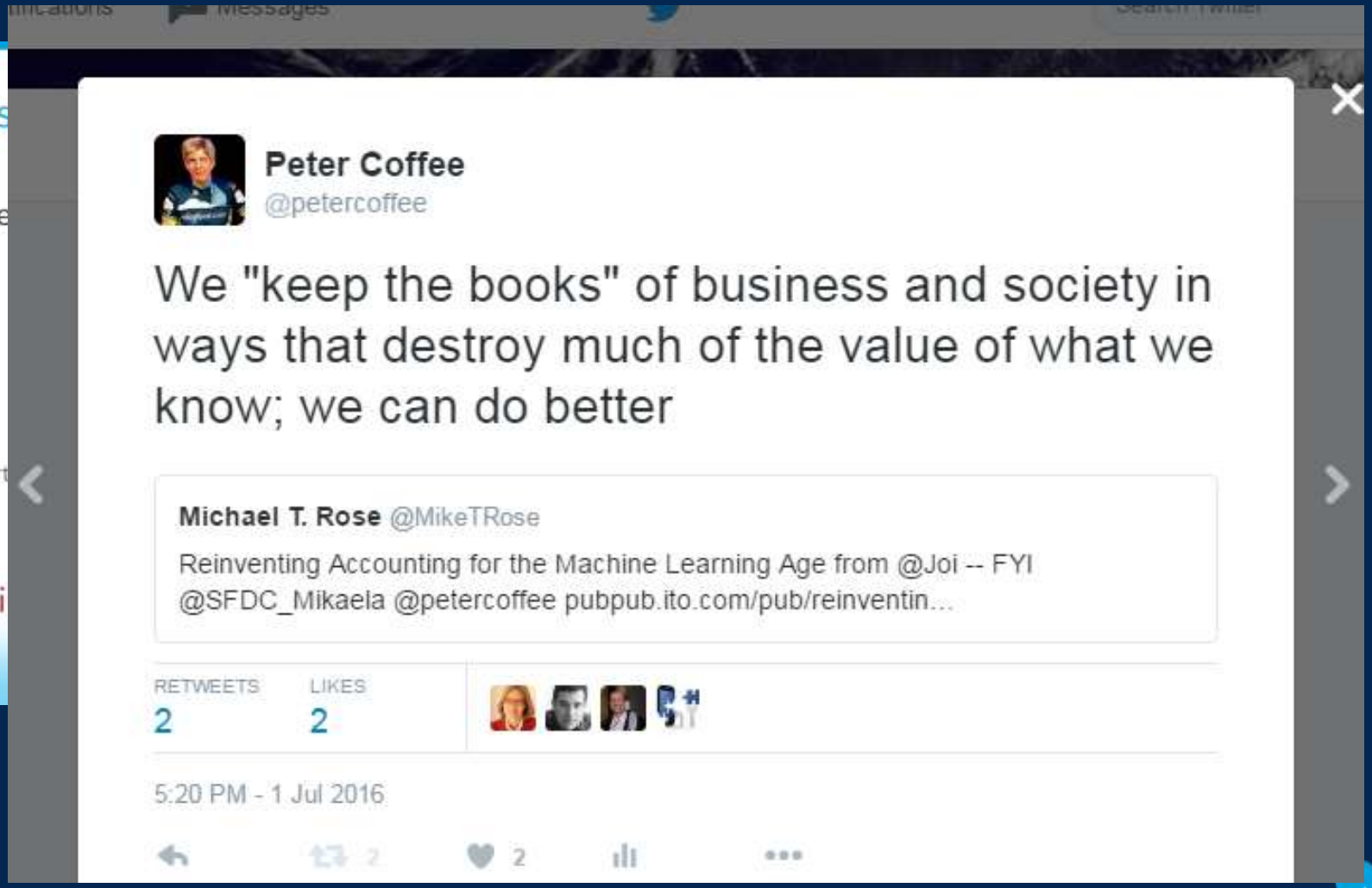
```
IDENTIFICATION DIVISION.
PROGRAM-ID. SequenceProgram.
AUTHOR. Michael Coughlan.

DATA DIVISION.
WORKING-STORAGE SECTION.
01 Num1 PIC 9 VALUE ZEROS.
01 Num2 PIC 9 VALUE ZEROS.
01 Result PIC 99 VALUE ZEROS.


PROCEDURE DIVISION.
CalculateResult.
    ACCEPT Num1.
    ACCEPT Num2.
    MULTIPLY Num1 BY Num2 GIVING Result.
    DISPLAY "Result is = ", Result.
    STOP RUN.
```

Silos fragmented process & identity

Even Error-Free Storage Can Obscure Value



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Is future success about “learning to code”?

Long-Haul “Driver”: $90k/year

F1 “Driver”: $30 million per year

Uber “Driver”: $34k/year*

I can’t recommend becoming a “coder”

* www.buzzfeed.com/johanabhuiyan/what-uber-drivers-really-make-according-to-their-pay-stubs

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Debugging: Security Model is Static/Perfectionist instead of Dynamic/Risk Mgmt

This is Game Theory: we should

- Deter
- Deceive
- Defend
- Detect
- Develop

Game theory is "the study of mathematical models of conflict and cooperation between intelligent rational decision-makers."

Someday, You Will Be Hacked. Design For That Day.

September 7, 2016 11:27 am

Safe as houses: how the super-rich make their homes super-secure

Hugo Cox

From face-recognition cameras to blast-resistant windows, the wealthy are going to greater lengths to protect their properties

"If you still hanker for a good old-fashioned safe, make sure it has two codes: one for normal use, the other for when you're being forced to open it, simultaneously alerting the police or your security team."

Programming Techniques — R. Rivest Editor

How to Share a Secret

Adi Shamir
Massachusetts Institute of Technology

In this paper we show how to divide data D into n pieces in such a way that D is easily reconstructable from any k pieces, but even complete knowledge of $k-1$ pieces reveals absolutely no information about D. This technique enables the construction of robust key management schemes for cryptographic systems that can function securely and reliably even when misfortunes destroy half the pieces and security breaches expose all but one of the remaining pieces.

Key Words and Phrases: cryptography, key manage-

(1) knowledge of any k or more D_i pieces makes D easily computable;
(2) knowledge of any $k-1$ or fewer D_i pieces leaves D completely undetermined (in the sense that all its possible values are equally likely).

Such a scheme is called a *(k, n) threshold scheme.*

Communications of the ACM, November 1979

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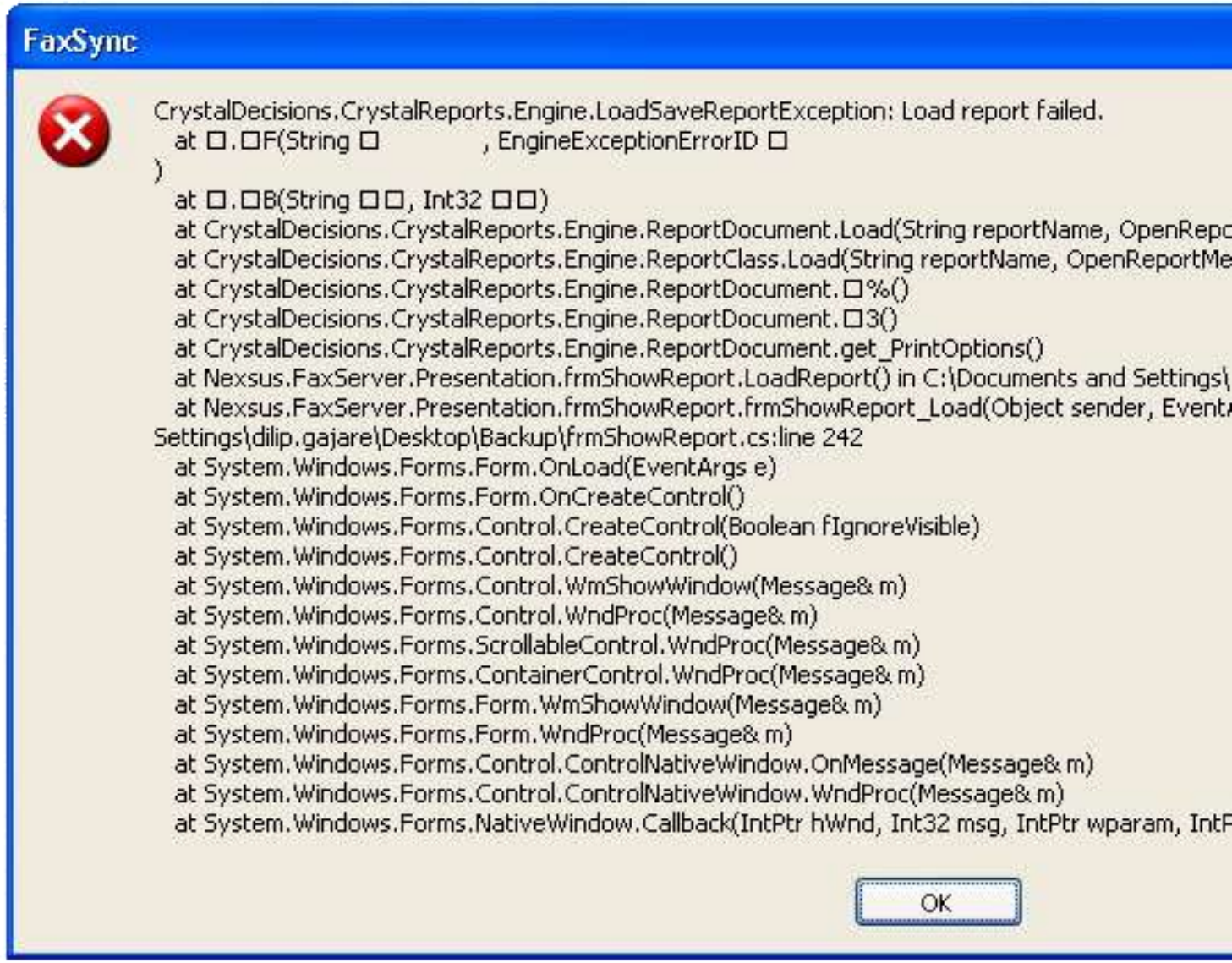
This is Game Theory: we should deter, deceive, defend, detect & develop

Estimation & Extrapolation: We Should Measure and Model

All existing market research spends too much to (mis)learn too little

Why Does Measurement Matter?

- People are slow and unreliable reporters of incomplete and inaccurate memories



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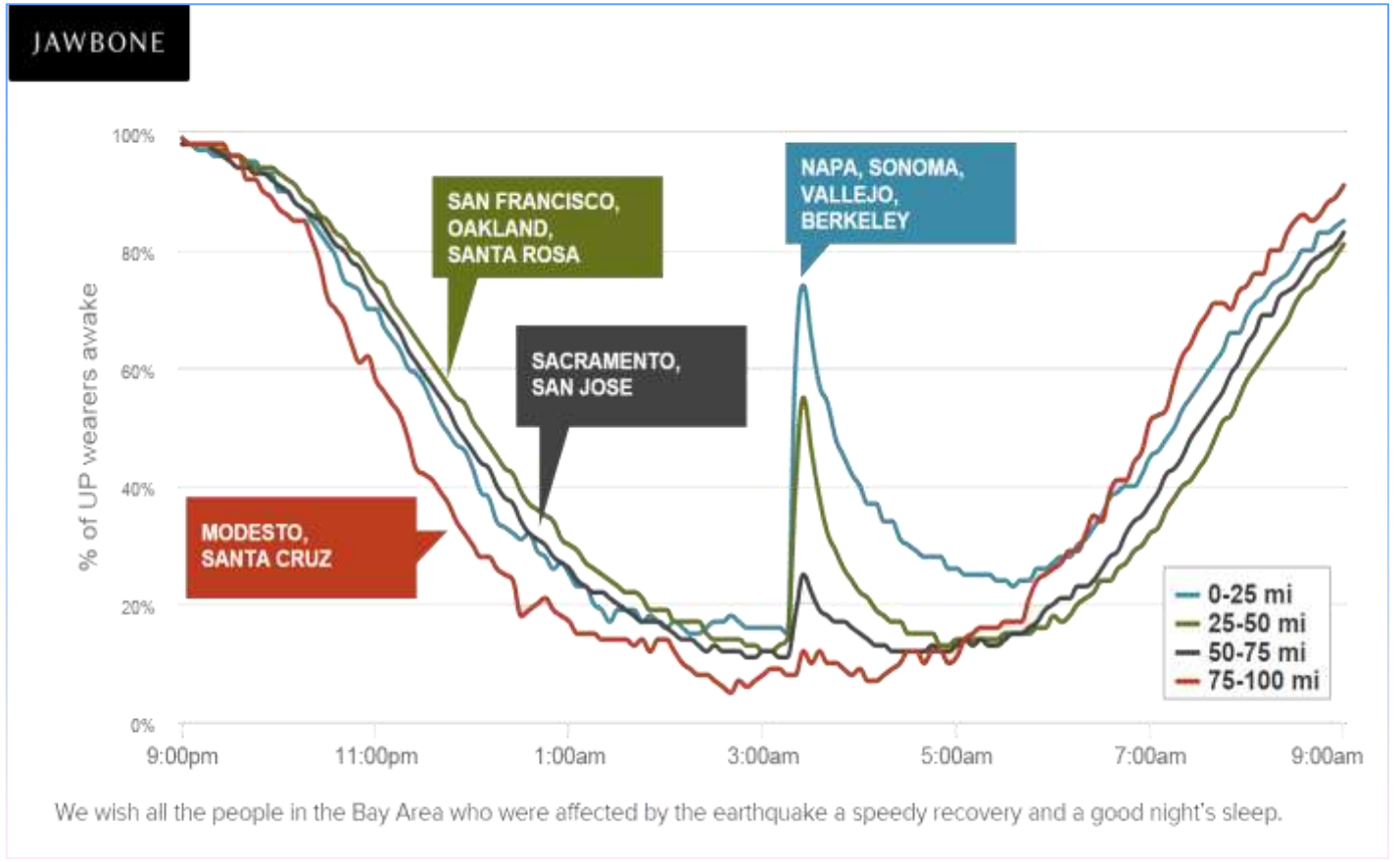
Why Does Measurement Matter?

- People are slow and unreliable reporters of incomplete and inaccurate memories
- People are passengers, not test pilots: they're not thinking about indicators of trouble until the trouble is already there
- Statistical significance emerges much sooner with accurate, timely collection at global scale



Don't Talk to Me About "Digital Transformation."

Making it 'Digital' is just the beginning

The *reason* to make it digital is to make it computable and transformable

The stuff you think is cool today is tomorrow's 1984 Macintosh

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Don't Talk to Me About "Digital Transformation."

For example: the watch will not extend the phone.
The phone will be a control panel for the watch.

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Don't Talk to Me About "Digital Transformation."

For example: the watch will not extend the phone. The phone will be a control panel for the watch...

We won't just digitally enhance the sound. We'll digitize and operate on the raw signal.

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Don't Talk to Me About "Digital Transformation."

The watch will not extend the phone. Rather, the phone will be a control panel for the watch.

We won't just digitally enhance the sound. We'll digitize and operate on the raw signal.

We will do things indistinguishable from magic…

MIT And Georgia Tech Develop System To Read Closed Books Using Terahertz Radiatic

BY MARY PASCALINE ON 09/10/16 AT 7:25 AM

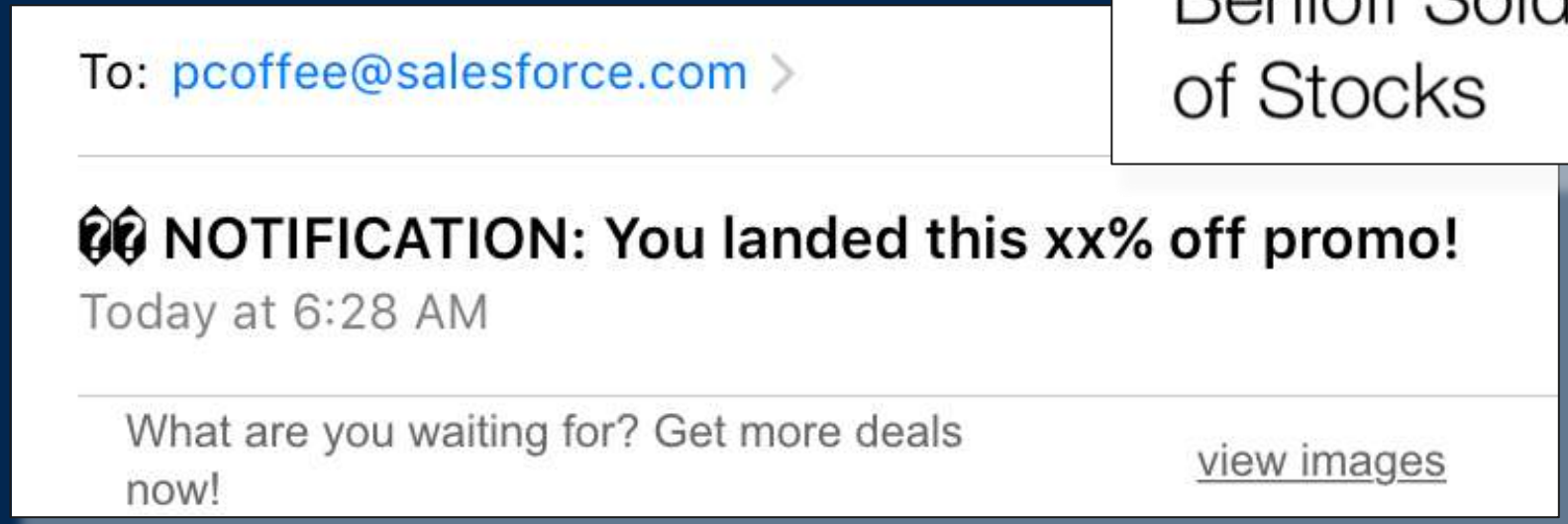
T-Waves May Offer Just Right Choice

By Peter Coffee | Posted 2002-05-20

eWEEK

Don't Talk to Me About "Digital Transformation."

…but we're still working on getting the *simple* things right.



If I End With *Three* Druckers, This Must Have Been Smart

"There is nothing quite so useless,
as doing with great efficiency,
something that should
not be done at all."

"If you want something new,
you have to stop doing
something old."

"Management is doing things right;
leadership is doing
the right things."

What Are The Dumb Things We're Doing?

A – **Assuming & Optimizing** instead of **Assessing and Adapting**

B – **Bridging Isolations** instead of **Chaining Collaborations**

C – **Coding** instead of **Composing**

D – **Debugging Brittleness** instead of **Gaming for Resilience**

E – **Estimating & Extrapolating** instead of **Measuring & Modeling**

Thank you

Peter Coffee
VP for Strategic Research

pcoffee@salesforce.com
@petercoffee
in/petercoffee

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