



Welcome to How CDOs Succeed?

25 June 2019 / UTC -4 (2:pm EDT)



Director, Michael Servaes

When the concept of IT leadership was introduced in the late 1970's, the title CIO was often referenced as career is over. Ambiguity, imprecision and confusion surrounded the role and even today CIO tenure is closer to four years as opposed to similarly positioned CFOs whose tenure three times as long.!

Unfortunately, it appears that the CDO role is at similarly prone to confusion, imprecision, and ambiguity. In some sectors, a fair percentage of CDOs seem not to be successful – failing after their initial year. This webinar will provide a summary of the worldwide state of commercial and public CDOs. In keeping with the societal goals of:

- Education around data leadership and data
- Identifying and promoting successful data leadership
- Organizing our collective body of knowledge

Associate Director, Peter Aiken



Data Leadership for the 21st Century!

Society Mission

Promote Data Literacy
Leadership Development
Advance the Profession
Reduce Redundant Work
Cooperation and Coordination

MISSION SOCIETY



Data Leadership for the 21st Century!

<https://www.doiworld.com/gtr2018/data-driven-decisions>

Data Leadership involves

- Establishing a clear vision
- Sharing that vision with others
 - so that they will follow willingly,
- Providing the information, knowledge and methods to realize that vision, and
- Coordinating and balancing the conflicting interests of all members and stakeholders.
- Defining the change needed to deliver an organisation that understands it's information requirements and
- What is required to become an organisation that maximises the benefits it derives from the data it creates, collects and stores; making sure the change is sustained



<https://www.ddiworld.com/gil2018/data-driven-decisions>

<https://iscdo.org>



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isCDO Webinar – Next steps

- Become a Board member or Area Leader
 - Apply to join the board
 - Help recruit area leaders.
- Join as paying member
- Gain access to (growing) data leadership resources
- Join in Society forums
 - Share ideas/council with fellow members
- Contribute to the resource library
- Conference discounts
- After the MIT conference, future webinars available only available in members area



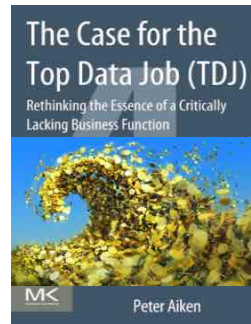
Ethics of Good Intentions"
25 July 2019 / UTC -4 (2:pm EDT)

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How CDOs Succeed?

Peter Aiken, Ph.D. Associate Director aiken@iscdo.org

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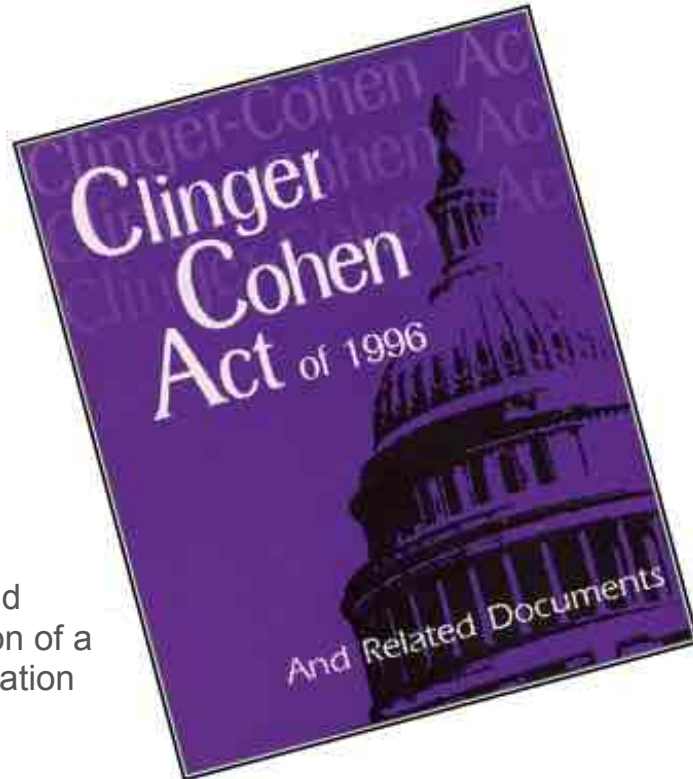


- Have accomplished astounding technological feats
- Have developed excellent organizational skill sets
- Have delivered phenomenal business value

"Most significant IT reform of the last decade"

1996 (passed)

- Establish Agency CIOs
 - Link IT investments to accomplishments
- Requires
 - CIO "Milestone Decision" assessment
 - Establish process to select, manage and control IT investments (CMM Level 2)
- Responsible
 - "developing, maintaining, and facilitating the implementation of a sound and integrated information technology architecture"

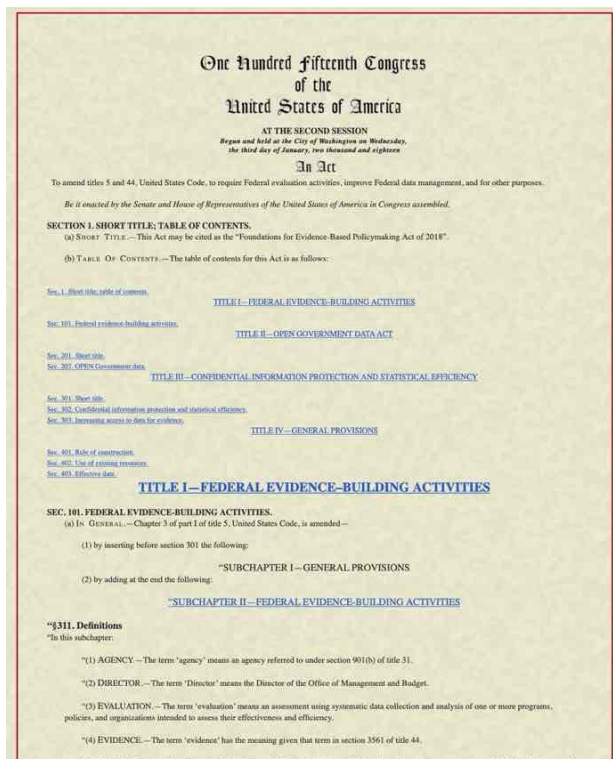


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OPEN Government Data Act



- Signed on 1/14/19
- **F**oundations for **E**vidence-Based **P**olicymaking (FEBP) **A**ct (H.R._4174,_S._2046)
- Title II, which includes the Open, Public, Electronic, and Necessary (OPEN) Government Data Act (Title II)
 - All federal data is open by default
 - Non-political CDOs are required
 - Use of open data and open models required in policy evolution
 - Penalties are higher than HIPPA

<https://www.congress.gov/bills/115th-congress/house-bill/4174/text>

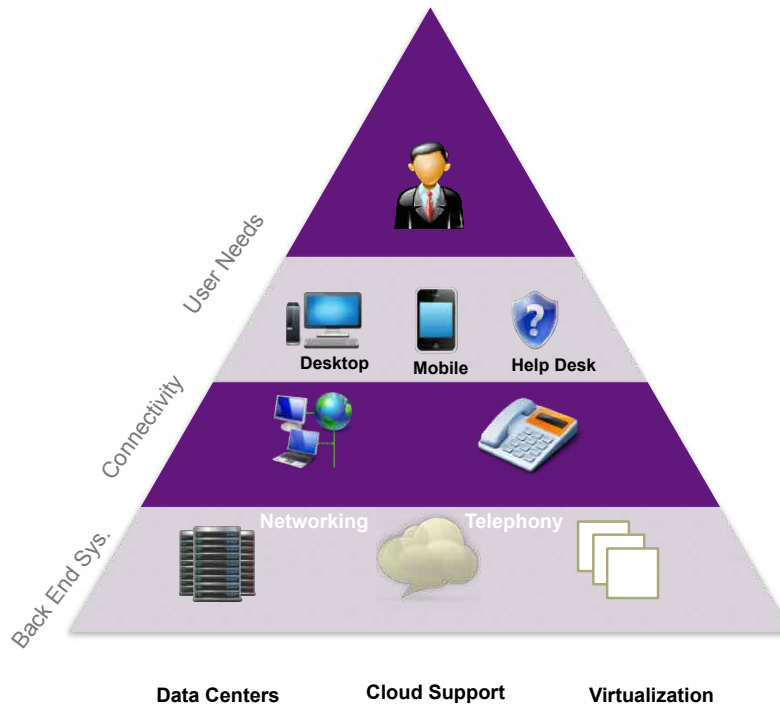


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CIO Infrastructure Focus



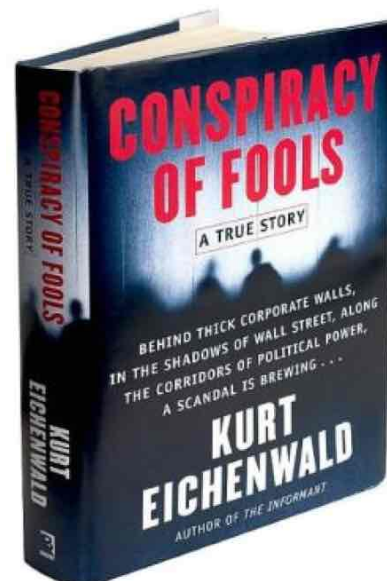
UNLOCKING BUSINESS VALUE

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Enron

- Fortune named Enron "America's Most Innovative Company" for six consecutive years
- Suffered the largest Chapter 11 bankruptcy in history (up to that time)
- August 2001: \$90.00 → \$42.00 → \$0.26
- Dynegy (several \$ billion) attempted rescue
- Enron spends entire amount in 1 week
 - Any person can write a check at Enron for
 - Any amount of money for
 - Any purchase at
 - Any time ...
- Enron goes back to Dynegy for more \$?
- Dynegy: What happened to the several \$ billion I gave you last week?
- Enron:

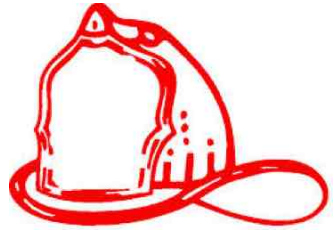
<http://en.wikipedia.org/wiki/Enron>



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A Singular Focus

- Chief
 - The head or leader of an organized body of people; the person highest in authority: the chief of police
- Chief Financial Officer (CFO) ← *does not balance books*
 - Individual possessing the knowledge, skills, and abilities to be both the final authority and decision-maker in organizational financial matters
- Chief Risk Officer (CRO) ← *does not test software*
 - Individual possessing the knowledge, skills, and abilities makes decisions and implements risk management
- Chief Medical Officer (CMO) ← *does not perform surgery*
 - Responsible for organizational medical matters. The organization, and the public, has similar expectations for any of chief officer – especially after the Sarbanes-Oxley bill.



[dictionary.com]

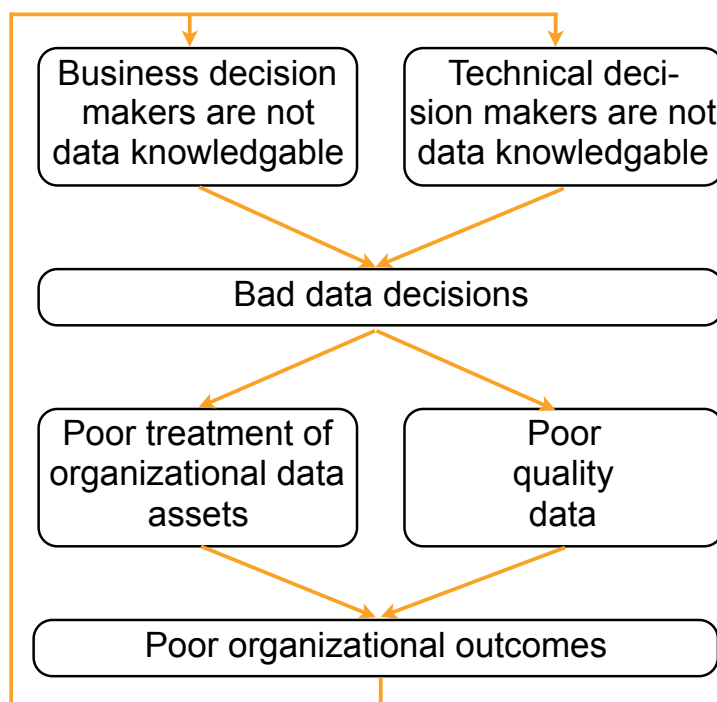
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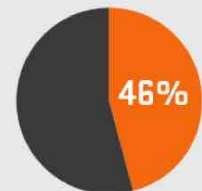
Bad Data Decisions Spiral



NEWS FLASH!

46% of companies report they made an inaccurate business decision based on bad or outdated data. Bad data leads to bad business decisions. Companies need to be careful that their data is sound – especially when dealing with investors.

[Live Comment Share](#)



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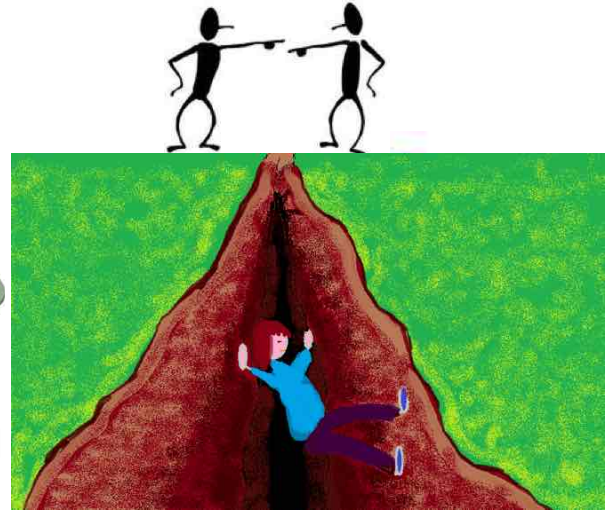


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Confusion

- IT thinks data is a business problem
 - "If they can connect to the server, then my job is done!"
- The business thinks IT is managing data adequately
 - "Who else would be taking care of it?"



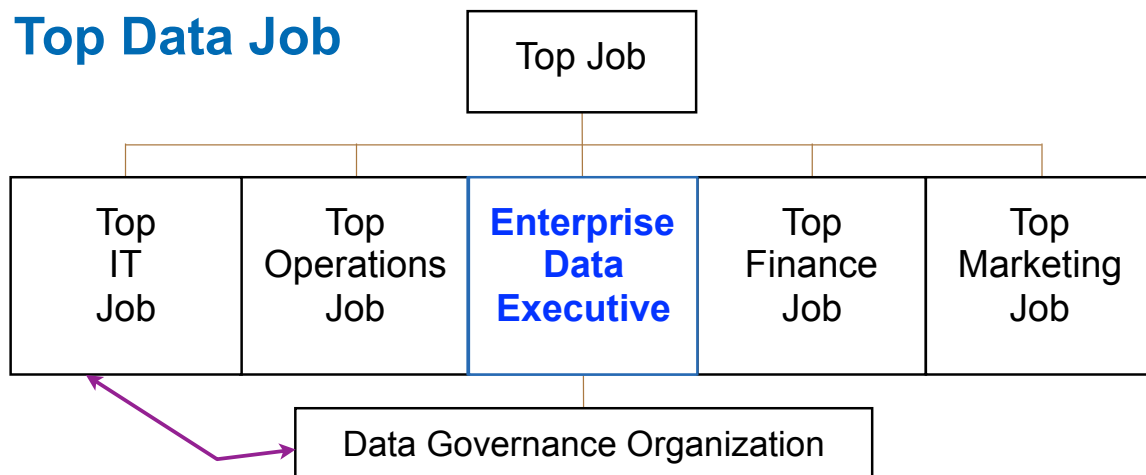
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Top Data Job



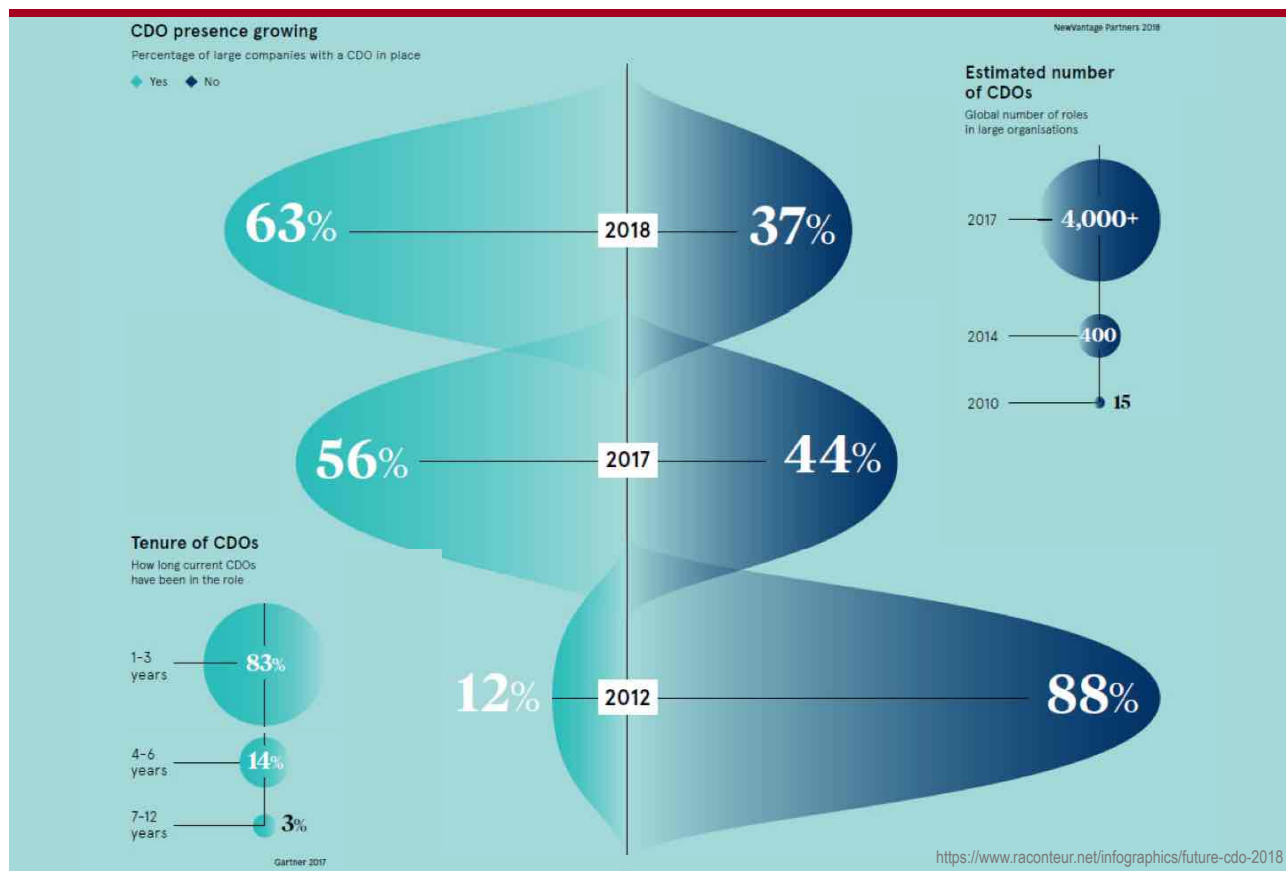
- Dedicated solely to data asset leveraging
- Unconstrained by an IT project mindset
- Reporting to the business
- It's own strategy
- Attention on par with similar organizational assets
- Professional ministrations to make up for past neglect

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What We Learned From Top Execs About Their Big Data And AI Initiatives



Randy Bean Contributor
CIO Network Contributor Group ⓘ
Enterprise & Cloud

1,965 views | Jan 2, 2019, 08:19pm

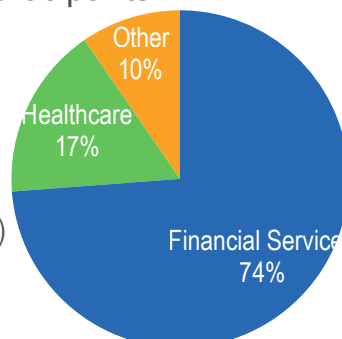


- Big Data/AI Executive Survey 2019

- 7th Annual
- 65 biggish participants

- Sample

- Financial Services
- Healthcare (over represented)

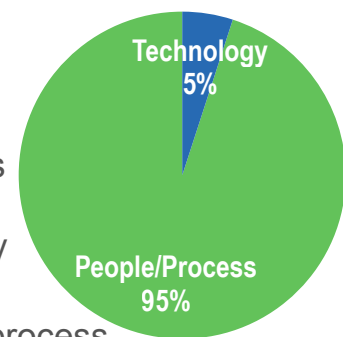


- CDO's dominate

- 97.5% respondents C-levels
- 72.7% senior data executives

- Culture's impact

- 5% of challenges relate to technology
- 95% to people & process



<https://www.forbes.com/sites/ciocentral/2019/01/02/what-we-learned-from-top-execs-about-their-big-data-and-ai-initiatives/>



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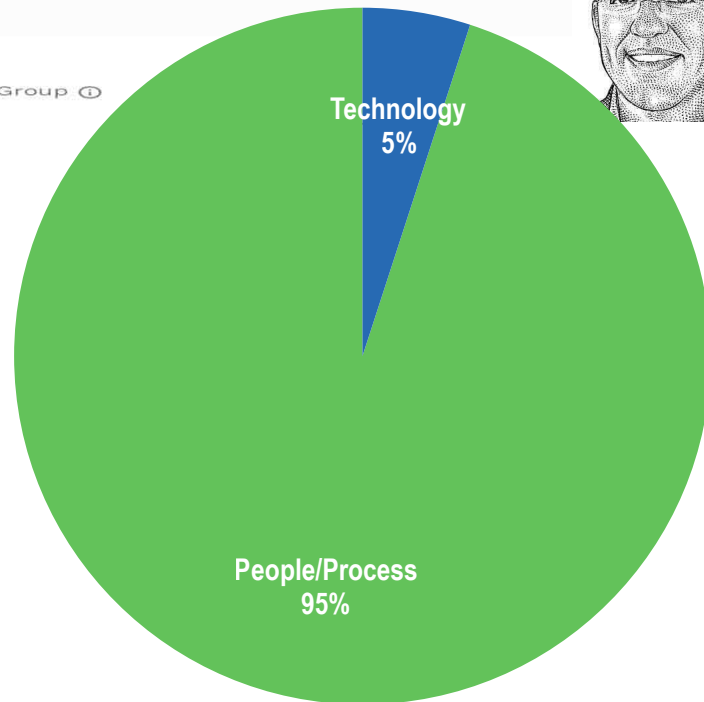
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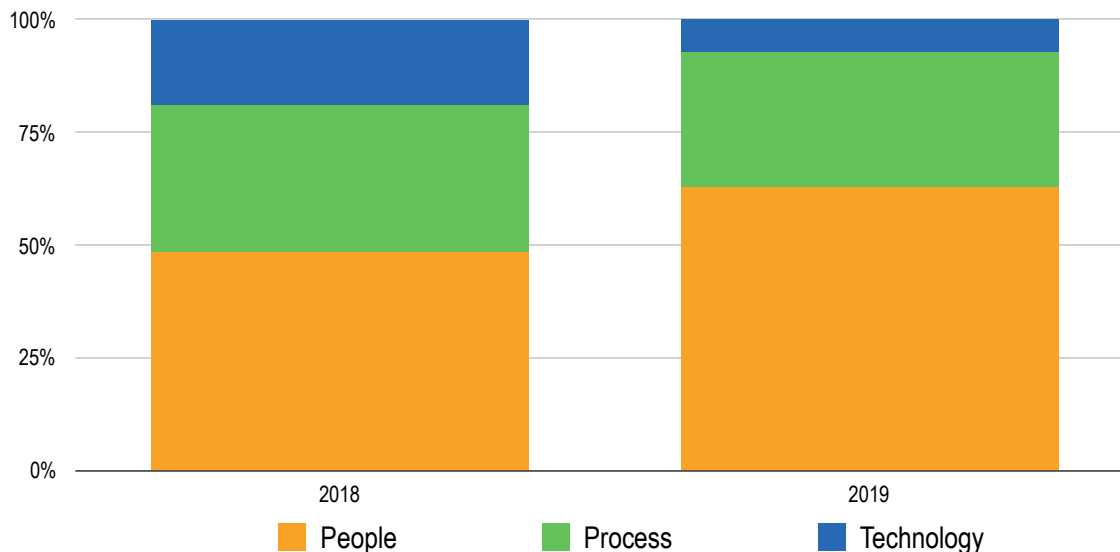


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Specific 2019 PPT perception

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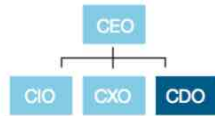
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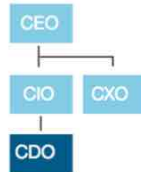
Each of the three most common reporting structures has positive and negative implications to consider

1. Direct report to CEO



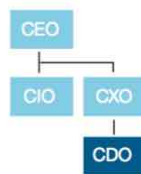
- ✓ Raise data to CEO's agenda for full empowerment
- ✓ Ensure data ownership independence from individual business units (BUs).
- ✗ Risk power issues between CIO and CDO

2. Integration within IT



- ✓ Leverage data as an operational enabler for business decisions
- ✓ Easily coordinate data management, architecture and IT
- ✗ Risk loss of business relevance for data

3. Report to functional area



- ✓ Provide data independence from IT
- ✓ Enable cross-BU functions for data management
- ✗ Risk diminished operational effectiveness caused by loss of IT contact

Source: IBM Institute for Business Value, 2016.

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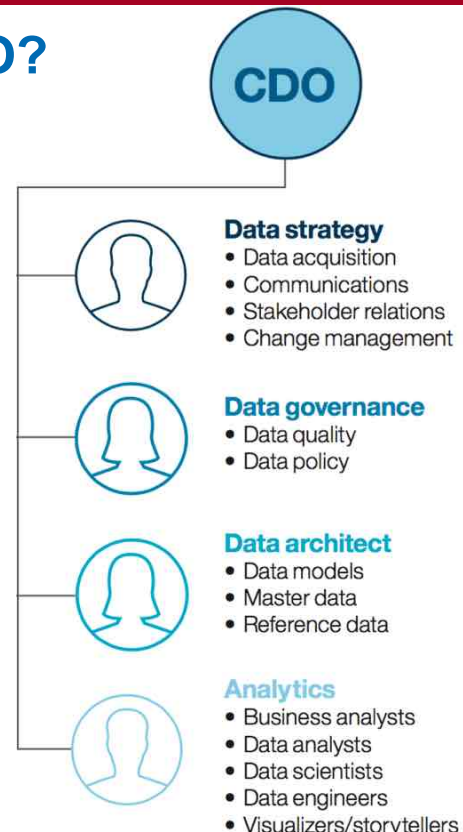


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Who should report to the CDO?

- 66 percent have **data architects** and **business analysts** reporting to them
- 60 percent have **data scientists** and **data analytics** staff
- 50 percent have data **acquisition** or data **management** specialists reporting to them
- 40 percent oversee a **center of competency** for analytics
- 30 percent oversee a **Chief Analytics Officer**
- One-third of CDOs oversee **data stewards** as part of their information governance programs
- Finding **talent** – especially qualified data scientists – is often one of the more overlooked challenges for a CDO
- +40 percent of CDOs reported a **lack of skills** as one of their top-two obstacles
 - Yet only 20 percent of organizations with plans to hire a CDO consider this an obstacle



Source: IBM Institute for Business Value, 2016.

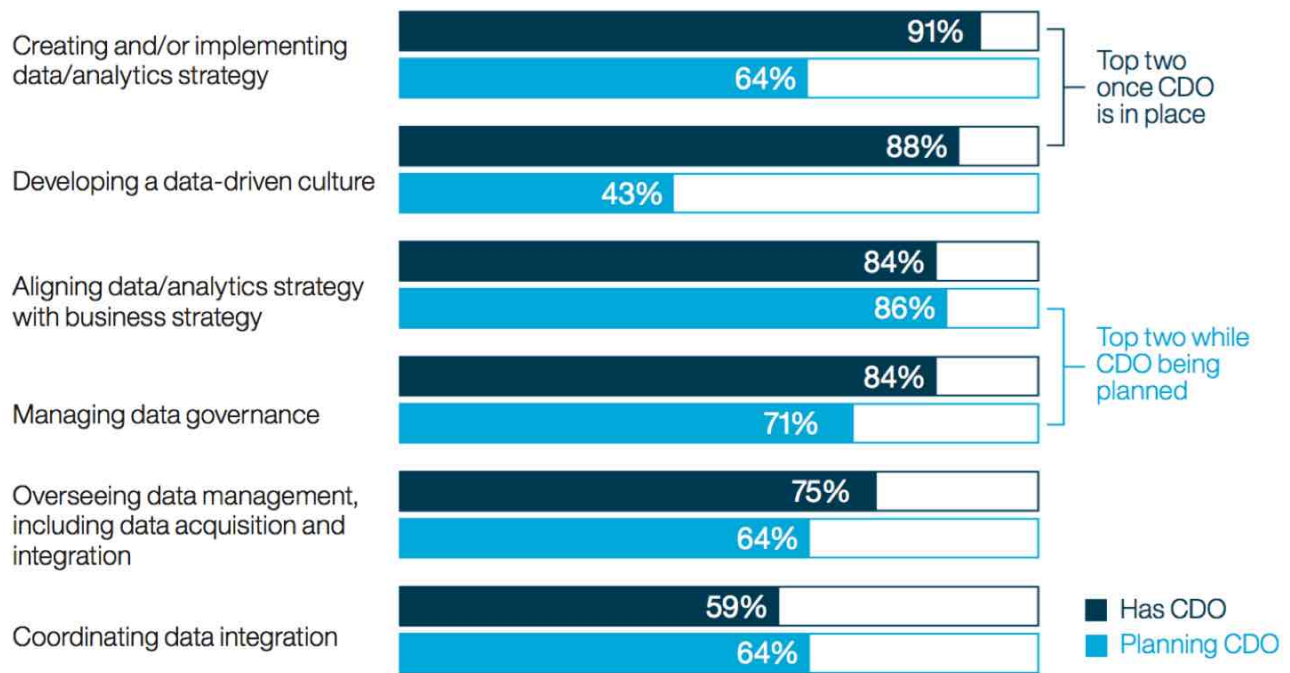
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The CDO key priorities evolve as organizational capabilities develop



Source: IBM Institute for Business Value, 2016.

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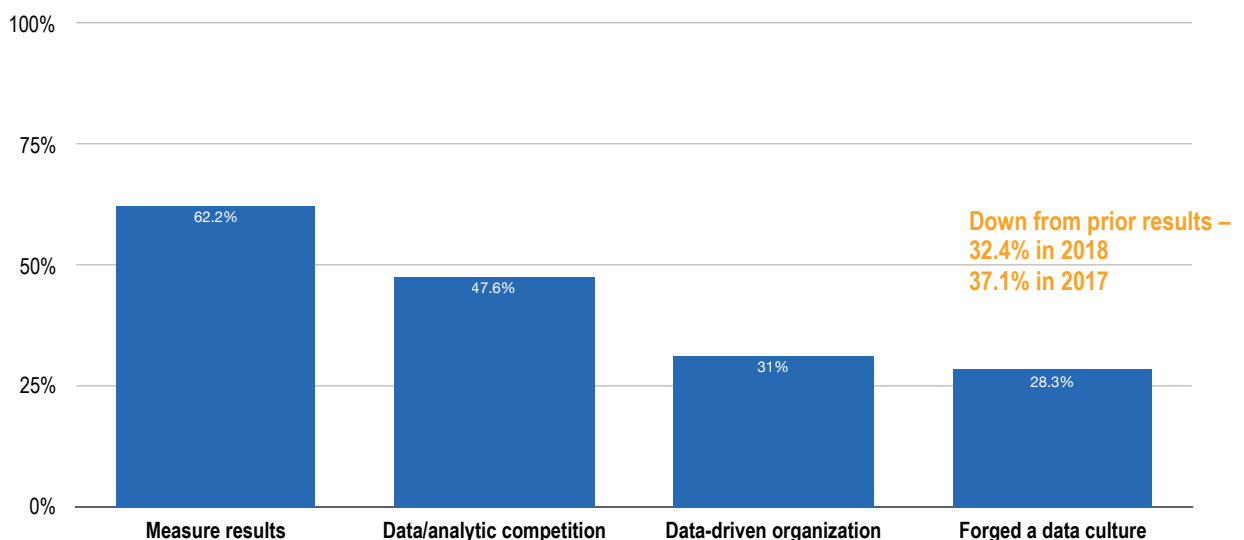
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2019 Struggles



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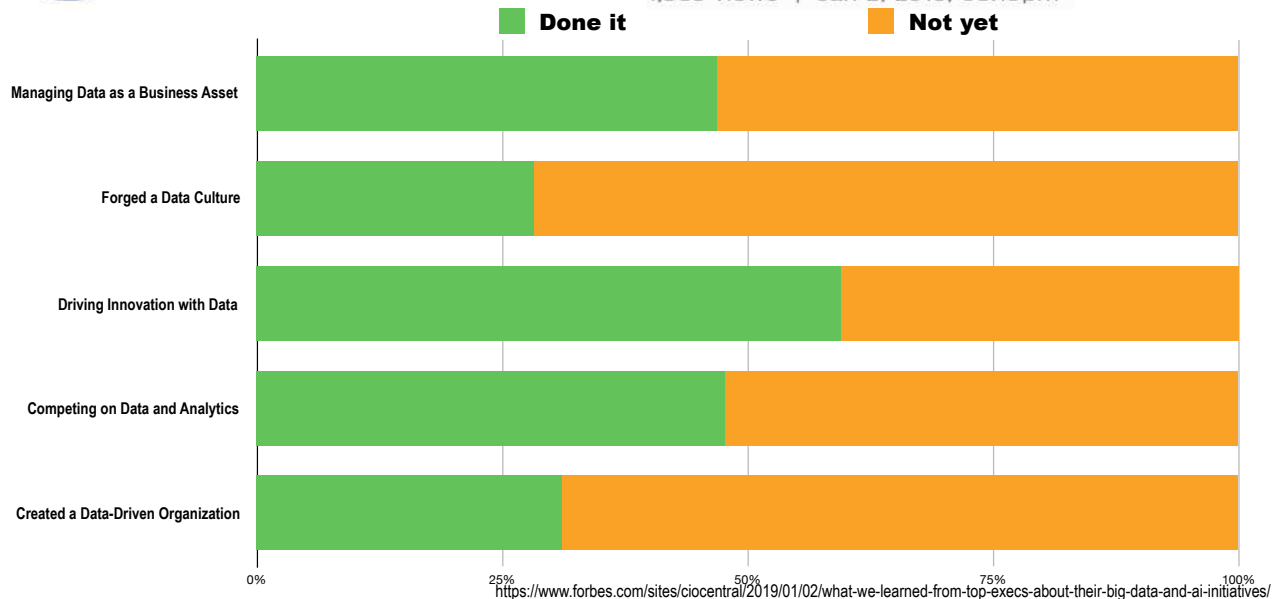
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The state of the data challenge 2019



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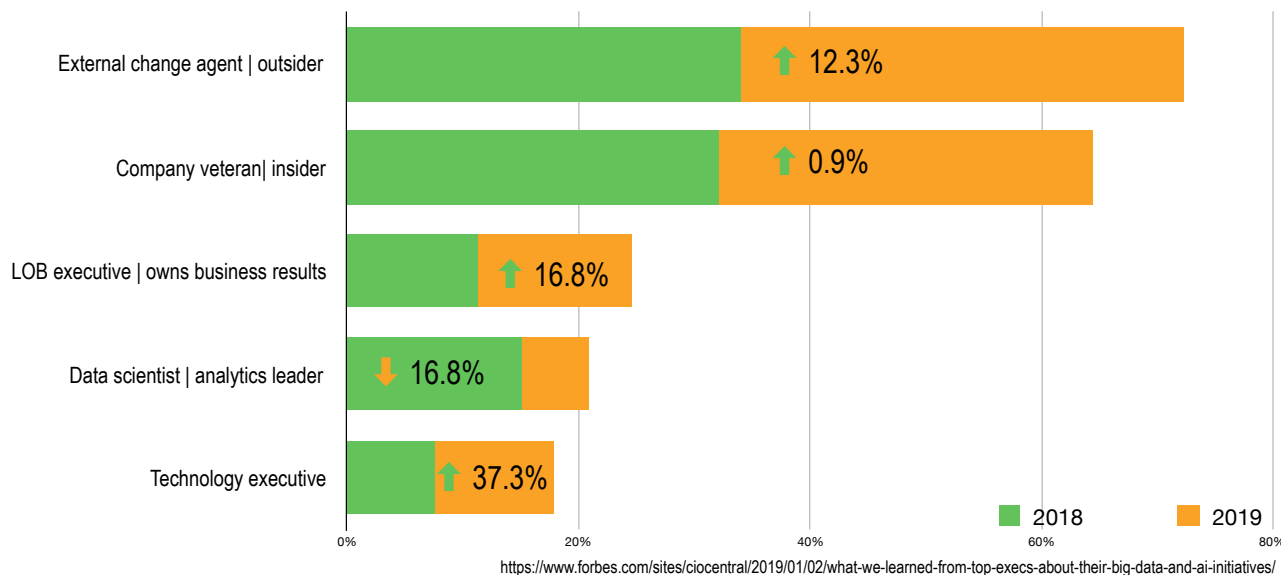
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CDO Profile(s)



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AGENDA



- Develop the first version of an organizational data strategy
- Inventory data assets-> decrease 80% data ROT (redundant, obsolete, trivial)
- Monetize your organization's data



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AGENDA



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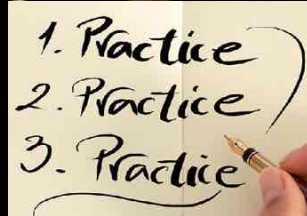
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A Musical Analogy

Please raise your hand when you recognize this song



+



=



<https://www.youtube.com/watch?v=4n1GT-VjIVs&frags=pl%2Cwn>

<https://iscdo.org>



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Mike Tyson

- “Everybody has a plan until they get punched in the face.”

— <http://f--f.info/?p=23071>



General Dwight D. Eisenhower



Military Plan



Dwight Eisenhower

- “In preparing for battle I have always found that plans are useless, but planning is indispensable.”

— <https://quoteinvestigator.com/2017/11/18/planning/>

Strategy Guides Workgroup Activities

A pattern in a stream of decisions

Strategy that winds up only on a **shelf** is not useful



UNLOCKING BUSINESS VALUE

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CDO Agenda

The CDOs goal is to better manage data as an organizational asset in support of the organizational mission!

AGENDA

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AGENDA

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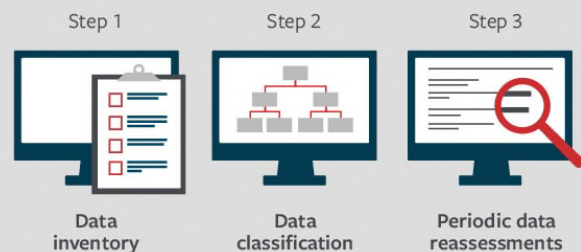
Data Inventory

- When will it be done?
 - Sounds like a task or a project
 - Data is not a project
 - No organization has ever completed a data inventory!
- Reframe the question
 1. How rapidly can we achieve the required capabilities?
 2. What sort of preexisting classification frameworks can be used to jumpstart?
 3. Often does each classification require reassessment?



<https://www.everteam.com/en/building-your-data-inventory/>

Understand and Classify Your Company's Data Assets



<https://www.travelers.com/resources/cyber-security/data-assessment-inventory-and-classification>



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AGENDA



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- Monetize your organization's data



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AGENDA

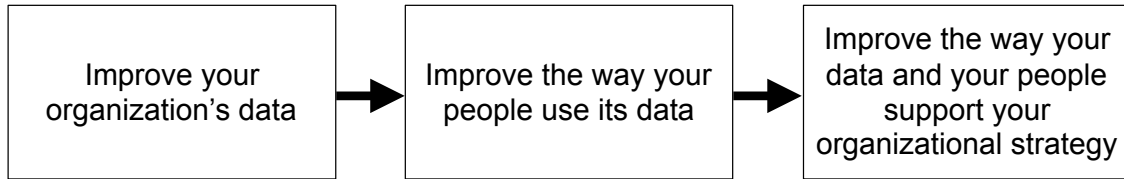


- Develop the first version of an organizational data strategy
- Inventory data assets-> decrease 80% data ROT (redundant, obsolete, trivial)
- **Monetize your organization's data**

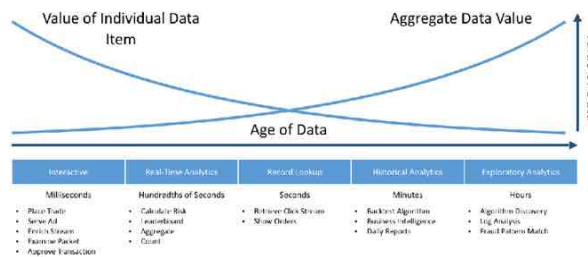


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Motivations



- Because data points to where valuable things are located
- Because data has intrinsic value by itself
- Because data has inherent combinatorial value
- Valuing Data
 - Use data to measure change
 - Use data to manage change
 - Use data to motivate change
- Creating a competitive advantage with data



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What did Rolls Royce Learn from *Formula 1*

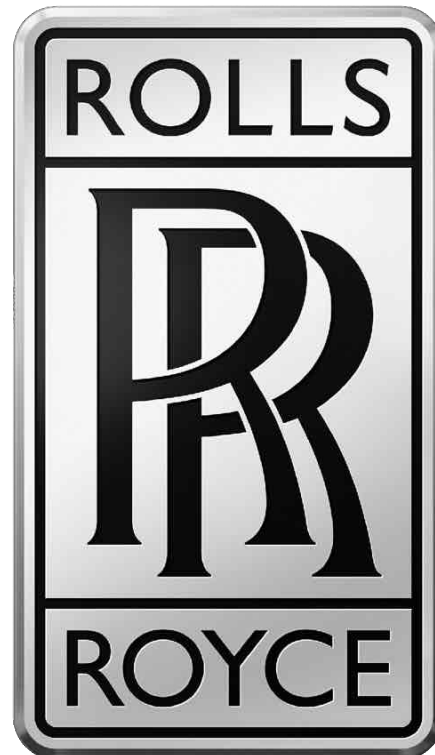
- Old model
 - Sell jet engines
- New model
 - Sell hours of thrust power
 - Power-by-the-hour
 - No payment for down time
 - Wing to wing
 - When was it invented?

Rolls-Royce celebrates 50th anniversary of Power-by-the-Hour

Tuesday, 30 October 2012

Rolls-Royce, the global power systems company, today celebrated the 50th anniversary of "Power-by-the-hour", its pioneering approach to engine maintenance management that forms the basis of the company's market-leading CorporateCare services.

"Power-by-the-hour", a Rolls-Royce trademark, was invented in 1962 to support the Viper engine on the de Havilland Phantom. Subsequent 125 business jet. A complete engine and necessary replacement service was offered on a fixed-fee per flight-hour basis. This aligned the interests of the manufacturer and operator, who only paid for engines that performed well.



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Chief Electrification Officer




- Chief Electrification Officer – responsible for electrical generating and distribution systems. The title was used mainly in developed countries from the 1880s to 1940s during the electrification of industry, but is still used in some developing countries.

Summary

- Working within an immature discipline
 - Compared to 8,000 years of accounting
- Requires a singular focus
 - Professional ministrations to make up for past neglect
- Report outside of IT
 - Data is not a project and you cannot dabble in it and expect tangible results
- Cannot do everything at once
 - Strategy more about prioritizing than planning
- Planning for sustainment
 - Cannot rely solely on a champion



EXPERIENCE: Succeeding at Data Management—BigCo Attempts to Leverage DataFull Text:  PDFAuthor: [Peter Aiken Virginia Commonwealth University/Data Blueprint](#)

Published in:




• Journal
Journal of Data and Information Quality (JDIQ) - Challenge Papers,
Regular Papers and Experience Paper [JDIQ Homepage archive](#)
Volume 7 Issue 1-2, June 2016
Article No. 8
ACM New York, NY, USA
[table of contents](#) doi>[10.1145/2893482](#)









2016 Article

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- Refereed

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