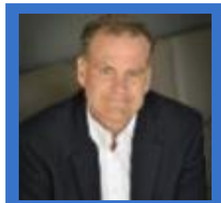
Intelligent Automation

Getting RPA Right

Christopher Surdak, JD



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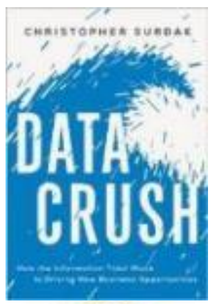
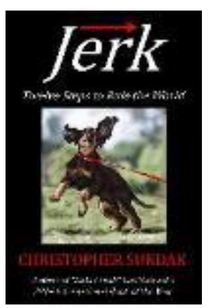
- Chris Surdak is a globally-recognized and award-winning expert in Big Data, Analytics, Robotic Process Automation and Artificial Intelligence. His focus is how these technologies, and others such as block chain, nanotechnology, and additive manufacturing will disrupt existing business models.
- He creates digital strategies for multi-national conglomerates, and countries including the United States, Colombia, Kazakhstan, Uzbekistan and the United Arab Emirates.
- Chris is an author of two books on digital transformation and economic disruption, the first of which, “Data Crush” was international business book of the year for 2014. He also maintains a column in European Business Review Magazine, focused on the disruptive use of technology and innovation.
- His writing and speaking on transformation has earned him several industry awards and recognition the world over, including:
  - Information Governance Initiative’s Evangelist of the Year for 2015
    The WhartonDC Benjamin Franklin Innovator of the Year Award for 2015
    Honoured Consultant to the FutureTrek Community of Tsinghua University, Beijing, China
  - Springboard.com’s Top 20 Big Data Influencers for 2016, 2017 and 2018
- Chris holds a Mechanical Engineering Bachelors from Pennsylvania State University, a Technical MBA from the Wharton School of Business of The University of Pennsylvania, a Cybersecurity Masters from Villanova University and a Juris Doctor from Taft Law School.

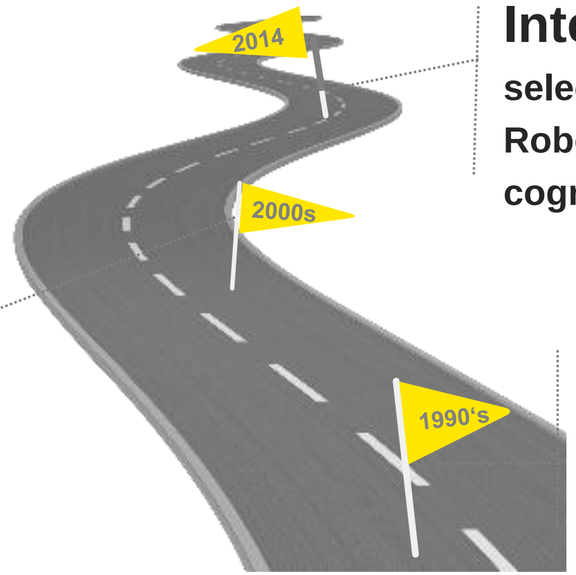




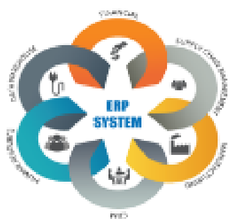
1. Why RPA? Why Now?

Ongoing Trends in Workforce Transformation

Intelligent Automation (IA) – Replace selected manpower with technology, such as Robotic Process Automation (RPA) and cognitive automation (collectively, IA).



Offshore labor arbitrage and outsourcing



ERP and shared services

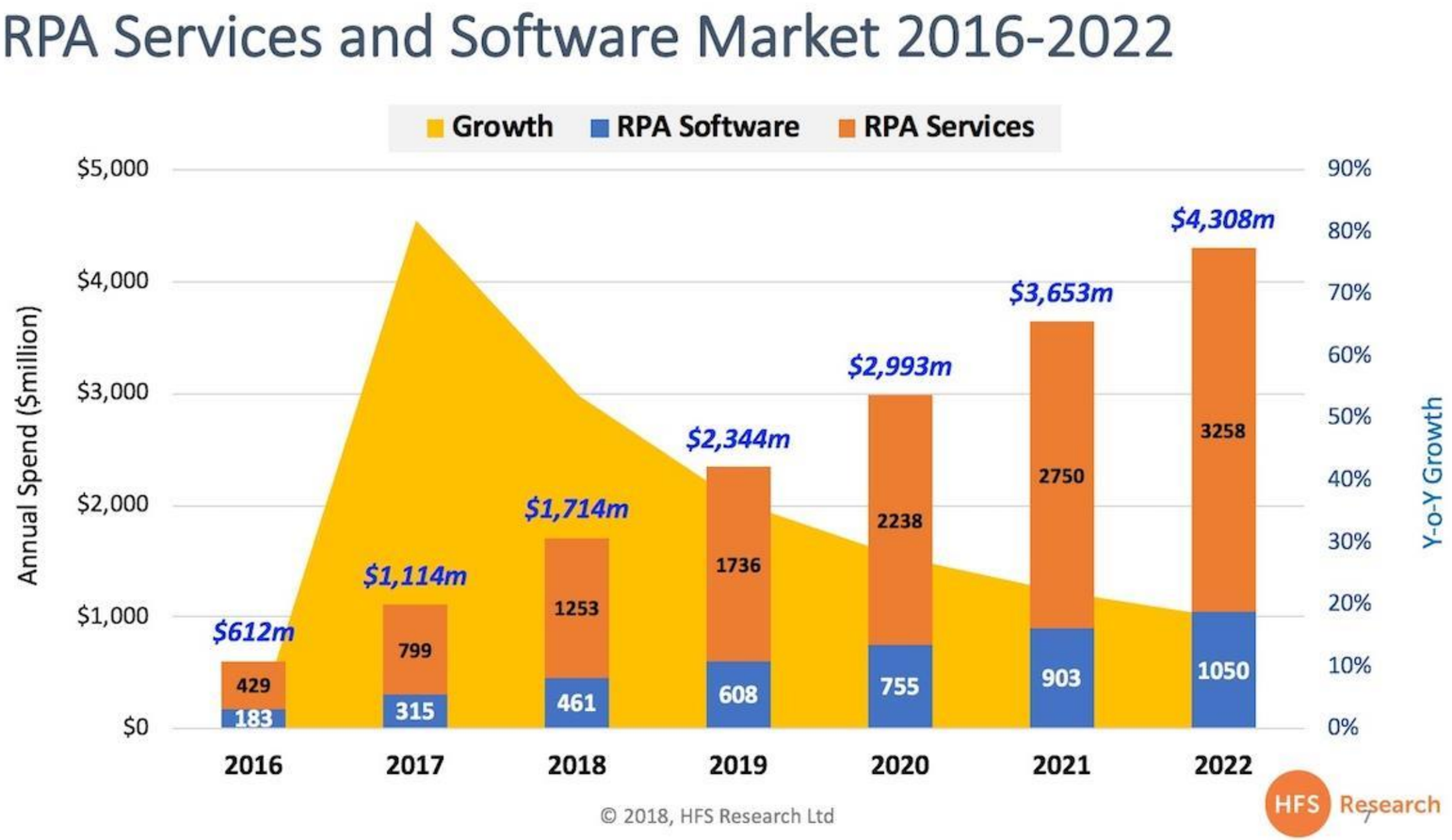
centralized finance and accounting, HR, procurement, and other business functions

We have moved from working in information systems, to having someone else do it for us, to having machines do it for us

RPA: Double-Digit Growth, Despite Increasing Commoditization

Intelligent Automation is "Optional"…

like having a website by 2000 was "Optional"



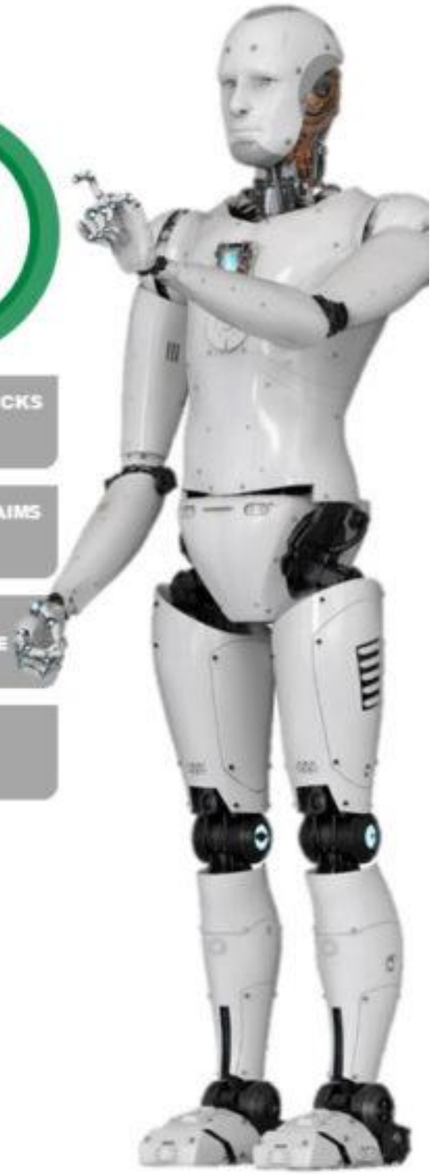
Millenium Group Roundtable, Deer Valley, 2019

2. Use Cases

Millenium Group Roundtable, Deer Valley, 2019

RPA in Healthcare: Sample Use Cases

PRE-VISIT /INTAKE	DIAGNOSIS	TREATMENT	RECOVERY & DISCHARGE	ADMINISTRATION	CLAIMS & BILLING
TELEHEALTH	MEDICAL RECORD DATA	TREATMENT PLAN RECOMMENDATIONS	VIRTUAL NURSING AGENTS	SUPPLY CHAIN OPTIMIZATION	ELIGIBILITY CHECKS
SOCIAL MEDIA	IMAGING ANALYSIS	CASE MANAGEMENT	PERSONALIZED MEDICINE MGMT.	MANAGED STAFFING	AUTOMATED CLAIMS PROCESSING & ADJUDICATION
SCHEDULING	PAPER RECORDS	VIRTUAL PERSONAL ASSISTANTS	DRUG INTERACTION TRACKING	ANALYTICS	AUTOMATED CLEARINGHOUSE SUBMISSIONS
PRE-REGISTRATION	PRELIMINARY DIAGNOSIS	RISK AND DISEASE PREDICTION	HEALTH OUTREACH & PROGRAM SUPPORT	SECURITY ANALYTICS	AUTOMATED BILLING
RISK ANALYSIS	DEVICES		REMOTE PATIENT MONITORING		



RPA in Healthcare: Sample Use Cases

Certain Healthcare Processes are particularly good use cases

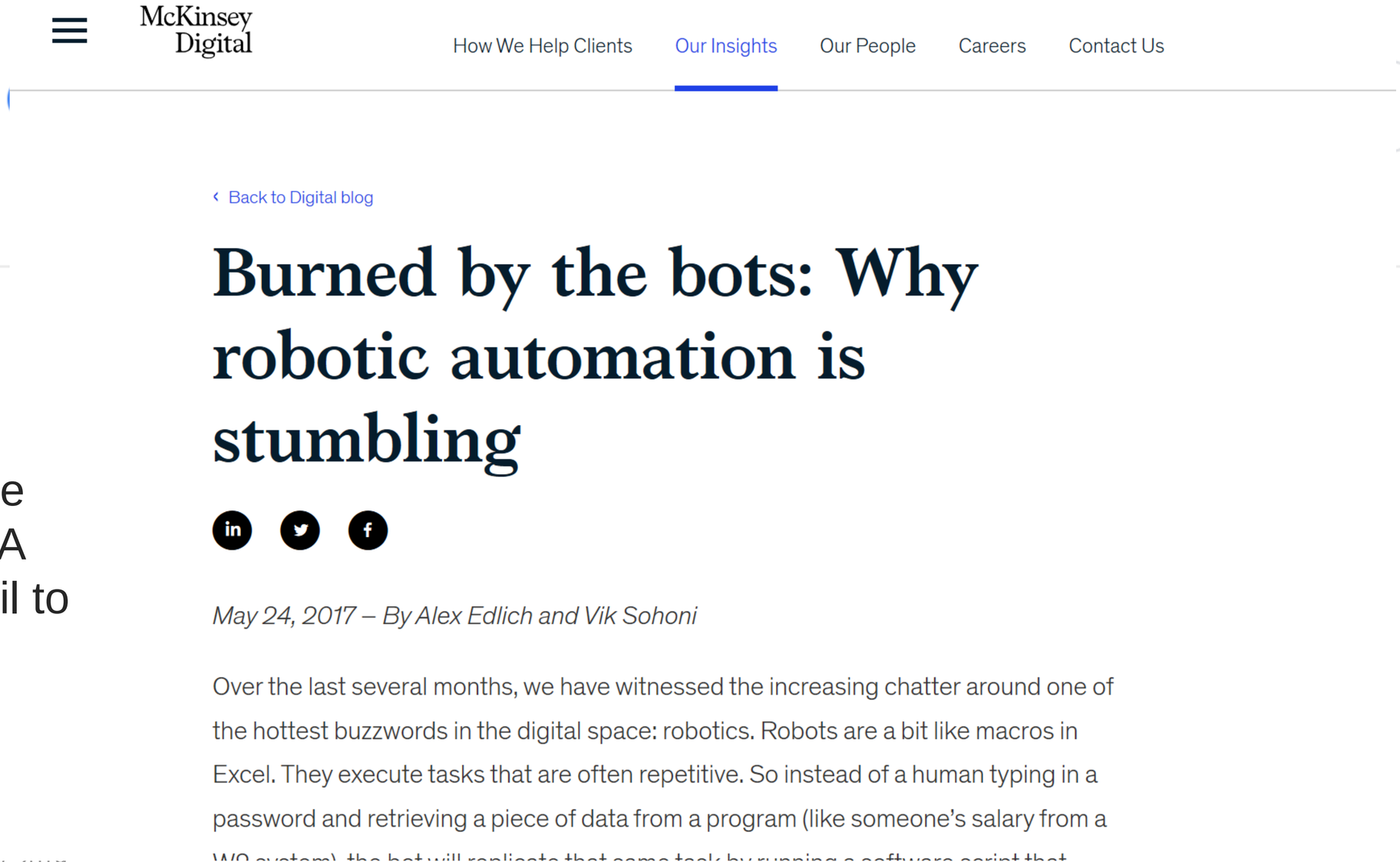
3. RPA Challenges

The Dirty Little Secret of RPA…

If it sounds too good to be true…

It usually is!

McKinsey states the vast majority of RPA implementations fail to meet expectations



RPA is at the Peak of Its ‘Hype Cycle’

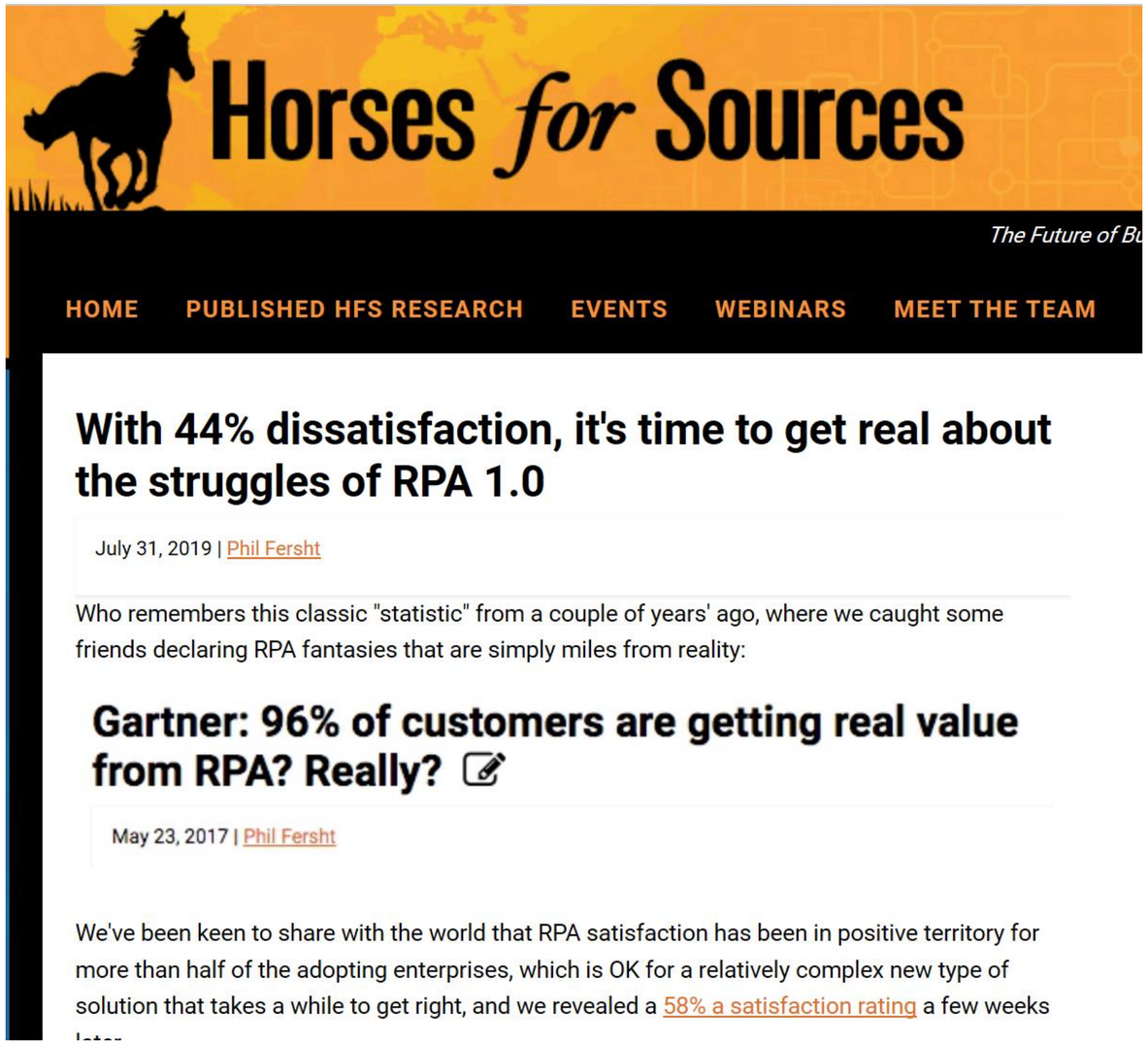
According to Gartner in 2017:

> “96% of customers are getting real value from RPA”

According to Gartner in 2018:

> “Only 5% of organizations are deploying RPA at scale”

44% are dissatisfied, **once they’ve progressed enough to experience dissatisfaction!**



Horses for Sources

The Future of Bu

HOME PUBLISHED HFS RESEARCH EVENTS WEBINARS MEET THE TEAM

With 44% dissatisfaction, it's time to get real about the struggles of RPA 1.0

July 31, 2019 | Phil Fersht

Who remembers this classic "statistic" from a couple of years' ago, where we caught some friends declaring RPA fantasies that are simply miles from reality:

Gartner: 96% of customers are getting real value from RPA? Really?

May 23, 2017 | Phil Fersht

We've been keen to share with the world that RPA satisfaction has been in positive territory for more than half of the adopting enterprises, which is OK for a relatively complex new type of solution that takes a while to get right, and we revealed a 58% a satisfaction rating a few weeks

New Techniques and Technologies Require New Metrics

Effectiveness: Useful bot output per unit of availability (24 hours/day)

Utilization (% of hours per day) * First Pass Yield (%) = EFFECTIVENESS

50% (No night shift) * 20% (High error rate) = **10% effective!**

4. RPA Lessons Learned

The Care and Feeding of Bots: 20 RPA Misconceptions

After helping to design and deploy over 5,000 bots, here are 20 lessons learned:

1. RPAs Main Value is ROI
2. Bots Replace Humans
3. Manual Tasks are Inherently Flawed
4. Bots are a Technology
5. First Pick a Tool or Technology
6. Start with a Proof of Concept
7. Bots Should Replicate Human Tasks
8. Bots Should Automate What Is
9. Bots Remain Static Once Deployed
10. Bots are Cheap to Run and Maintain
11. Governance is Unnecessary
12. Expertise Can Be Outsourced
13. It's Important to Focus on What Bots Can Do
14. Create a Proof of Value
15. Bots Create Stability
16. Bots Should Be Designed for Average Performance
17. Bots Require Little Testing
18. You Need a Center of Excellence
19. Automation is Easy
20. RPA is Innovative

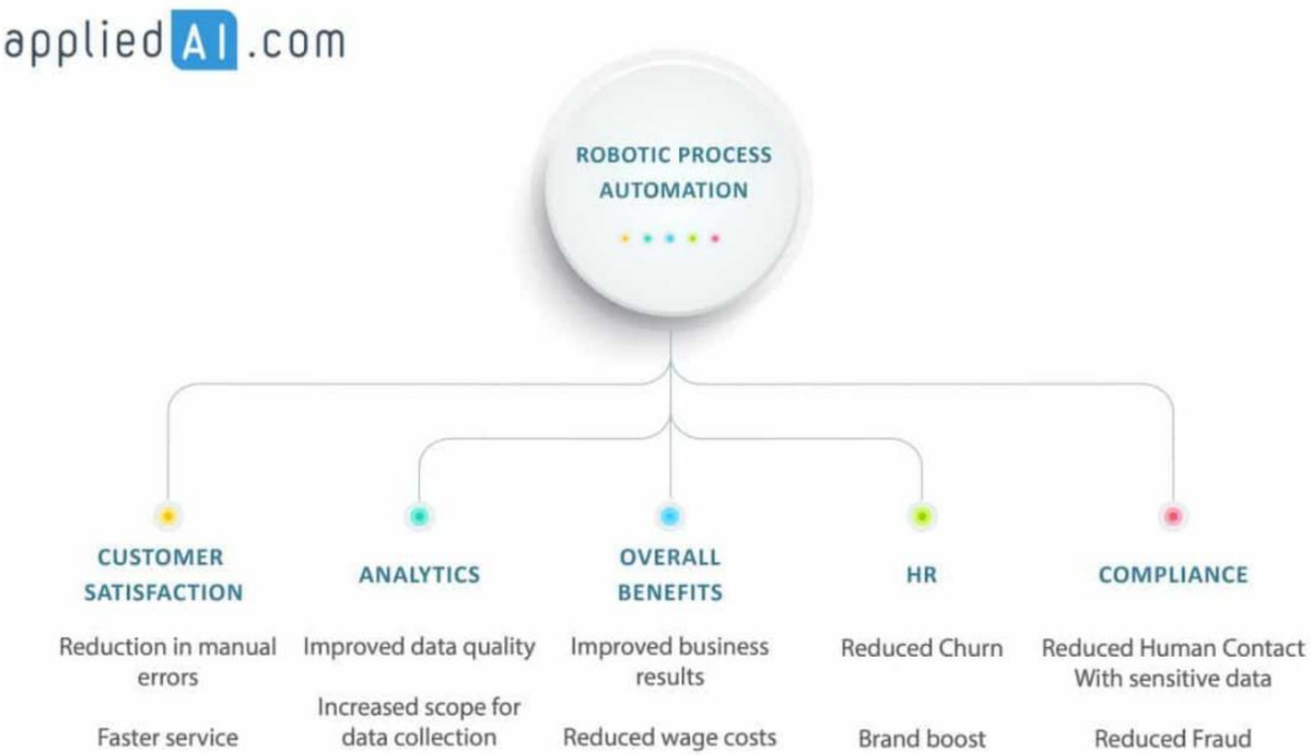
Mistake #1: Focus on ROI

ROI may be Automation's LEAST Valuable Return!

- Your entire organization has been obsessively focused on cutting costs
- Expecting dramatic savings with minimal investment sounds too good to be true, because it largely is

- RPA's greatest returns come from ROx's; or things you HAVEN'T been as focused upon

- ROx's:
  - Return on Time
  - Return on Quality
  - Return on Focus
  - Return on Consistency
  - Return on Privacy



Mistake #2: Replace Humans with Bots

RPA works without people as well as a hammer works without people

- Replacement of full FTEs **is the exception**, rather than the rule
- If a bot does not replace a whole FTE, is there still a business case?
- If the business case requires full automation (replacement of all humans) how will **exceptions** be handled?
- The best solution is **cybernetic**, with bots handling bulk work items and humans managing exceptions and providing judgment

Mistake #3: Manual Tasks are Inherently Flawed

Only if your organization has been incompetent for decades!

- Most companies have applied constant improvement processes for years, if not decades
- A process step that remains manual after these efforts has likely survived multiple attempts at automation
- Manual tasks persist because of some combination of **Cost, Complexity, Compliance or Complacence**

- For automation to bring benefits, something fundamental has to change, versus earlier attempts

Mistake #4: Bots Should be Treated Like a Technology Implementation

Bots aren’t a new technology, they’re a new workforce

- The support requirements for RPA is much closer to managing a staff than managing a software package
- Bots require training, ongoing support, development and assessment through their lifecycle, just like humans
- Issues such as password resets, credentials and process or rule changes befuddle the majority of RPA implementations

Mistake #5: It's Imperative to Pick the "Right" Tool

RPA is not ERP, CRM or SCM

- The "leading vendor" in RPA has changed 3 times in 4 years
- Their functionality, price point and supportability are largely identical
- License fees are roughly $8-12,000 per year for each vendors' solution
- If a 5-10% difference in license price is significant, you likely have a very poor use case

EGHAM, U.K., March 7, 2019

Gartner Predicts Up to Two-Thirds of iPaaS Vendors Will Not Survive By 2023

Analysts to Discuss Infrastructure Trends and Challenges at the Gartner Application Architecture, Integration & Development Summits 2019 in Mumbai, London and Sydney

Although the market for integration platform as a service (iPaaS) shows strong growth, the first signs of market consolidation are starting to emerge. Gartner, Inc. predicts that by 2023, up to two-thirds of existing iPaaS vendors will merge, be acquired or exit the market.

"The challenge for most iPaaS vendors is that their business is simply not profitable," said Bindi Bhullar, senior research director at Gartner. "Revenue growth and increasing customer acceptance can't keep up with the costs for running the platform and the heavy spending in sales and marketing."

Megavendors such as Oracle, Microsoft and IBM are better-equipped to handle those challenges as they offer more-competitive offerings with more-aggressive pricing and packaging options than smaller players in the market. Gartner expects that this trend will continue, further diminishing the market share of specialist iPaaS players.

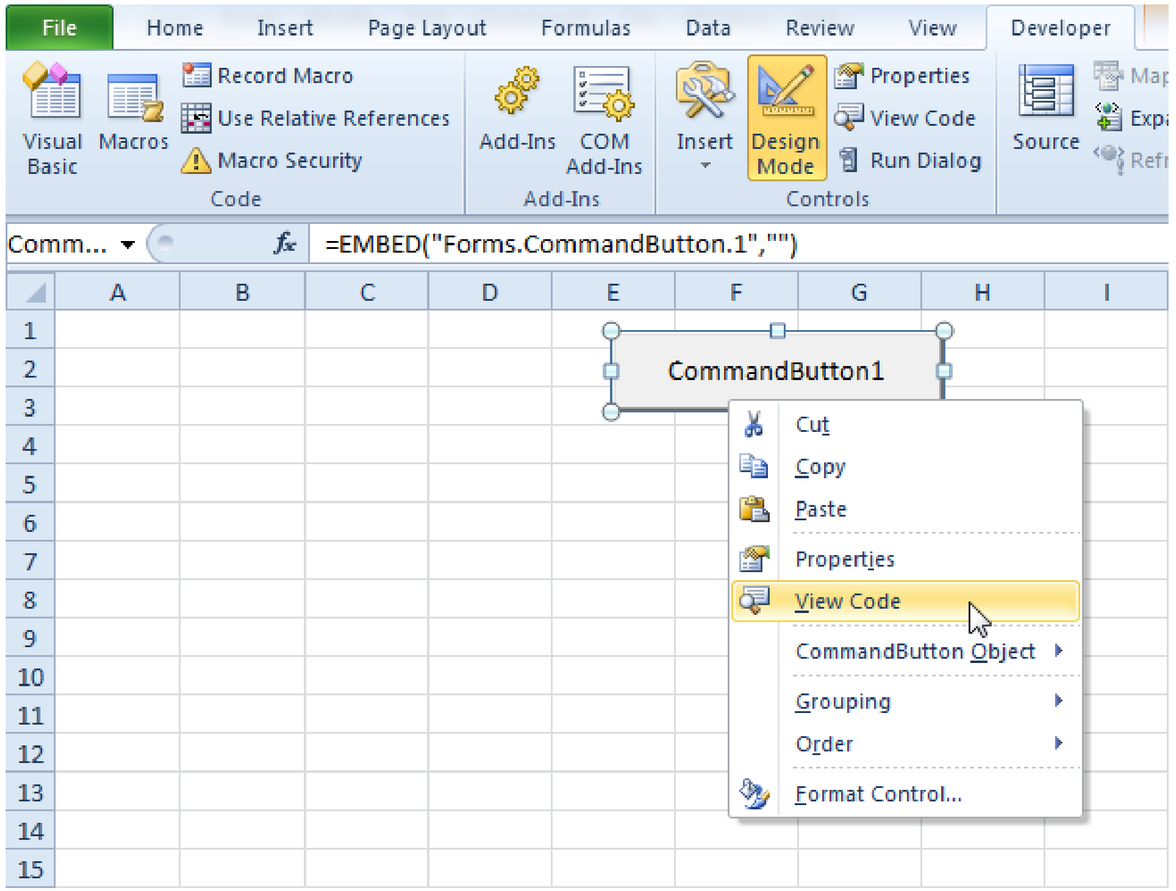
primed for consolidation. Here's what we said just five weeks ago:

Mistake #6: You Must Start With a “Proof of Concept”

There’s nothing “conceptual” about RPA

- Most of the technology in RPA tools is over 20 years old
- Macros, Screen Scraping and Optical Character Recognition (OCR) have been around a very long time

- Proof of cost and proof of capability are more accurate
- **But** pilots do not effectively demonstrate cost or capability



Mistake #7: Bots Should Replicate Human Tasks

Bots and people have different abilities, and limitations. Use each accordingly

Exactly replicating human actions means that bots adopt human constraints

Often, there's a better way if you start from scratch

Mistake #8: Bots Should Automate “As-Is” Processes

To make the most of Bots’ abilities as-is processes must be changed

- Running the same task faster does not always yield better results

- Frequently, it causes problems elsewhere in your systems or processes

Mistake #9: Bots Run Themselves After Deployment

Bots change what they automate, and must adapt as a result

- A bot that runs perfectly, without changes is a mythical beast
- 1% of processes may fit this ideal
- Ongoing maintenance for bots typically runs 200-500% of the cost of acquisition
- Bots are “free” like a puppy is “free”

Mistake #10: Bots Require Minimal Support Once Deployed

In valuable use cases, operating costs should exceed acquisition costs

- Password resets, environment changes, patches, upgrades, port changes, URL changes, etc.
- All conspire to make bot maintenance costly and complex
- Remember that just because RPA is **SOLD** as an inexpensive, quick fix, ad hoc solution doesn't make it so

Mistake #11: Governance Is Unnecessary and Slows Bots Down

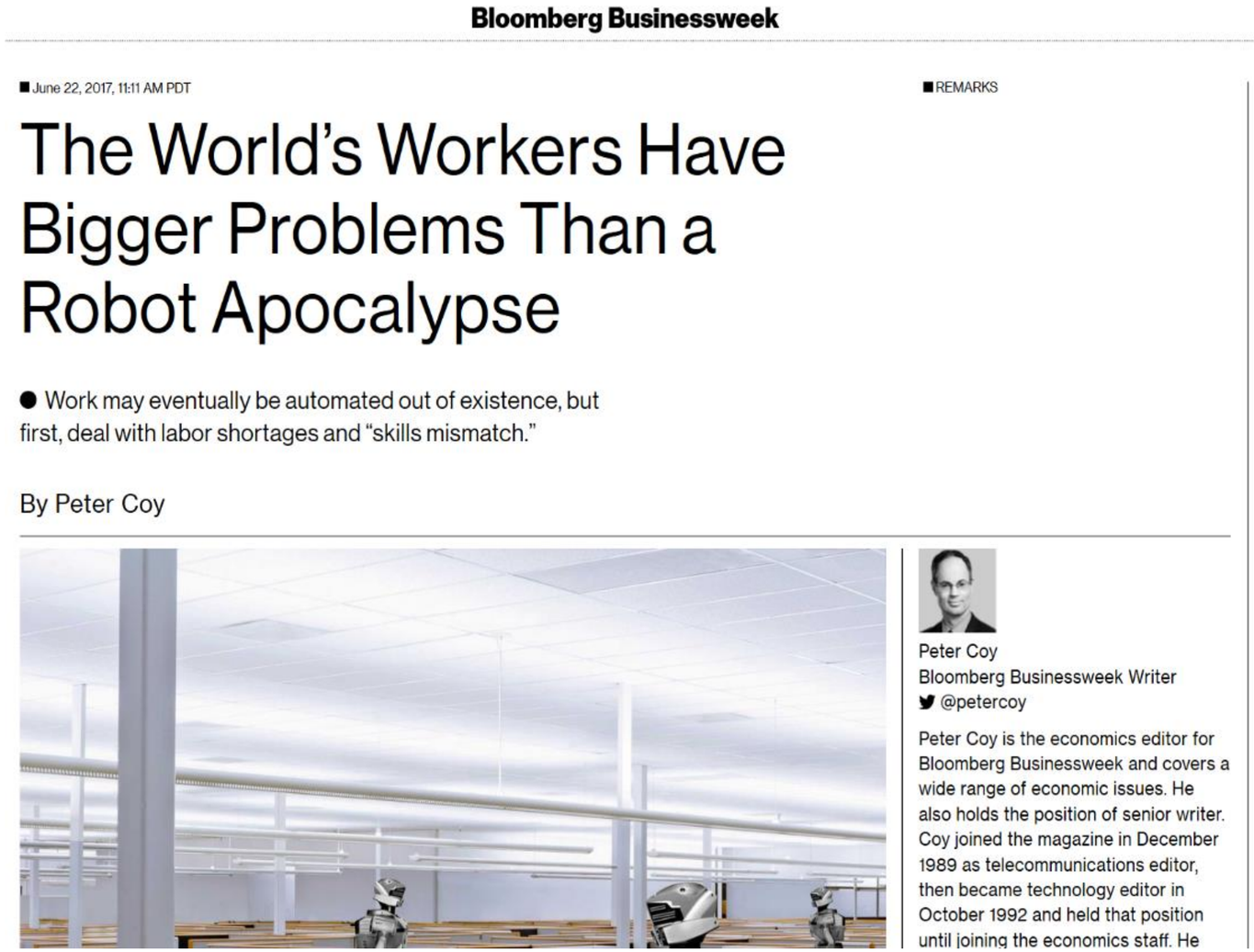
Governance is the entire reason for RPA to exist

- RPA is 20-30 year old technology, wrapped in a governance layer… RPA ***IS*** governance
- Without governance, there's no need for RPA
- Without governance, RPA cannot scale beyond 20-30 bots

Mistake #12: Expertise Can Be Outsourced With RPA

Third parties cannot know your unique tasks, only you do

- Process participants and owners are critical to any RPA implementation
- The greater their buy in, and active participation, the better the results
- Participation means a seat at the table in a post-automation world



Bloomberg Businessweek

■ June 22, 2017, 11:11 AM PDT

■ REMARKS

The World's Workers Have Bigger Problems Than a Robot Apocalypse

● Work may eventually be automated out of existence, but first, deal with labor shortages and "skills mismatch."

By Peter Coy

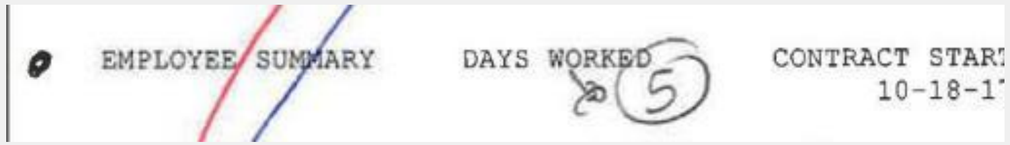
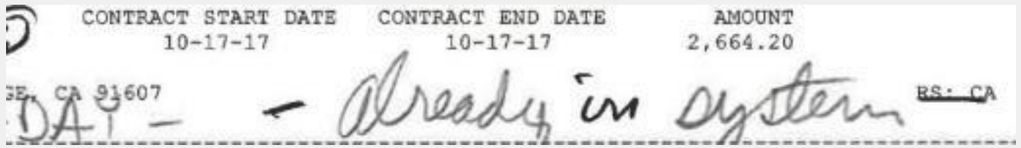
Peter Coy
Bloomberg Businessweek Writer
@petercoy

Peter Coy is the economics editor for Bloomberg Businessweek and covers a wide range of economic issues. He also holds the position of senior writer. Coy joined the magazine in December 1989 as telecommunications editor, then became technology editor in October 1992 and held that position until joining the economics staff. He

Mistake #13: Design Should Focus On What Bots Can Do

Its more important to understand what bots CAN'T do

- Realistic expectations are key to successful use cases
- For example, text recognition has advanced, but still has a long way to go
- If a process step requires a human to process data, OCR may be a constraint
- "Good OCR has 60%–65% yield" (Harvey Spencer, Harvey Spencer Associates)

Likely readable	Likely not readable
	

Mistake #14: Deploy a Proof Of Value (POV) Before You Scale

RPA works in pilots, but only provides value at scale

- Bots produce a chicken-and-egg scenario, like other investments in healthcare
- Achieving scale is key to economic success, but it takes a compelling business case to commit to scale
- The ‘bot barrier’ lies between 20-30 bots
- Below this point, positive ROI is rarely **if ever** achieved

Mistake #15: Bots Create Process Stability

Effective bots disrupt processes, if they are truly effective

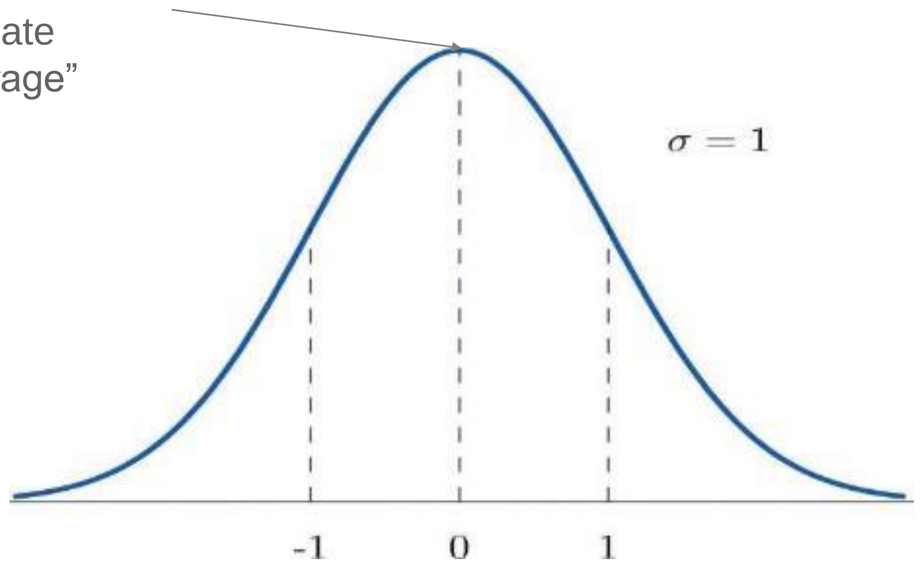
- Initially bots should destabilize processes, until a new set point is achieved
- Running some tasks much faster will overwhelm other tasks that have not been addressed
- A new setpoint will be reached, but it may take time to achieve
- Unintended consequences may be significant

Mistake #16: Bots Should Be Measured By Average Performance

Don’t replicate average, replicate exceptional

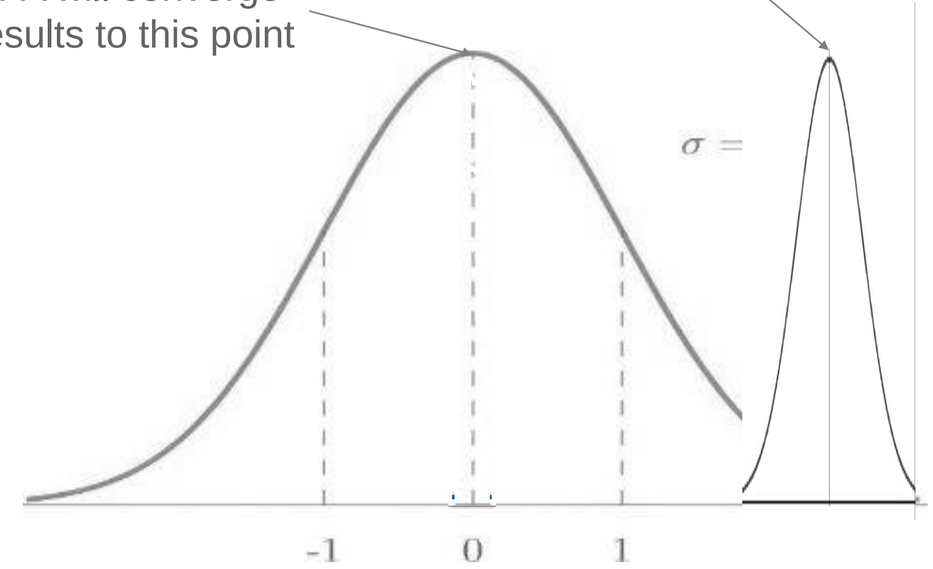
- ML/AI learns from prescribed rules and a training dataset
- The lessons learned are then applied globally to all transactions
- The point of replicated results is critical, as the distribution collapses to that point
- Replicating to average means that half of your transactions will have WORSE results

If you replicate “Average”



RPA will converge results to this point

Instead of here



Mistake #17: Bots Require Little Formal Testing

Ignore testing at your peril!

- Tolerance for False Positives and Negatives is critical to RPA success
  - *False Positive: Incorrect signal that initiates subsequent action*
  - *False Negative: Incorrect signal that negates subsequent action*

- Tolerance for False Positives and Negatives is critical to RPA success
- Both types of failures are normal in any process
- Patients, Regulators and Lawyers are generally intolerant of false negatives
- Imperative to understand a process's tolerance for each

Mistake #18: You Need a Center of Excellence

Create a Center of Support, Not a Center of Excellence

- Excellence should be shared, not centralized
- Standards, best practices, etc. should be centralized

Mistake #19: RPA is Innovation

Applied incorrectly, RPA is counter-innovation

- Maintains and deepens technology debt
- Hard-codes habits, whether good or bad
- Ensure inflexibility, rigidity and conformity; which may be good or may be bad

Mistake #20: Automation Is Easy

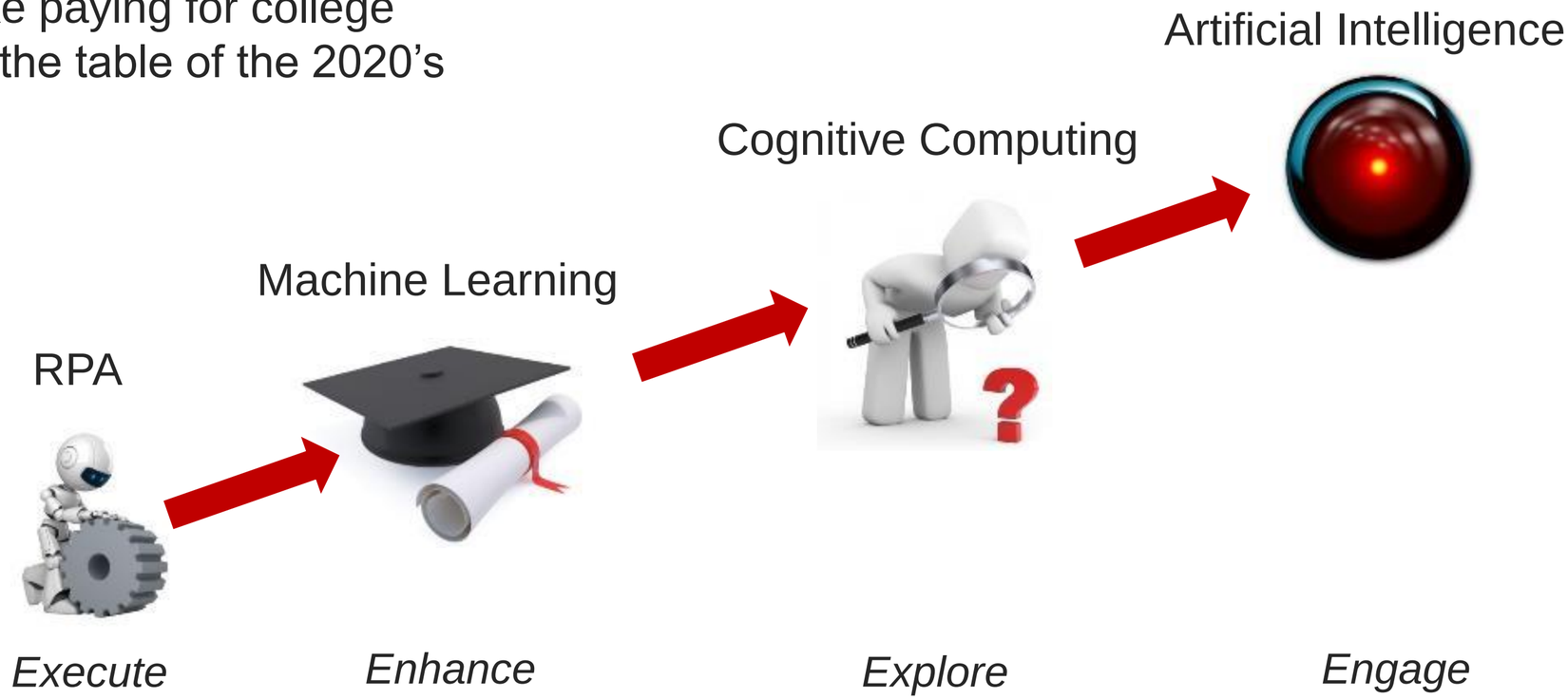
Pilots and demos are easy, maintaining a cyber-workforce is hard

- Automation looks easy because of the prior 19 misperceptions
- It may appear to be easy in one context…
- But may be extremely difficult in another context
- If transformation were easy, it wouldn't be transformative

Intelligent Automation Continuum

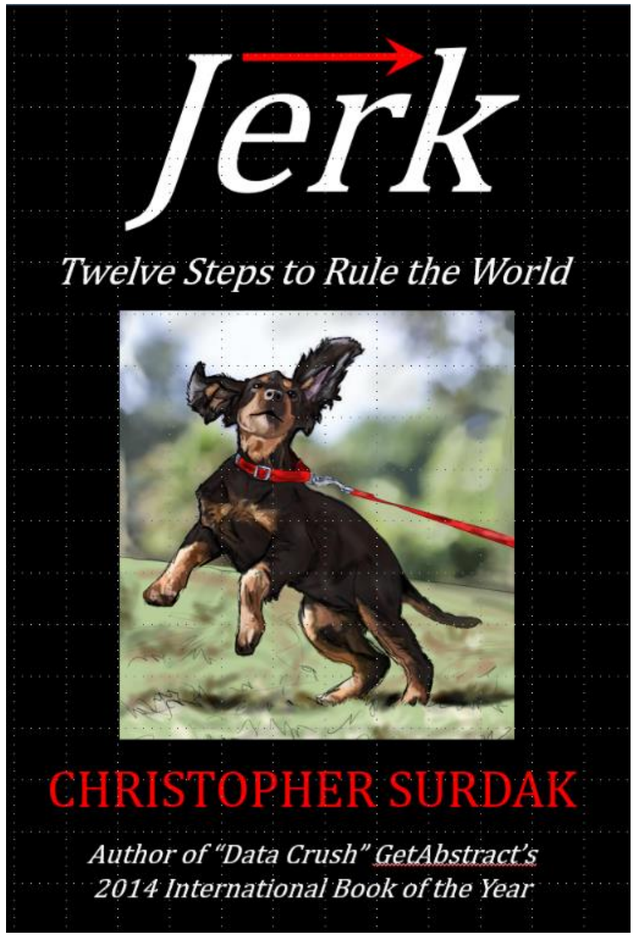
RPA is the first step towards a cybernetic workplace

- Investing in RPA is like paying for college
- It gives you a seat at the table of the 2020's

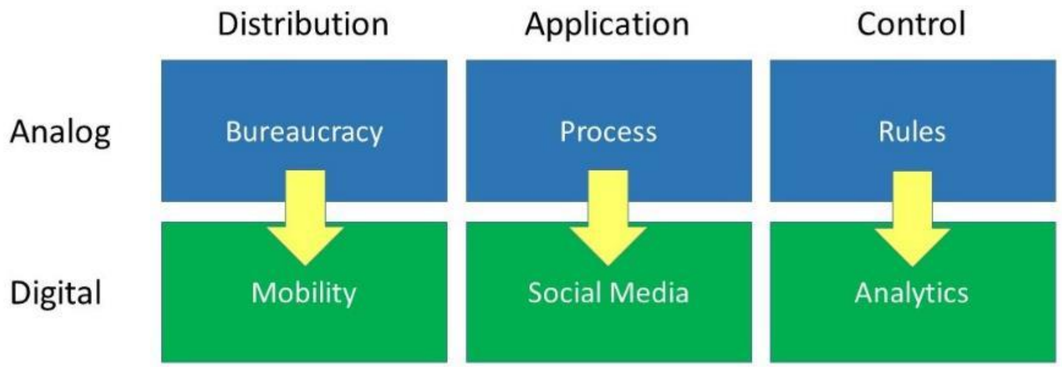


Digital Transformation is Upon Us!

Transform or become irrelevant



Realigning from Capital-Centricity to Information-Centricity



	Distribution	Application	Control
From:	*Customers Come to Us*	*Operate Serially*	*Decisions Out of Context*
To:	*We are With Our Customers*	*Operate Collaboratively*	*Decisions In Context*

Thank you

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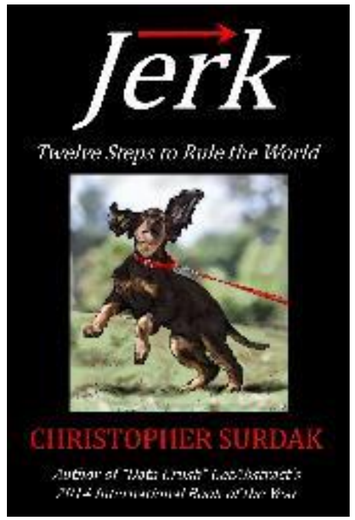

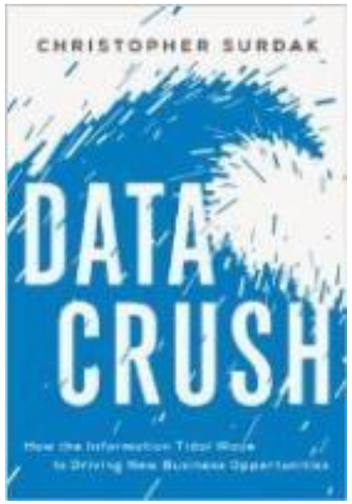

If you'd like to learn more, check out "*Data Crush,*" getAbstract's International Book of the Year, 2014

"*Jerk: The Digital Transformation Cookbook*" Now available on Amazon

And thereafter, book three, "*The Care and Feeding of BOTS*", in 2019 and books four, "*In Mob We Trust*," and five, "*Averageocracy*," In 2020