



"I am their leader, which way did they go": A tale of leadership in the digital age.

SPE Business, Management and Leadership
Committee (BML)

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May 29, 2019



Leadership in the Digital Oil Field



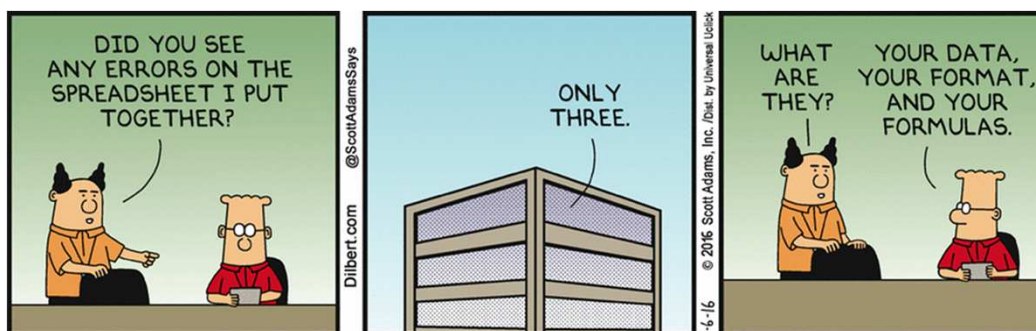
- A New Competence Model: Digital Literacy of the Workforce
 - What about your digital literacy
 - A new vocabulary (AI, ML, ANN, deep learning, AR/VR, Digital Twin, Big Data, IoT and many others)
- Scarcity of Digital Talent in the Marketplace
 - Next Generation Workforce
- Understanding the Advanced Analytics Techniques
 - Giving up on needing to understand why the model works the way it does
- Most Leadership skills apply, but:
 - Agile: Pick up the Pace
 - Allow and Celebrate Failure: Fail Fast



Leadership in the Digital Oil Field: Sometimes you feel left behind



Leadership in the Digital Oil Field: Practice Humility



Leadership in the Digital Oil Field: Data-Driven versus Physics-Driven



Darcy's Law

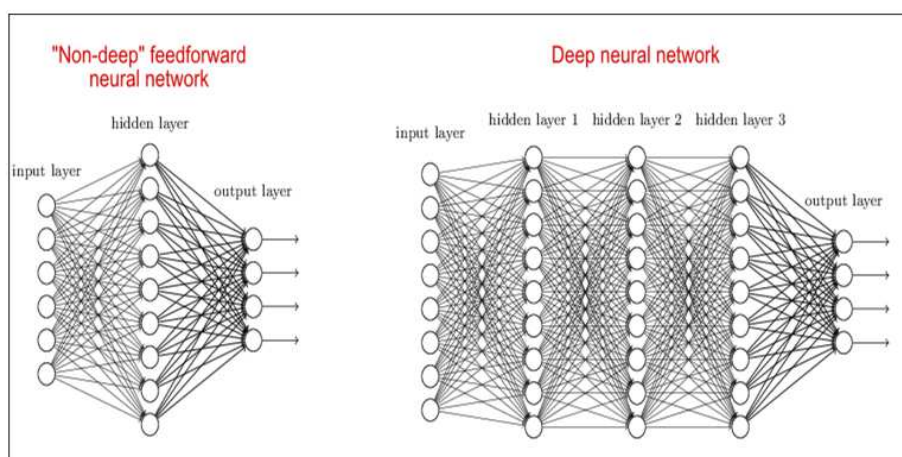


This individual became Chief Engineer for the Department of Côte-d'Or, he would be raised to the Chief Director for Water and Pavements for Paris. Allowed leave of his duties owing to poor health, it is in convalescence in Dijon that he would begin to study the flow of water through beds of sand to constitute an equation to describe the movement of a fluid through a porous medium. In 1856, he would have his eureka moment. His name is **Henry Philibert Gaspard Darcy**, and his equation would become known as Darcy's Law.

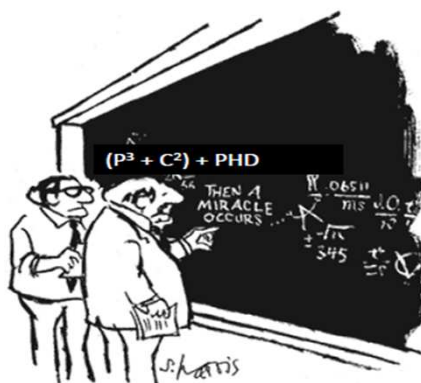
Since its first definition, **Darcy's Law** has been derived to allow for differential solutions, vector analysis, multiphase and unsaturated flow and has been applied in several fields, one of which is petroleum engineering. Used to determine hydrocarbon flow through permeable media, this Dijonnais pioneering work describes the some of the fundamental physics that forms the undercurrent of our industry to this very day.



Leadership in the Digital Oil Field



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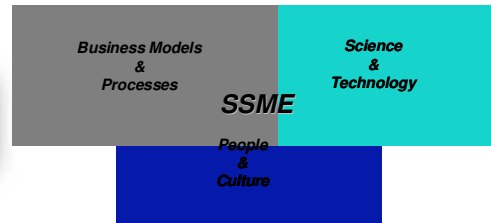
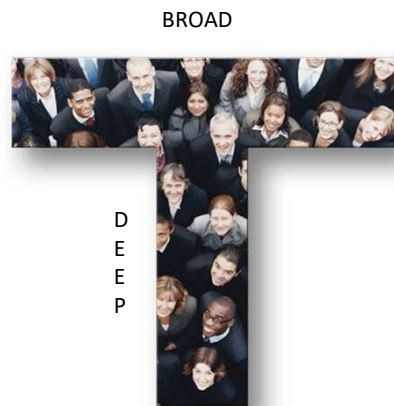
"I THINK YOU SHOULD BE MORE EXPLICIT HERE IN STEP TWO."



Leadership in the Digital Oil Field: Collaboration



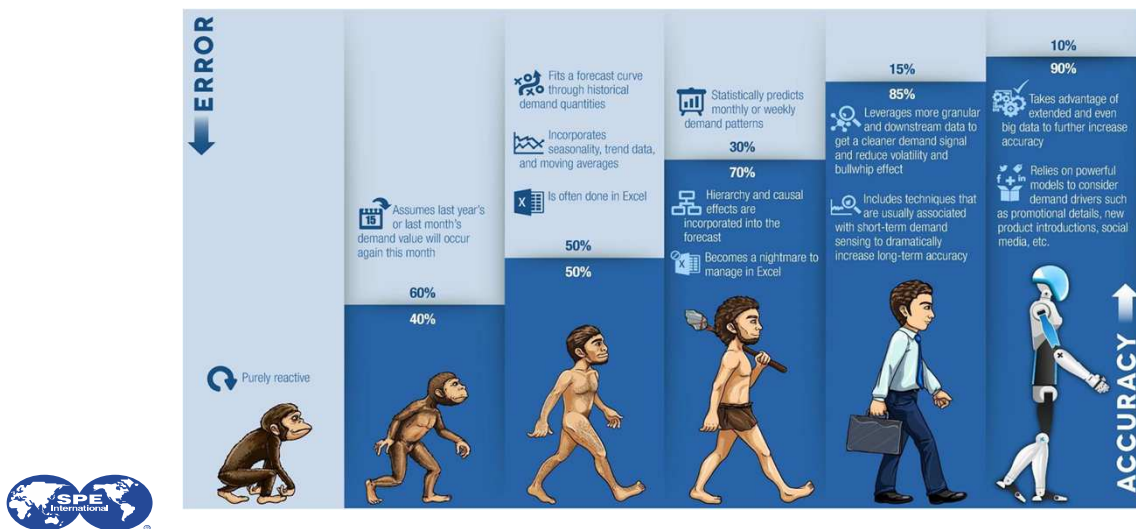
T-shaped expertise



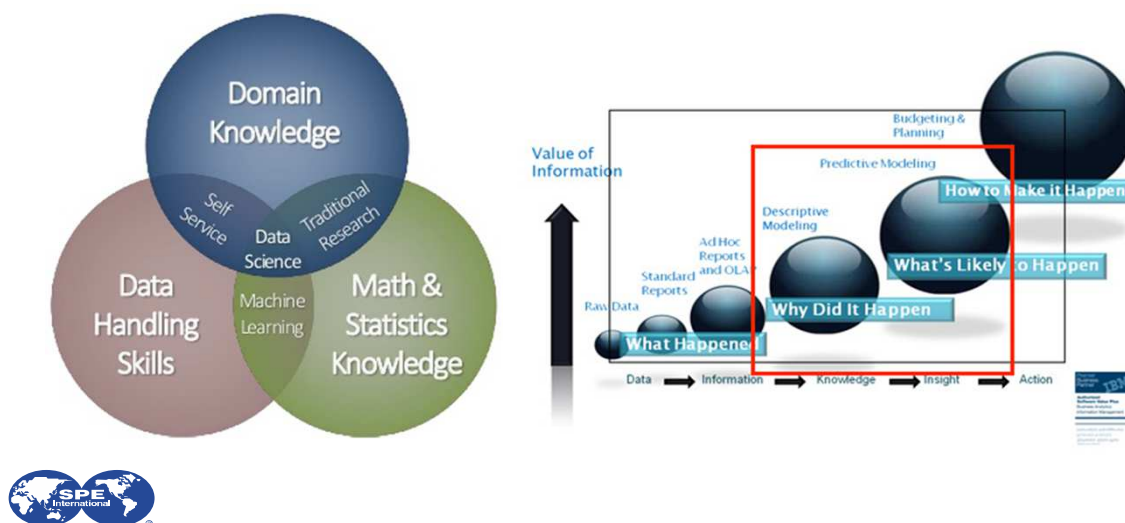
"IT professionals will need to possess expertise in multiple domains. Technical aptitude alone will no longer be enough. IT professionals must prove they can understand business realities – industry, core processes, customer bases, regulatory environment, culture and constraints. Versatility will be crucial." – Gartner Group IT Professional Outlook

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Leadership in the Digital Oil Field: Analysis, Automation, Autonomy



Leadership in the Digital Oil Field: Analysis is Multi-disciplinary



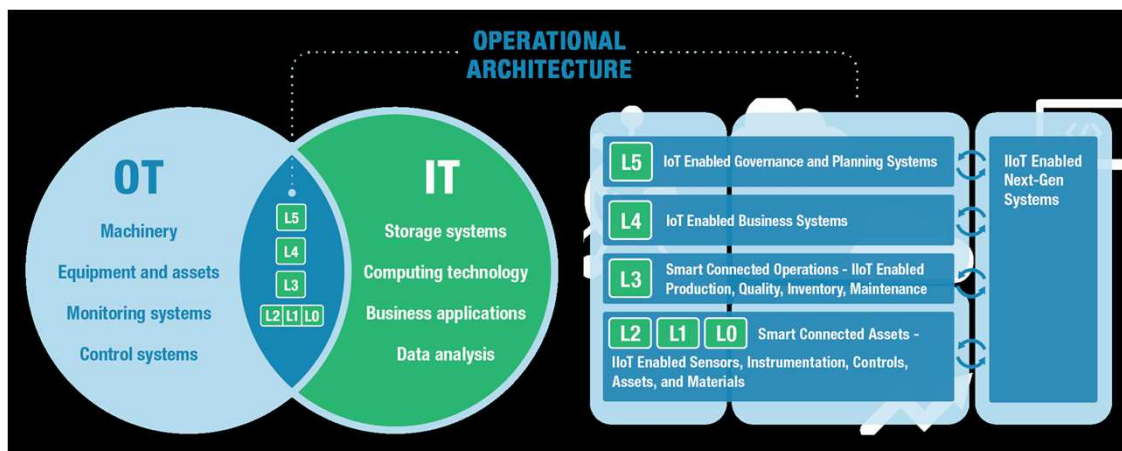
Leadership in the Digital Oil Field: Data is an enterprise asset



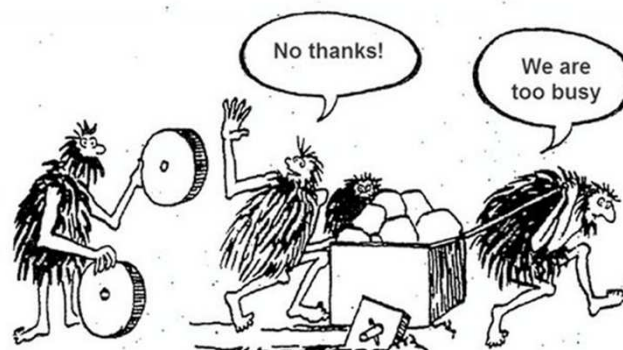
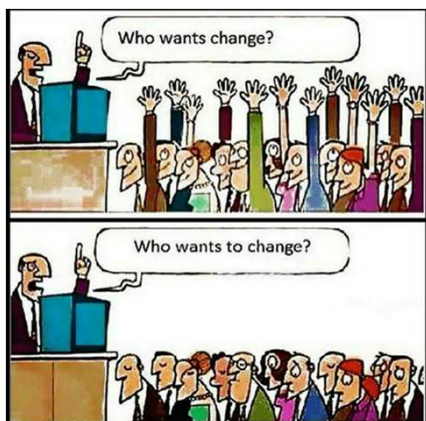
Leadership in the Digital Oil Field: Breaking down functional silos



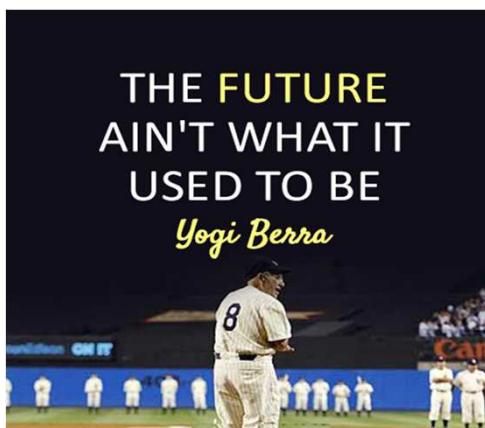
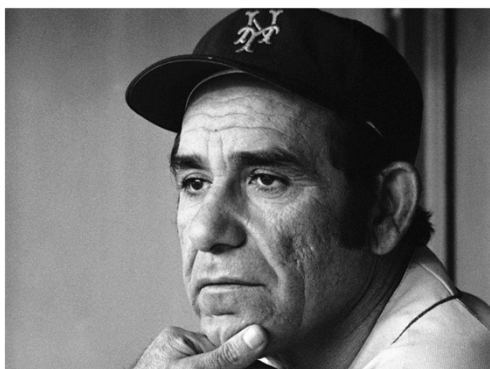
Leadership in the Digital Oil Field: Convergence of OT and IT



Leadership in the Digital Oil Field: Making Time for Change



Leadership in the Digital Oil Field: Change Management



The Future is Bright, But Different



Leadership in the Digital Oil Field



The Canterbury Tales (Middle English: Tales of Caunterbury) is a collection of 24 stories that runs to over 17,000 lines written in Middle English by Geoffrey Chaucer between 1387 and 1400. In 1386, Chaucer became Controller of Customs and Justice of Peace and, in 1389, Clerk of the King's work. It was during these years that Chaucer began working on his most famous text, The Canterbury Tales. The tales (mostly written in verse, although some are in prose) are presented as part of a story-telling contest by a group of pilgrims as they travel together from London to Canterbury to visit the shrine of Saint Thomas Becket at Canterbury Cathedral. The prize for this contest is a free meal at the Tabard Inn at Southwark on their return.



Leadership in the Digital Oil Field: Traditional Leadership is changing



Who is this man?



Petroleum Network Education Conferences

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Leadership in the Digital Oil Field: Who are we to tell than they can't do it?



FRIENDS OF IRONY

Leadership in the Digital Oil Field



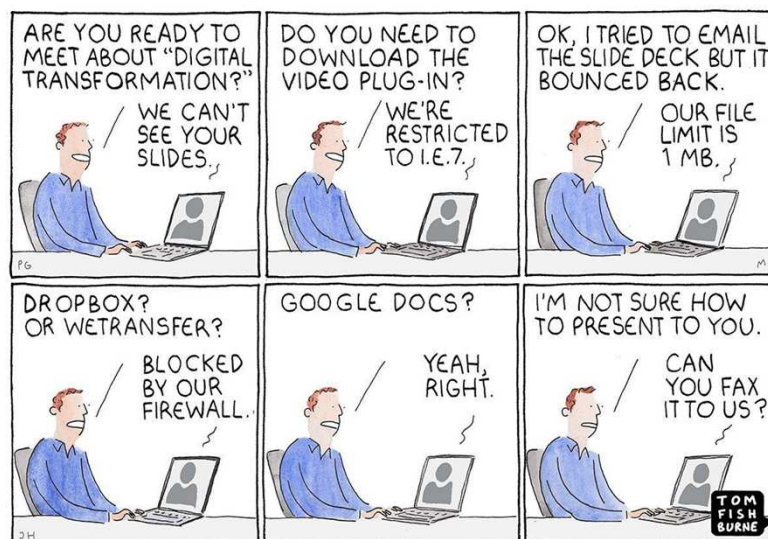
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"Does this count as big data?"



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