



An Analytic Culture Starter Kit

Adam Austin

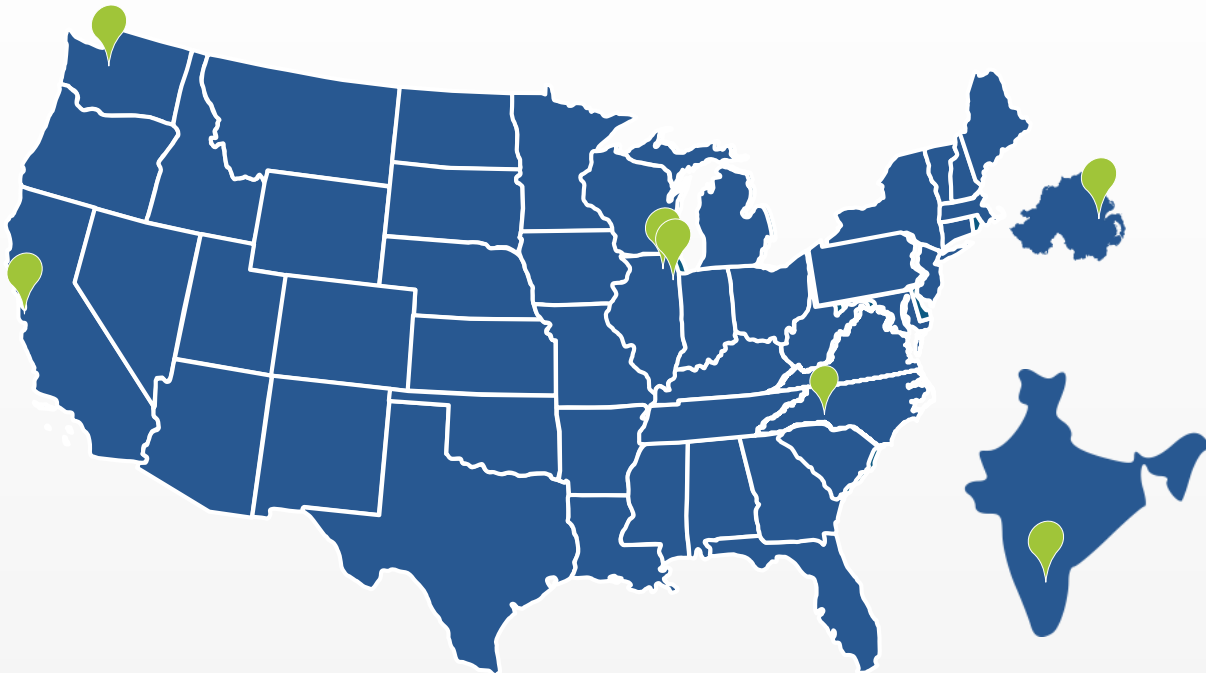
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[just_add_data](https://twitter.com/just_add_data)

DATA SCIENCE AT ALLSTATE

Where We Work

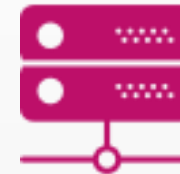


We have experts across **seven locations**:
Bangalore - Belfast - Charlotte - Chicago
Northbrook - Seattle - Silicon Valley

Who We Are



300+ data and analytics experts



Managing and governing data



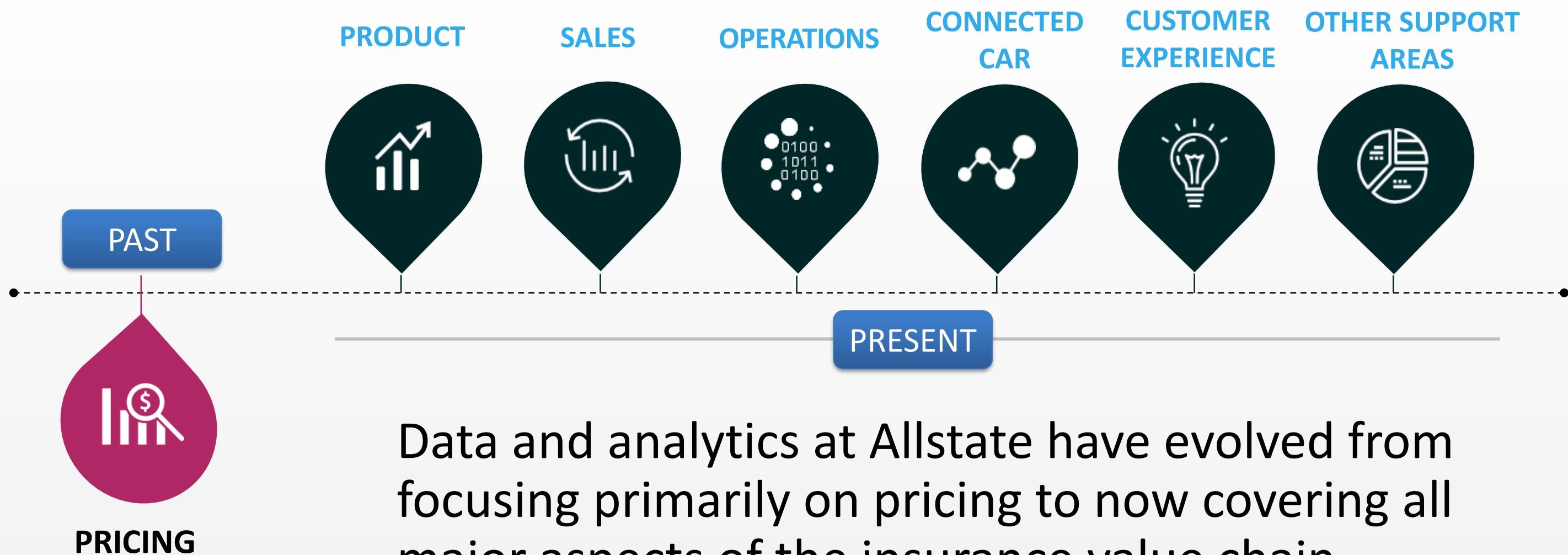
Developing analytics solutions



Delivering solutions through technology



DELIVERING ANALYTIC SOLUTIONS ACROSS BUSINESS UNITS



PAVING THE WAY FOR AN ANALYTIC CULTURE

An analytic culture must be a top-down initiative

**WE ARE A
DATA AND ANALYTICS
COMPANY.
-ALLSTATE CEO TOM WILSON**



Leaders be like



WHAT IS AN ANALYTIC CULTURE?

DEFINITION

An **analytic culture** is an enterprise-wide expectation that strategic decisions incorporate judgment based on insights from **data exploration, analysis, models, and/or experimentation.**



BROADLY, AN ANALYTIC CULTURE HAS OR PURSUES...



ANALYTIC TALENT



CONTINUOUS PROFESSIONAL DEVELOPMENT



SOUND, DOCUMENTED DATA ON RELEVANT MEASURES



TOOLS TO ACCESS AND STUDY THE DATA

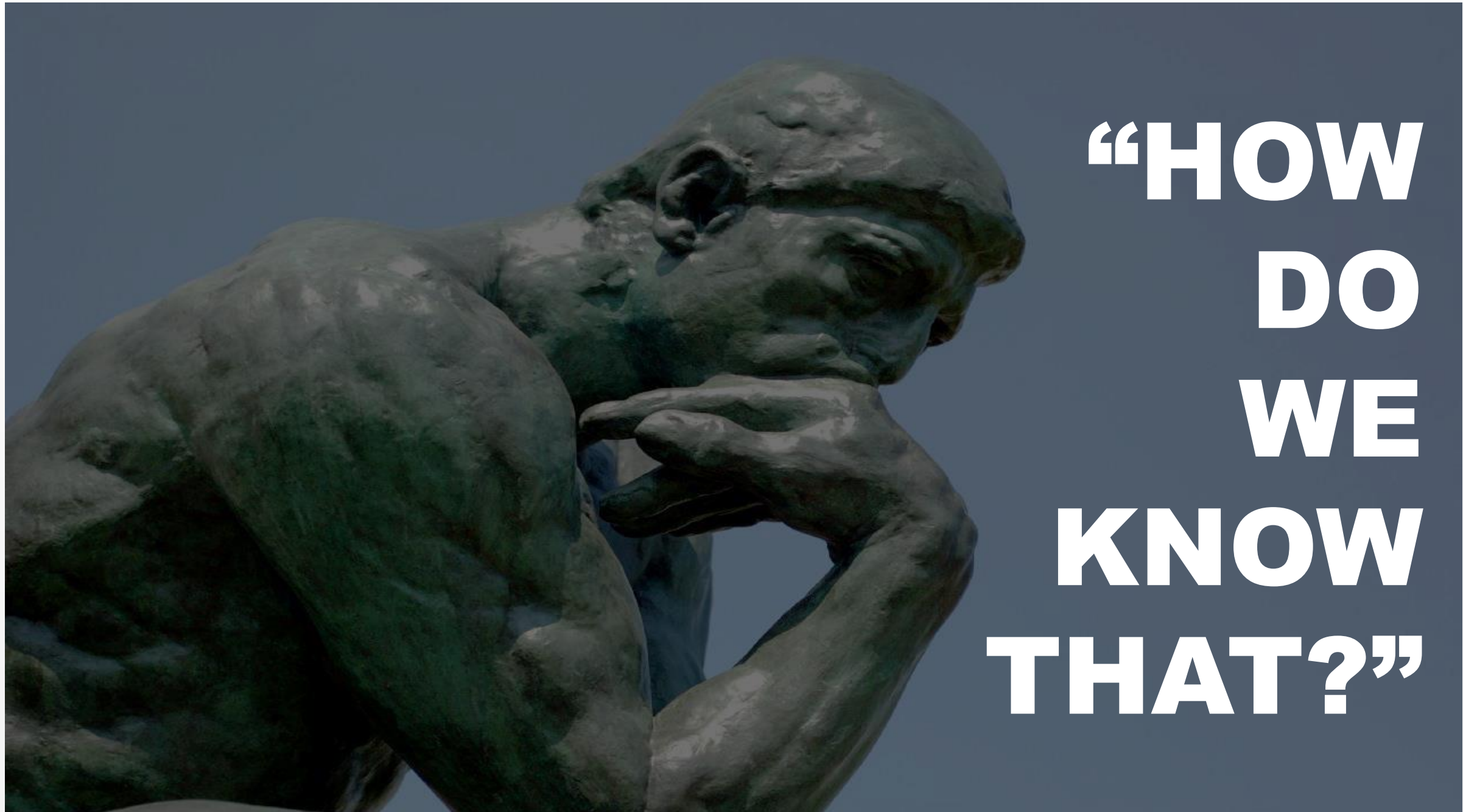


PLATFORMS FOR MODELING AND EXPERIMENTATION



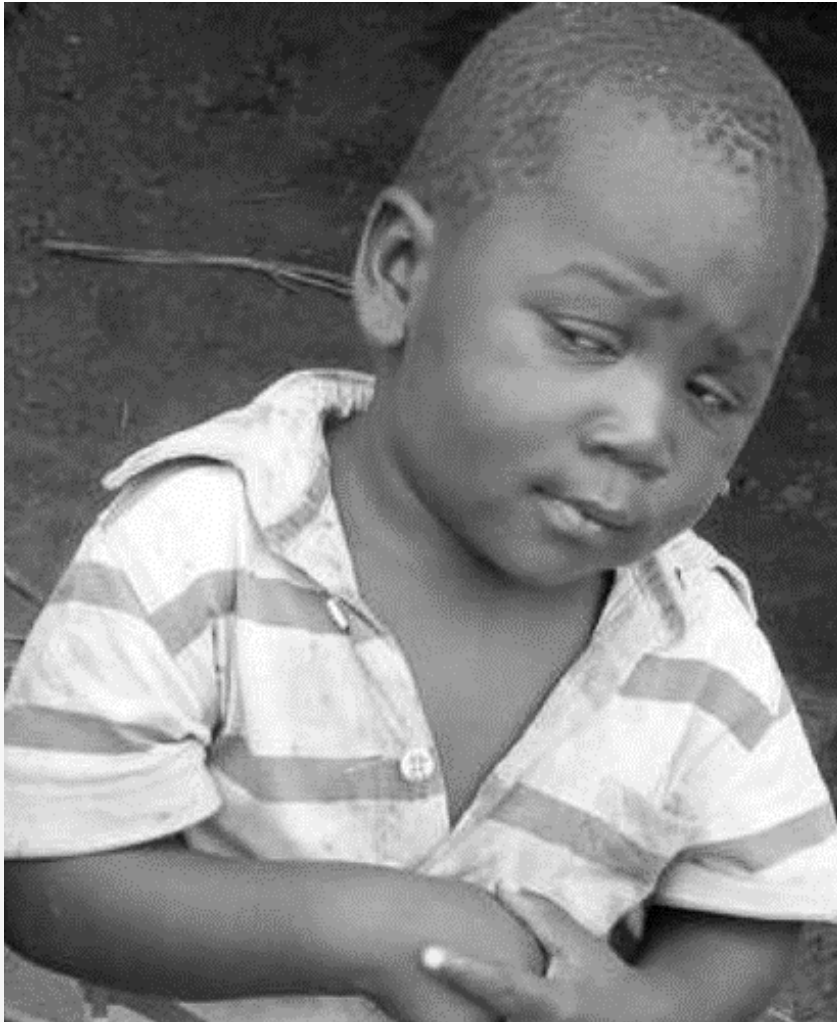
SUPPORT FOR IMPLEMENTATION OF ANALYTIC INITIATIVES

THE HALLMARK OF A CULTURE OF ANALYTICS



WHY DO WE NEED A “CULTURE” OF ANALYTICS?

LEADERS RESIST ANALYTICS FOR THREE REASONS



MISTRUST



OVERCONFIDENCE



FEAR

MISTRUST AROUND ANALYTICS CUTS BOTH WAYS



Overly pessimistic view of analytics mistrusts:

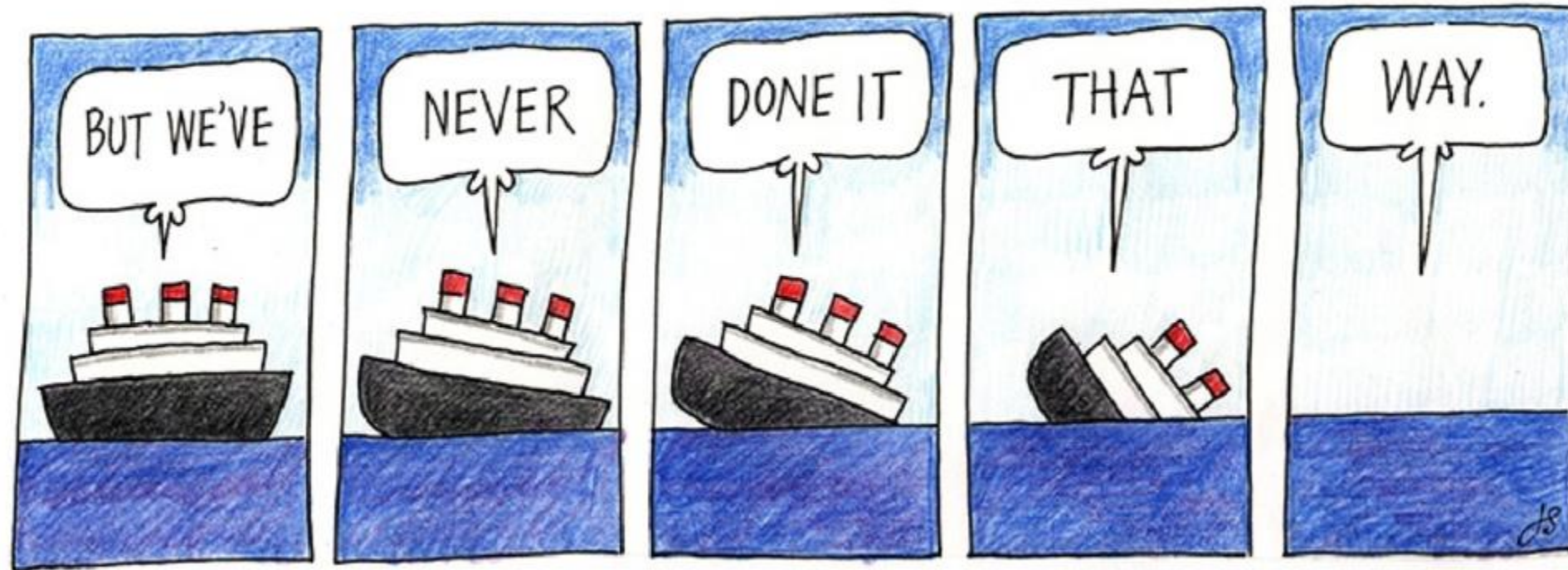
- Generalizations based on data
- Black box models
- Uncertainty in statistics



Overly optimistic view of analytics mistrusts:

- Leadership
- Human decision-making
- Corporate strategic initiatives
- Anything not on the blockchain

OVERCONFIDENCE IN HUNCHES AND INSTINCTS



“This result can’t be true. It goes against what we’ve always known”

“As a senior leader, I know what’s best for my business unit.”

“I don’t need help solving the larger problem. I just need day-to-day reporting.”



FEAR OF CHANGE AND IRRELEVANCE



Leaders may feel threatened by...

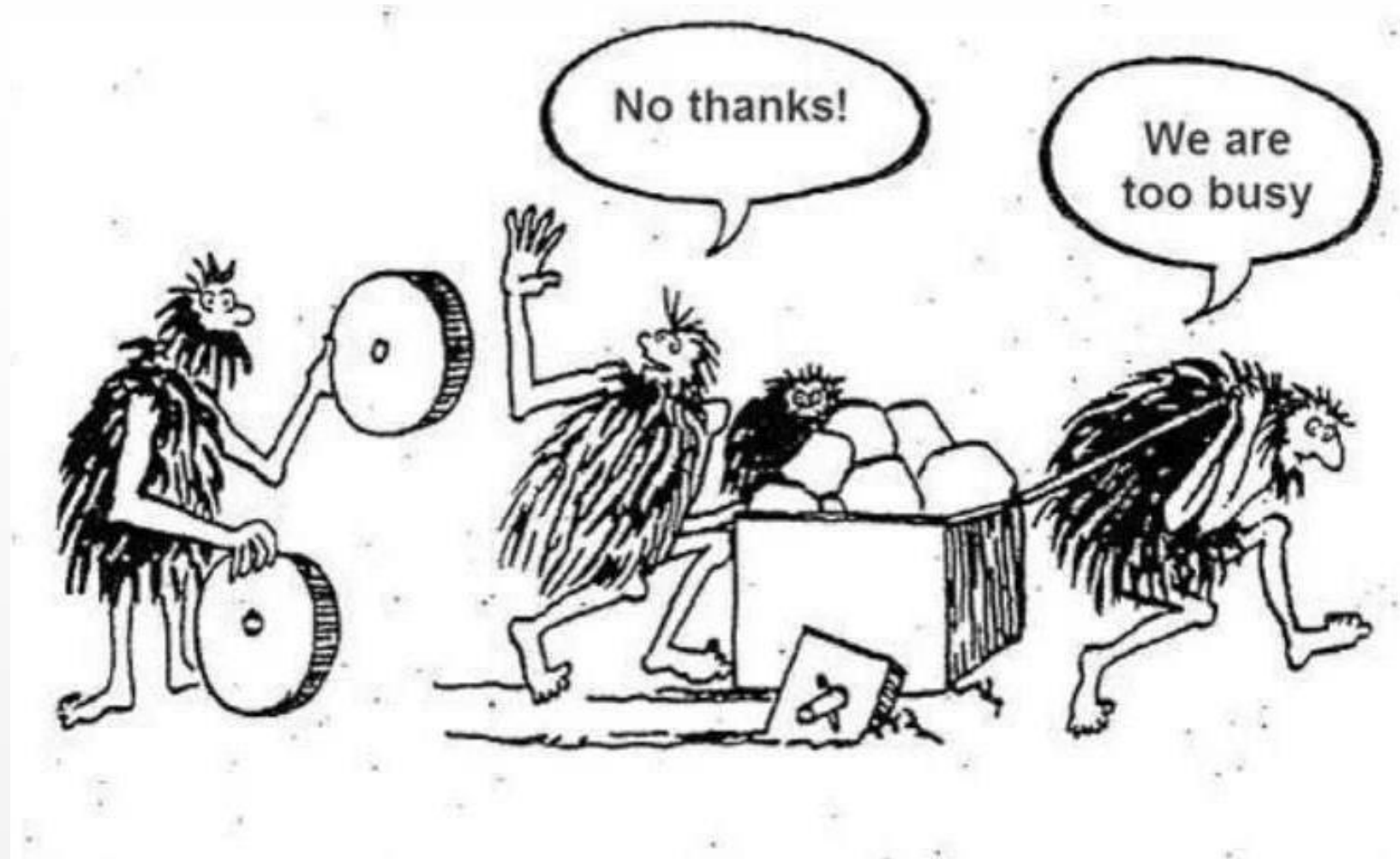
... a new perception that current decision making is flawed

... new and increasing burdens of accountability

... changing the role of the leader from having all the answers to following the data



IS AN ANALYTIC CULTURE AN EXISTENTIAL THREAT?



The only threat analytics makes is to leaders whose careers are built on being keepers of tribal knowledge.

AN ANALYTIC CULTURE CULTIVATES VALUE



**KNOWING
THINGS**



**SHARING
KNOWLEDGE**



**ADMITTING YOU
DON'T KNOW**



**USING DATA
TO LEARN**



WHAT ARE THE FOUNDATIONS OF A CULTURE OF ANALYTICS?

THE MOST IMPORTANT ASSET IN AN ANALYTIC CULTURE



HUMILITY



STORY TIME



THE MATH RUFFIANS



If we are seen as math bullies, how likely are we to...

... get business partnership?

... get corporate sponsorship? (\$\$\$)

... convince people that data and analytics have value?

... demonstrate that our methods even work?

... retain organizational confidence when our methods fail to deliver on their promises?



THE SECOND-MOST IMPORTANT ASSET IN AN ANALYTIC CULTURE



Before you build a culture of analytics, build a culture of responsible data management.



STORY TIME



THE STRUGGLE IS REAL



Tanya Cashorali

@tanyacash21

Follow



My interviewing advice for new data scientists is to ask if the company has IT and/or data engineers, and if not, congratulations! you are now both. - @kierisi 🙌🙌🙌🙌 #IWD #datascience #interviewing

10:38 AM - 8 Mar 2019

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THE GAME PLAN

MOTIVATE LEADERSHIP

At its core, analytics is a leadership problem. The hardest part of making analytics work is not the data science or technology. All the major challenges are ones that leaders must solve.

- Florian Zettelmeyer,
Northwestern Kellogg School of Business

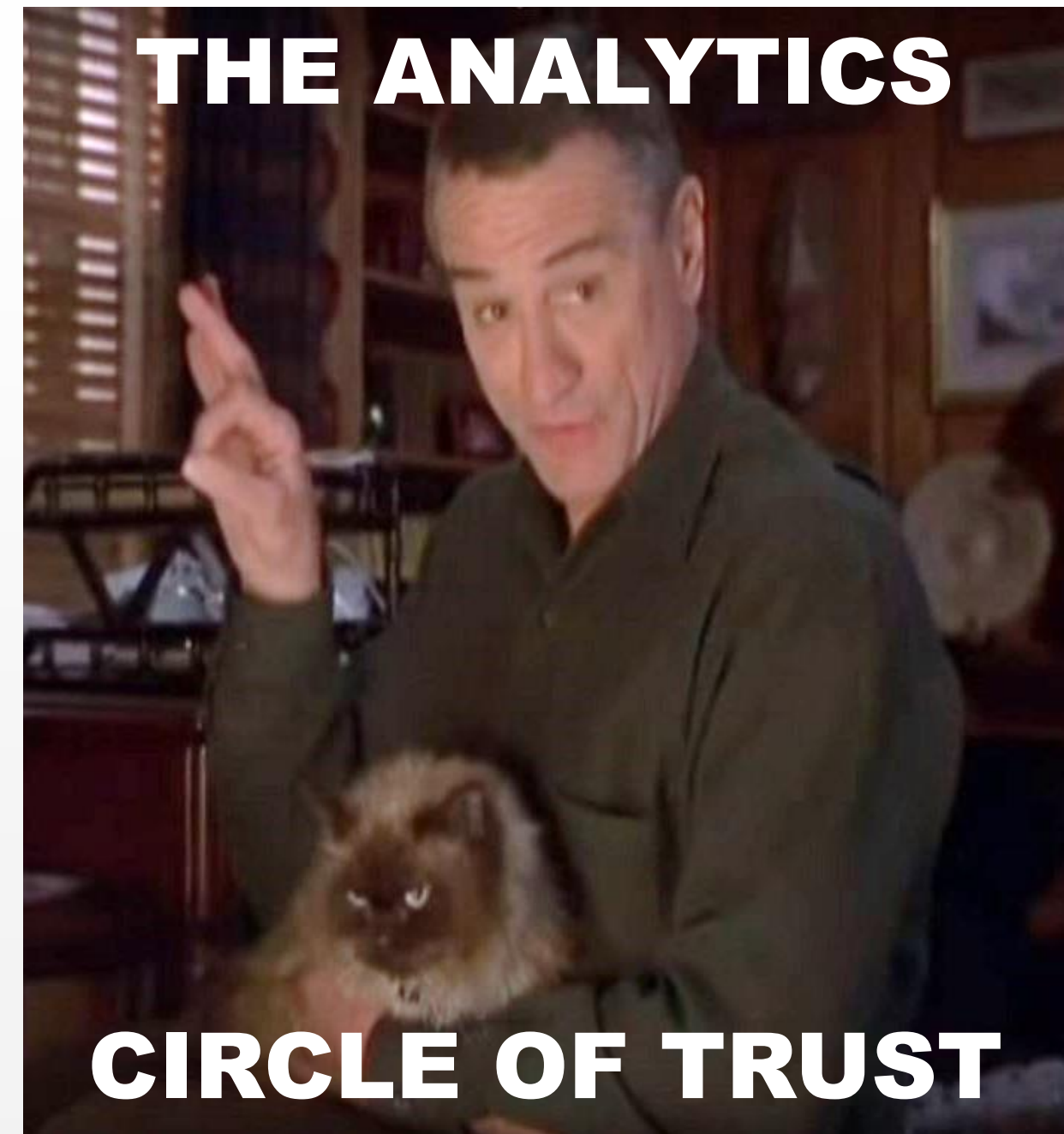
Analytics...

...requires managerial judgment

...has to be problem-driven

...has to be planned

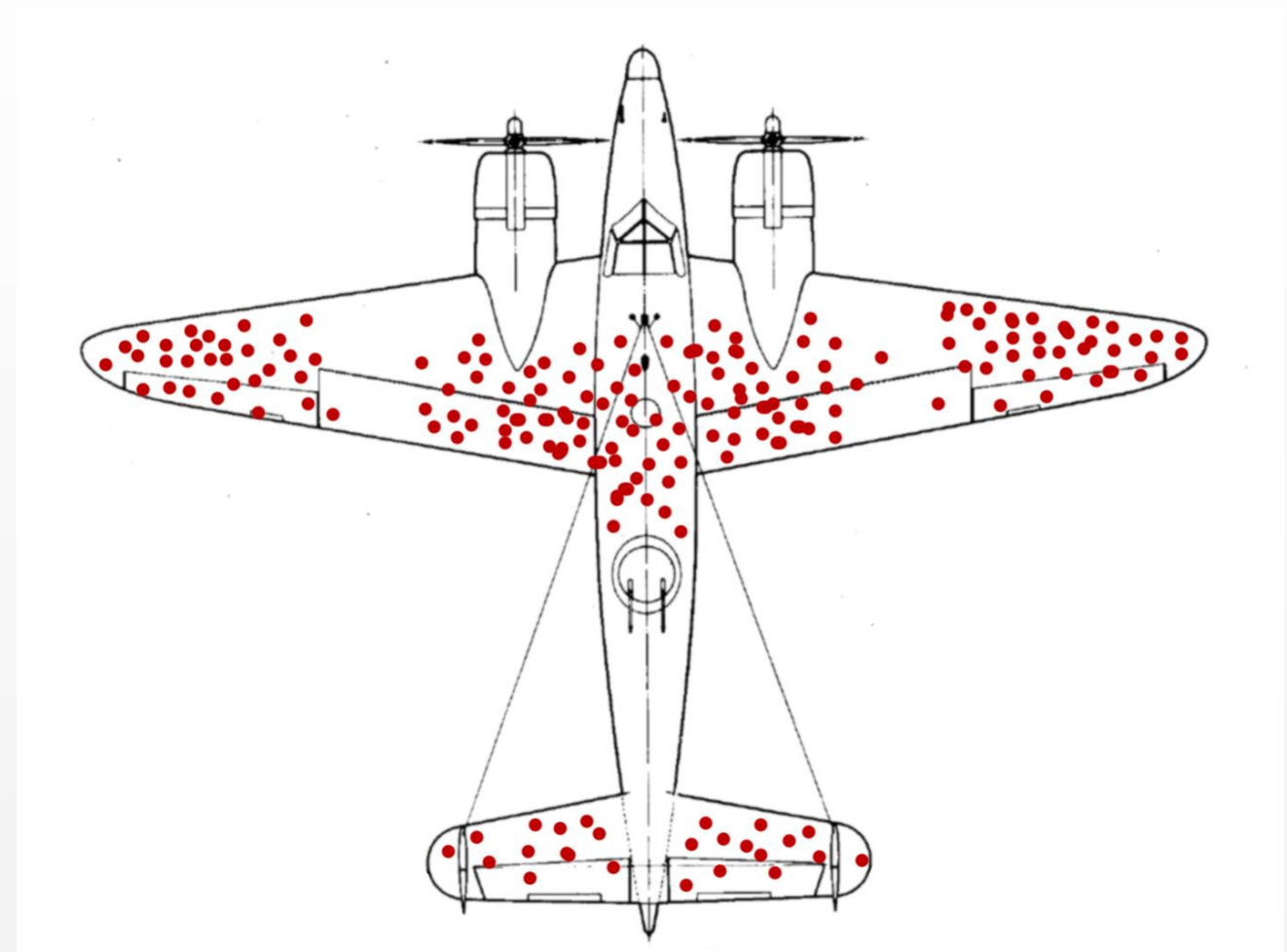
...has to be actionable



ARM LEADERS WITH THE RIGHT TOOLS

Empower leadership by giving them what they need to be successful:

- To see where their business decisions interface with analytics
- To understand analytics as an extension of their current expertise
- To recognize tools in the analytics toolbox
- To evaluate which initiatives are suited for optimization by analytics
- **To measure the value from analytics**



TRAIN LEADERS TO IDENTIFY ANALYTIC OPPORTUNITIES



LEADING WITH ANALYTICS AT ALLSTATE

What we teach

Analytics is every leader's issue

The three kinds of analytics

Distinguishing good and bad analytics

Experiments, quasi-experiments, and models

Linking analytics with action



Northwestern
Kellogg
School of Management



SUSTAIN AN ATMOSPHERE OF DEVELOPMENT

Develop data analysts

 analytics training week

Develop your department

 comprehensive new-hire training

Develop yourselves

 courses, reading groups, conferences

Develop anyone else who will listen

 network of communities of practice



DECODED



ALLSTATE PYTHON USER GROUP (APUG)



ALLSTATE R USER GROUP (ARUG)



ANALYTICS LUNCH & LEARNS



ALLSTATE BIG DATA USER GROUP
(ABDUG)



DATA MANAGEMENT COMMUNITY



DATA SCIENCE SEMINAR



LOCATION ANALYTICS ****NEW****



NUDGING HANDS



PRODUCT OWNER USER GROUP (PONG)



THE RUNWAY



TEST & LEARN COMMUNITY

THE ROLE OF THE R USER IN THE CULTURE OF ANALYTICS



You do not need to be an expert to teach R.

You do not need to be an expert to teach R.

You do not need to be an expert to teach R.

CURATE AN USER GROUP



The bar for meaningful contributions to an analytic culture is lower than you think it is.



RStudio's Tonya Filz speaks about championing R in your enterprise:
<https://resources.rstudio.com/rstudio-conf-2019/the-resilient-r-champion>

WRAPPING IT UP

PERSEVERE

An analytic culture starts with YOU.

Teach others.

Do good work.

Foster a community in which people can seek help, answer questions, and share methods and successes.

And don't forget to have fun!





Thanks for listening!

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