

SPE Gulf Coast Data Science in Oil & Gas: where do we stand?

I&E

innovation & engineering



Topics I will cover today

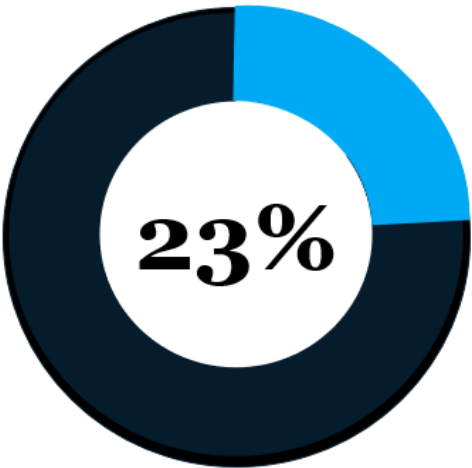


1. Digital Transformation landscape
2. Oil & Gas Industry Re-skilling
3. Data Science Up-skilling & Re-skilling
4. Data Science CoP
5. Data Science Accelerator
6. DataX Team
7. Data Science Project Snapshots

Digital Transformation landscape

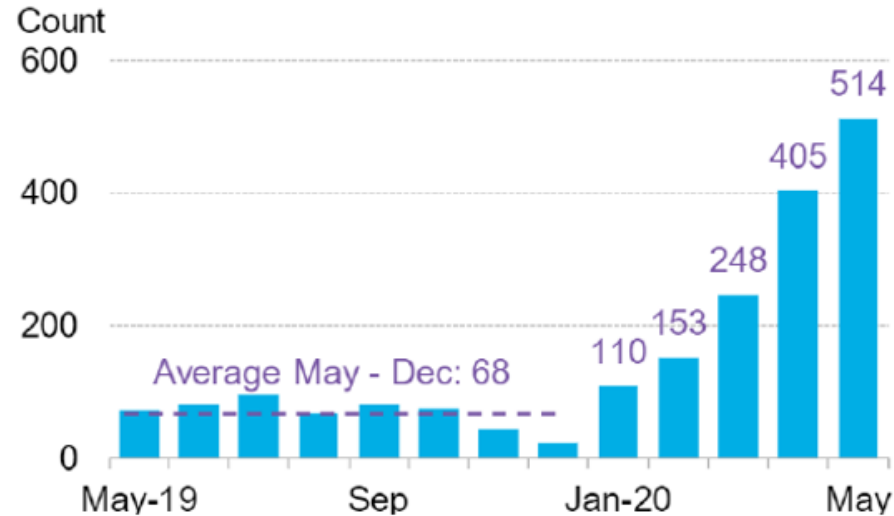


Share of digital transformations that succeed

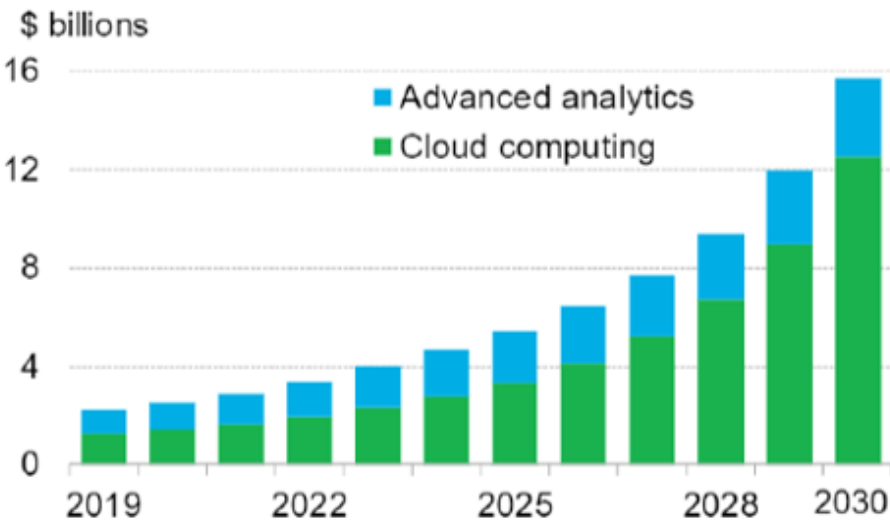


Source: McKinsey's Digital Survey, 2019; N=3,800;

Mentions of remote operations in industrial company filings



Forecast oil industry spend on advanced analytics and cloud computing

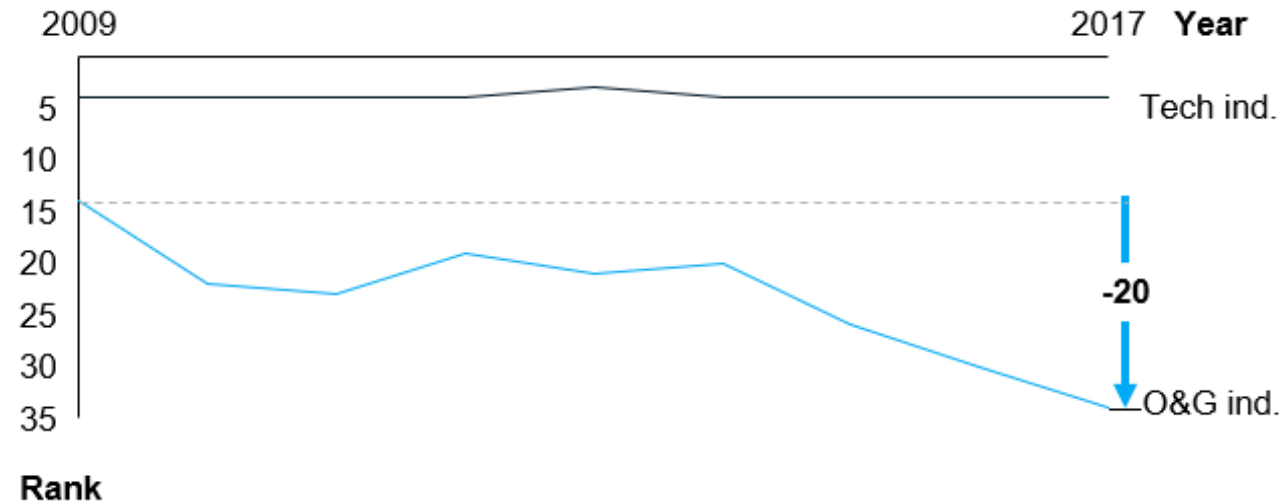


The O&G industry needs to step up to attract and retain top talent

Many of our O&G clients struggle with attracting talents at scale

The Oil & Gas industry is not attractive to Digital Talent...

Ranking of most desirable industries for digital talent, lowest is best



Top 5 Most Desirable Employers Among Global Engineering/IT Students



Source: McKinsey & Company

-40% less 80% More Number of hours worked

...so the talent that you do have will need to be reskilled

Skill category		Oil & Gas and mining
Physical and manual skills	-14%	
Basic cognitive skills	-15%	
High cognitive skills	+8%	
Social and emotional skills	+24%	
Technological skills	+55%	

Data Science Up-skilling and Re-skilling



Our digital transformation is driven by a people transformation and our development is based on 70 : 20 : 10.



Our employees continue growing their careers with formal learning and career development resources.



DATA SCIENCE / GETTING STARTED

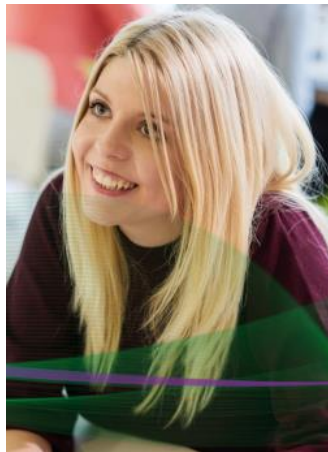
Data science for everyone

Have you heard the term data science, but don't know what it is? Learn the basics, including the languages used, skills, tools and methodology required.

18 HOURS LEVEL 1 2 3

Upskilling

One-stop portal simplifies access to digital skills learning. Data science paths provide structured learning journeys tailored to all skill levels.



Career development

Clear expectations are set across roles and levels to support career growth. Employees complete self-reflections and use dashboards to plan development.



Reskilling

Reskilling promotes growth from within while helping us perform while transforming – example focus areas are data scientists and agile coaches.



Data Science Community of Practice

18 August 2020



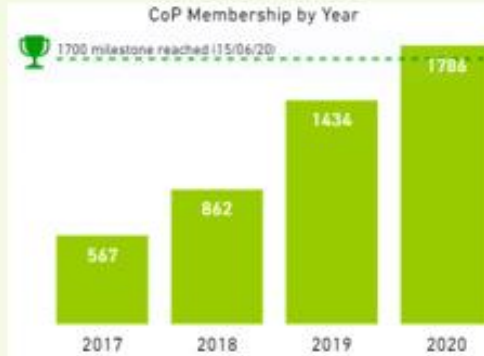
Membership

1786

Members

24.55%

Growth YoY%



Community



NB: The above visual does not include non-CoP members



Departments

Top 10 Departments



NB: The above visual does not include non-CoP members

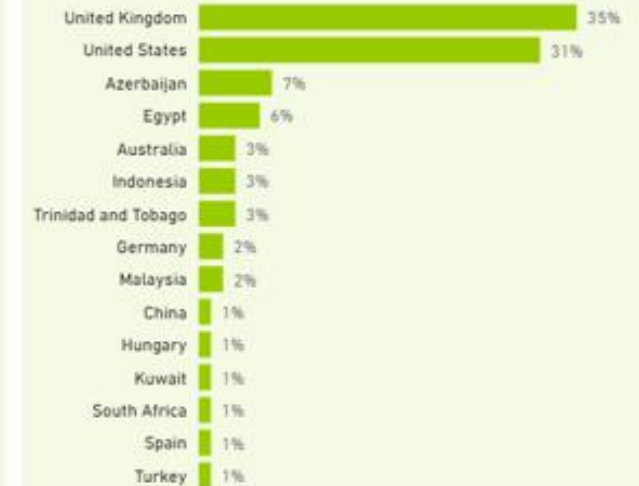


Activity (July 2020)

Total Unique CoP Site Visitors



CoP Site Visitors by Country



NB: The above visual does not include non-CoP members

42

Total Items

9

Opportunities

33

Projects

19

Delivered

23

Code Repositories

19

Project Repositories

*Reimagining
energy*

the marketplace for data science supply & demand

The Data Science Accelerator app enables anyone in bp to both identify and work on data science opportunities. Projects can also be added to raise awareness and promote reusability of existing data science code.



Search



Share



Participate



Perform



Opportunities



My Data



Add



Access



Collaborate



Analyze



Projects



Re-use



Edit



Join



Feedback



Admin

FAQs

What is the purpose of this app?

The primary purpose of this App is to **capture** data science opportunities across bp which will enable **anyone** in bp with the appropriate skills and time to deliver the business value. In addition, the App captures data science Projects with applicable code enabling anyone in bp to **re-use** which accelerates time to value.



What is an Opportunity?

An **Opportunity** is a business idea that can apply data science to deliver ongoing business value. Once an Opportunity is captured in the Accelerator, anyone in bp can choose to work on the Opportunity by contacting the applicable Opportunity owner.



What is a Project?

A **Project** is an Opportunity where someone has decided to apply data science to deliver the success criteria. A Project contains a link to the data science code and if applicable, the Project Repository that was used to manage the Project.



Got a question? Go to our Yammer site for help.

The DataX Team



What is DataX?

- A team of 12 data scientists with oil/gas domain expertise, who are deployed onto cross-functional, multi-disciplinary digital product teams
- They create value by turning data into actionable insights by melding business domain knowledge with analytics and machine/deep learning modelling

Team Principles

- **Impact** – focus on our user's needs to create solutions that address the business challenge; deliver value quickly using MLOps framework and strategic partnerships
- **Speed** – test and iterate to deliver accelerated impact; fail fast and share learnings quickly
- **OneTeam** – collaborate to create code that is shareable and reusable; cultivate an open, transparent and enthusiastic data science community

Team Working Style

- **70% Delivery** – create data science solutions to business-facing challenges
- **20% Development** – explore personal development opportunities for up-skilling / re-skilling (courses, conferences, collaborations)
- **10% Dividend** – re-invest into bp's data science community (team materials, CoP engagement, mentoring)

Project Snapshots

