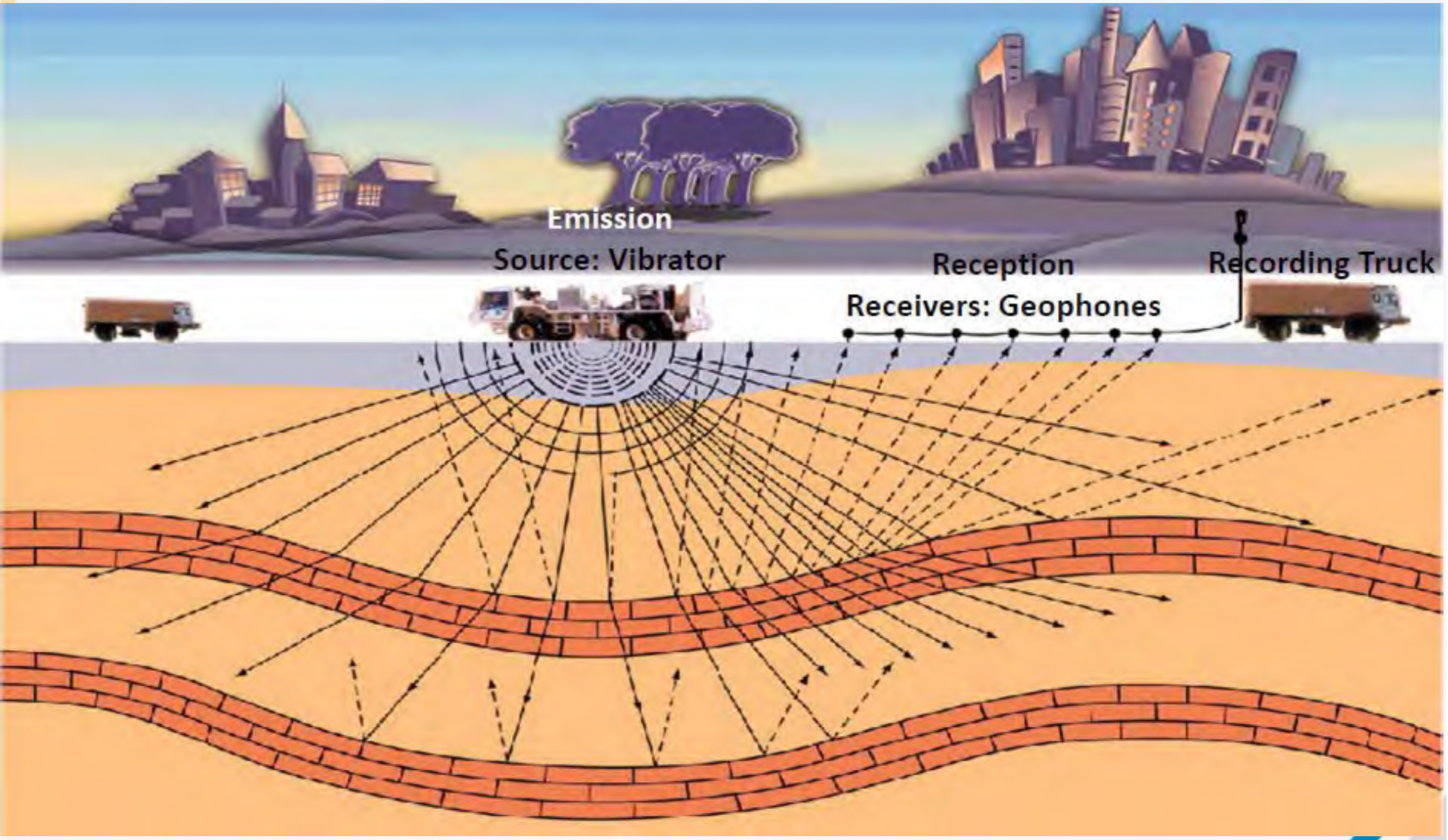
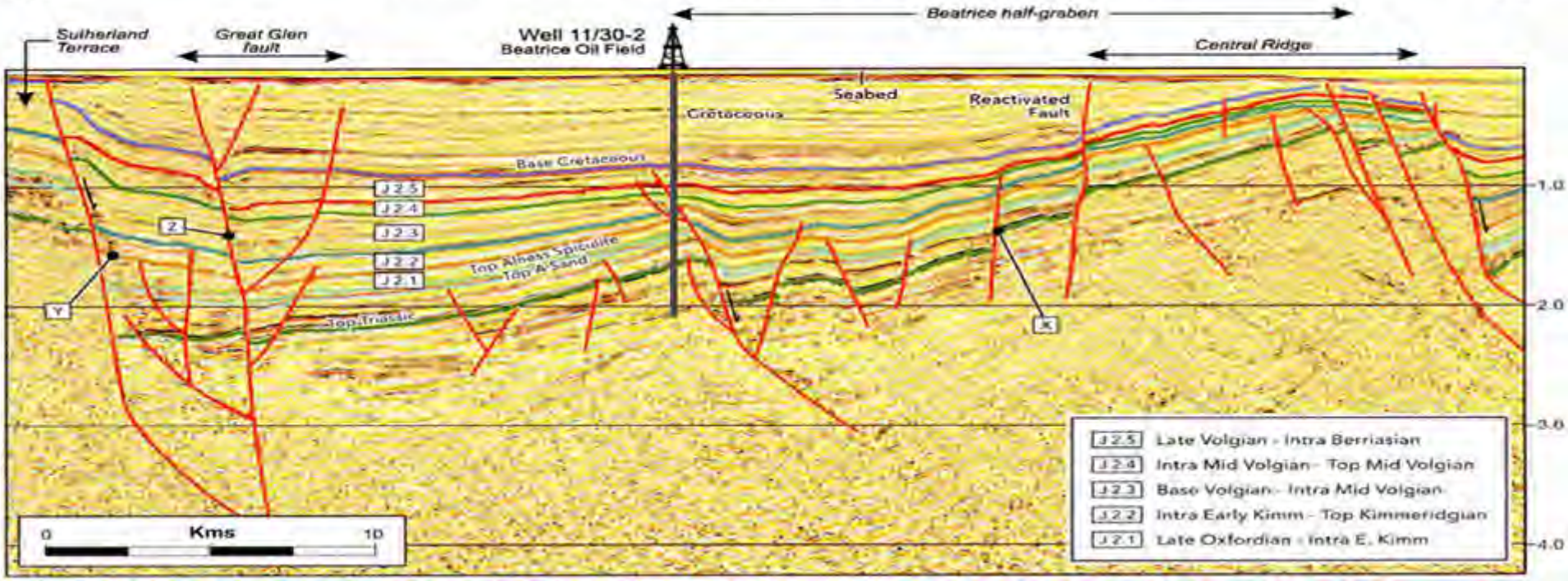
TiD 2017
质量竞争力大会

大数据如何为能源行业带来价值

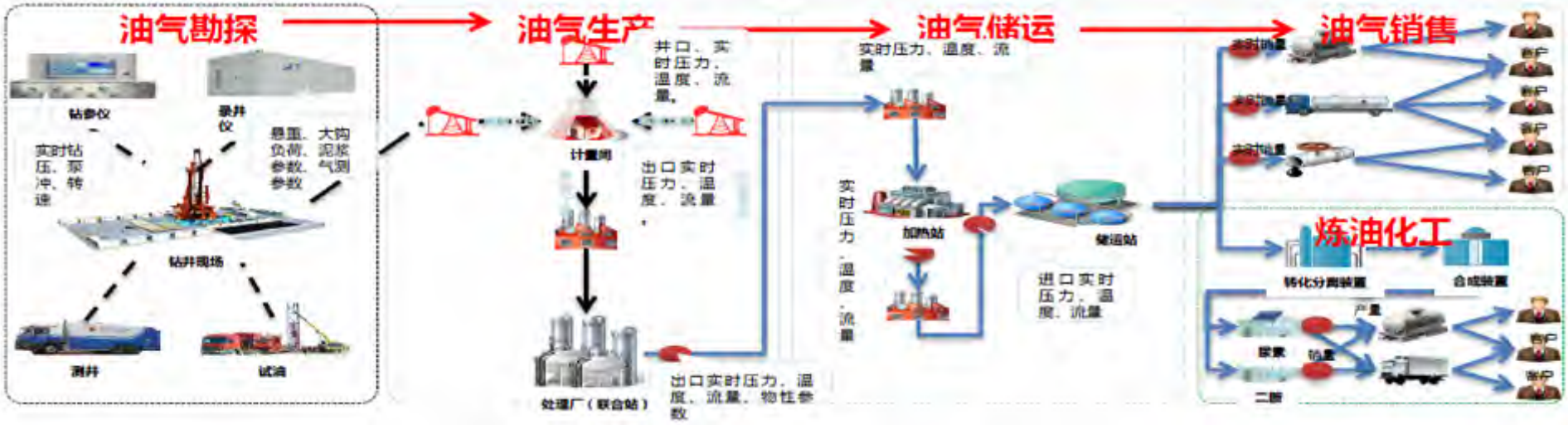
软件研发
SOFTWARE DEVELOPMENT


Emission
Source: Vibrator
Reception
Receivers: Geophones
Recording Truck

Seismic section calibrated with well data

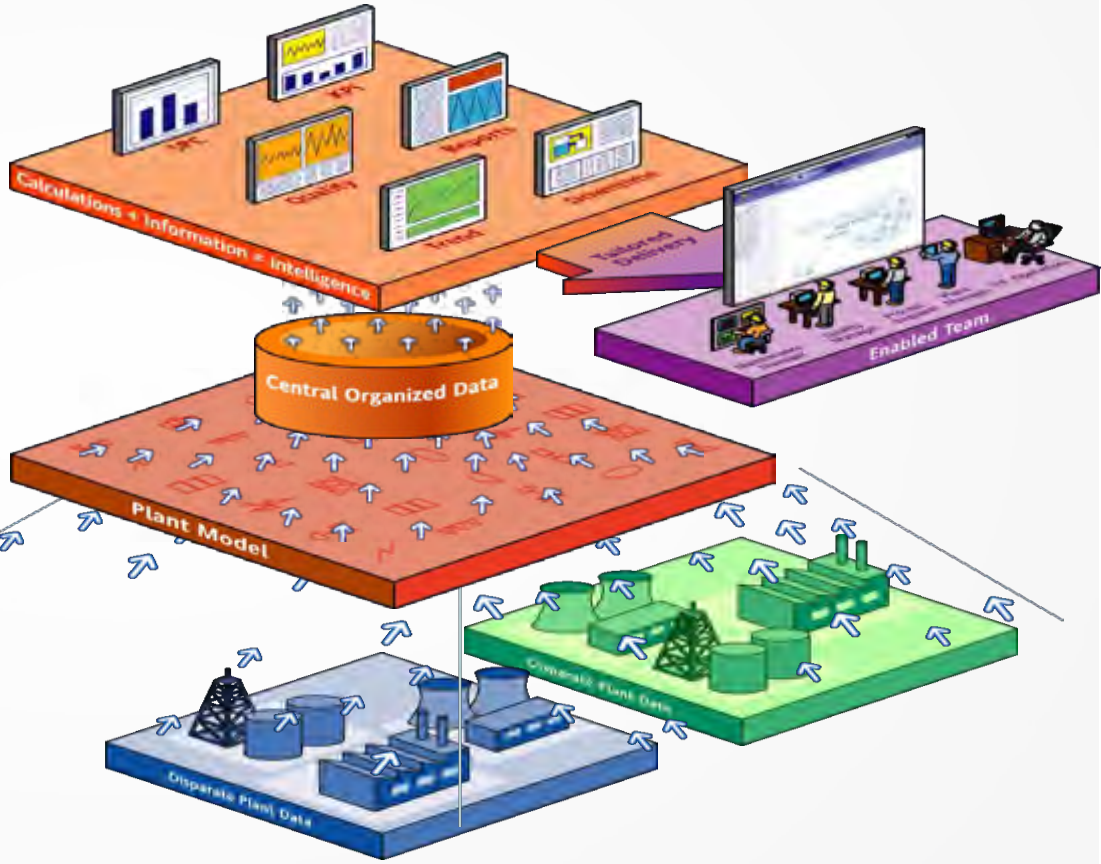


- 应用现状
- 建议体会


油气勘探
油气生产
油气储运
油气销售
钻参仪
录井仪
实时钻压、泵冲、转速
悬重、大钩负荷、参数、泥浆气测参数
钻井现场
测井
试油
井口、实时压力、温度、流量、
计量间
出口实时压力、温度、流量、
处理厂（联合站）
出口实时压力、温度、流量、物性参数
实时压力、温度、流量
实时压力、温度、流量
加热站
储运站
进口实时压力、温度、流量
炼油化工
转化分离装置
合成装置
产量
销量
二醇


千余套炼化生产装置
数万公里油气长输管道
数万口油气水井
万座加油站
OA
收发文
合同签署
亿张加油卡
用户单据
物采交易


业务决策场景
判断、决策、发布
管理决策者
成果数据库
成果数据库
成果数据库
分析成果决策数据
数据分析场景
业务建模、数据分析、价值发现等
数据分析者
面向主题分析数据
数据治理场景
数据ETL、事件处理、数据存储管理、分析数据库建立等
数据治理者
多源、多类、实时大数据源
应用系统
管理者
业务运行系统
技术数据、生产运行、企业资源、物联网、实时监控、档案、网站等系统


Calculations + Information = Intelligence
Enabled Team
Central Organized Data
Plant Model
Disparate Plant Data

能耗优化

运行优化

调度优化

监控

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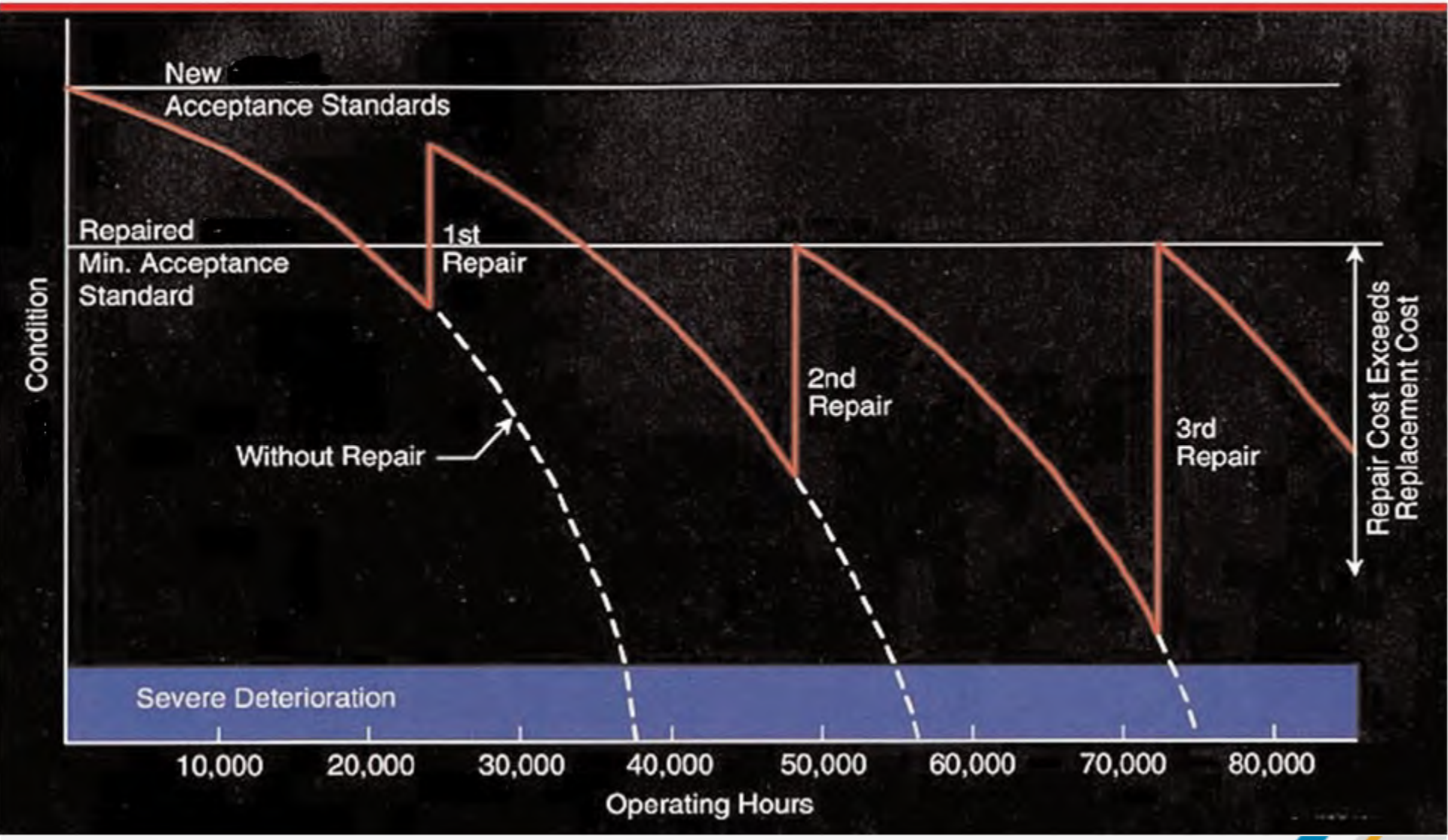
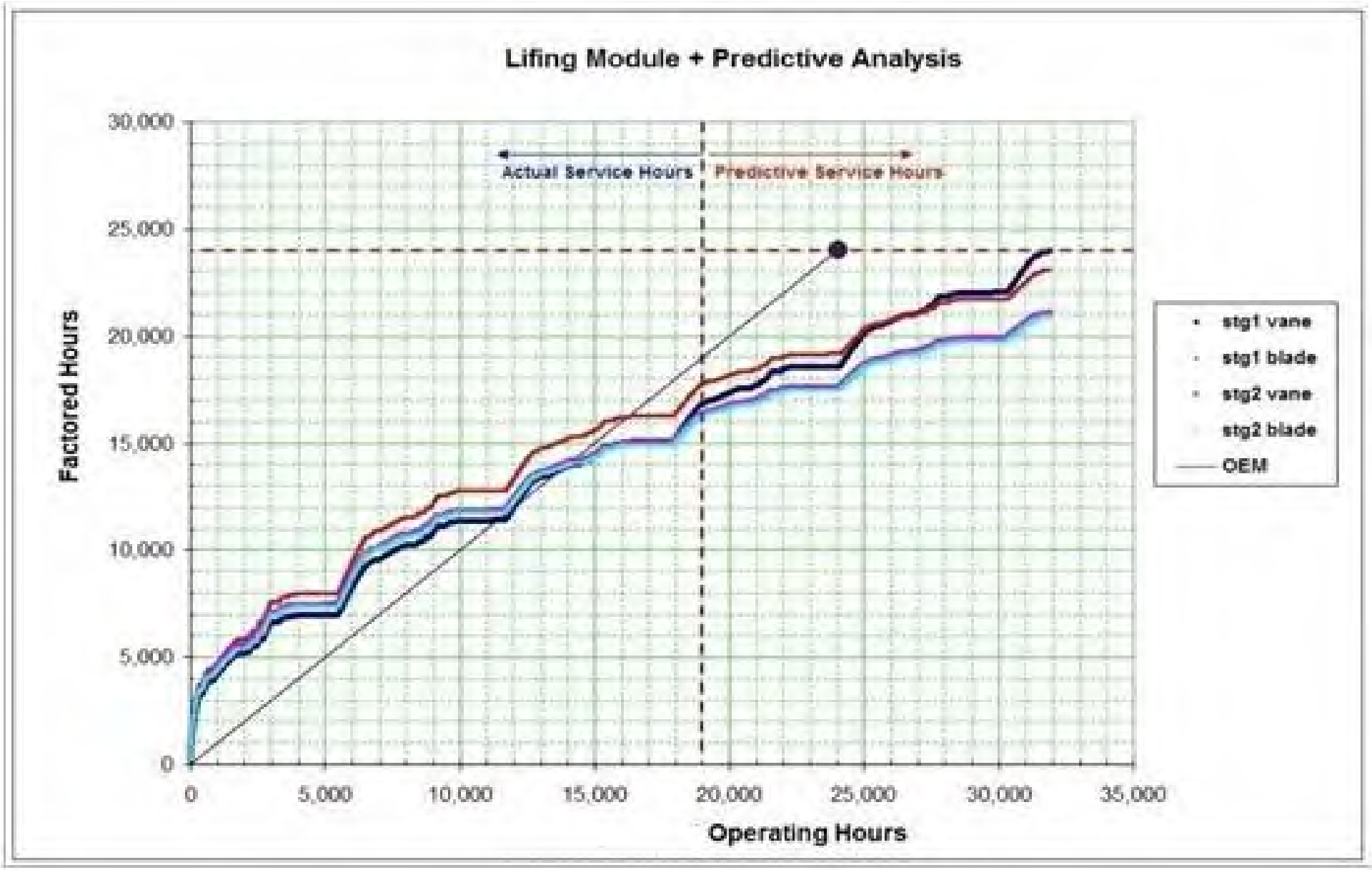
优化案例




Lifing Module + Predictive Analysis
Actual Service Hours
Predictive Service Hours
Factored Hours
30,000
25,000
20,000
15,000
10,000
5,000
0
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
Operating Hours
stg1 vane
stg1 blade
stg2 vane
stg2 blade
OEM

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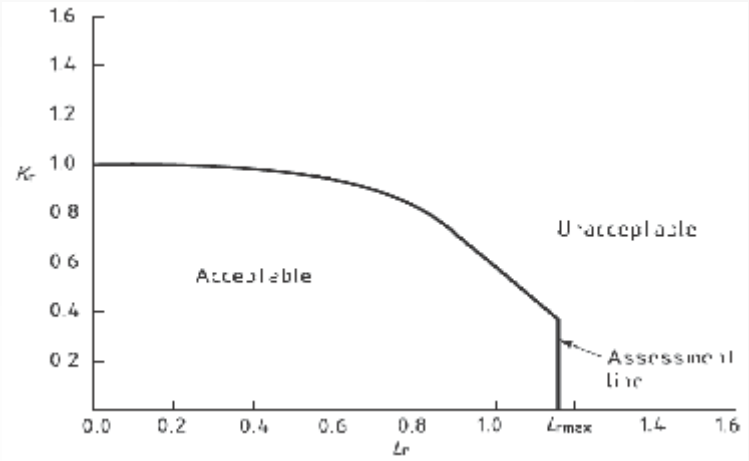
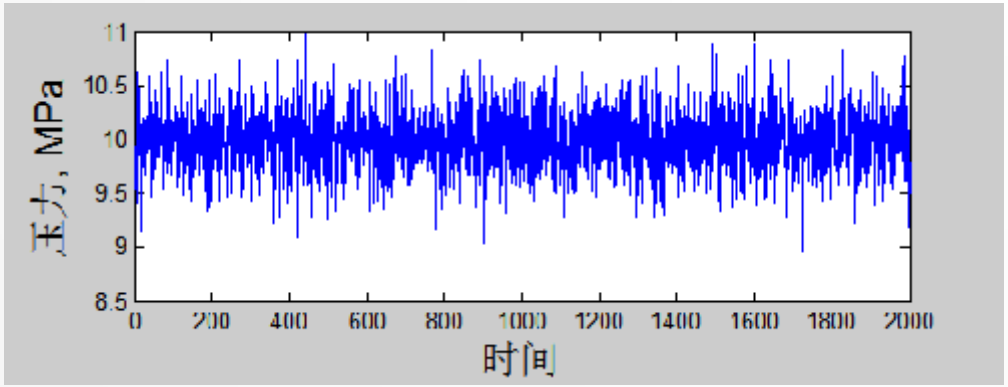
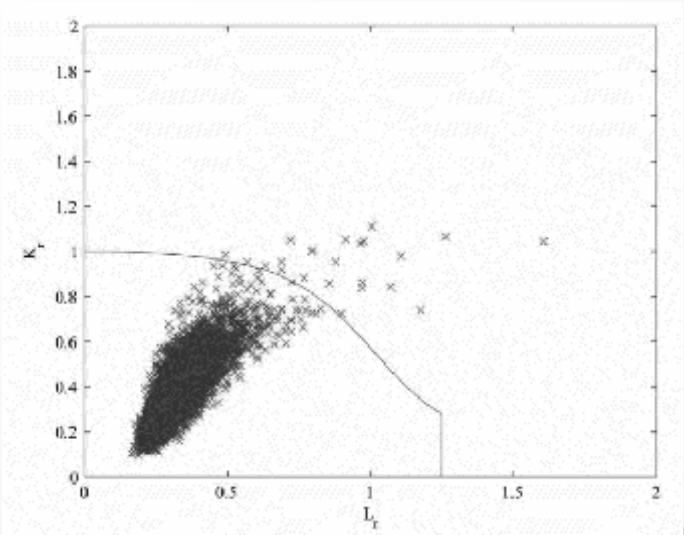
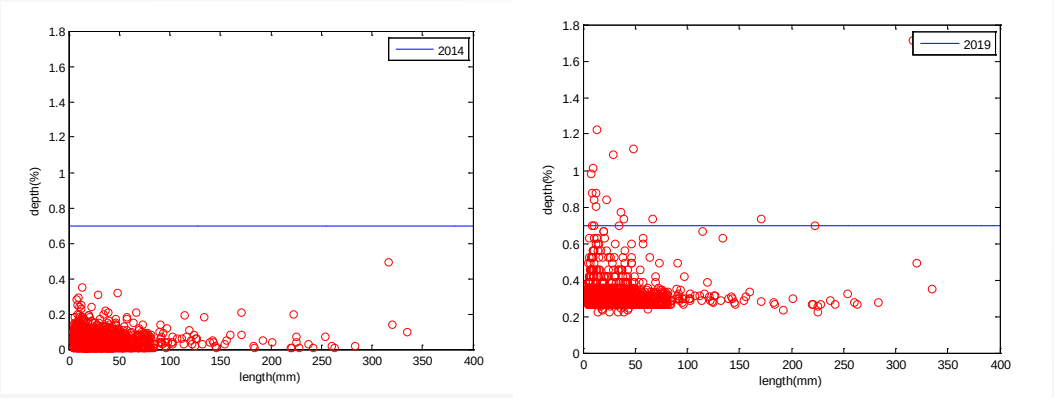
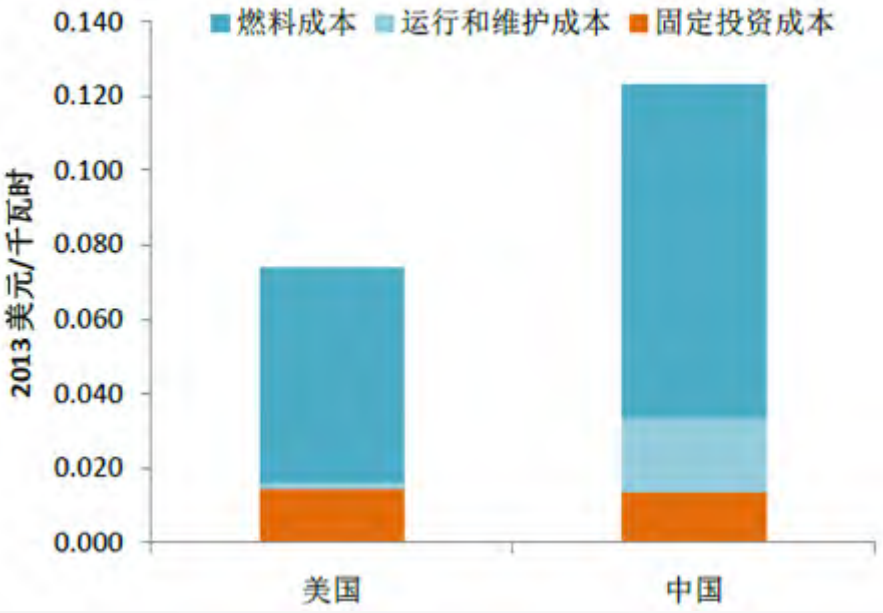

1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
Kr
Unacceptable
Acceptable
Assessment line
0.0
0.2
0.4
0.6
0.8
1.0
Lrmax
1.4
1.6
Lr


11
10.5
10
9.5
9
8.5
压力, MPa
0
200
400
600
800
1000
1200
1400
1600
1800
2000
时间

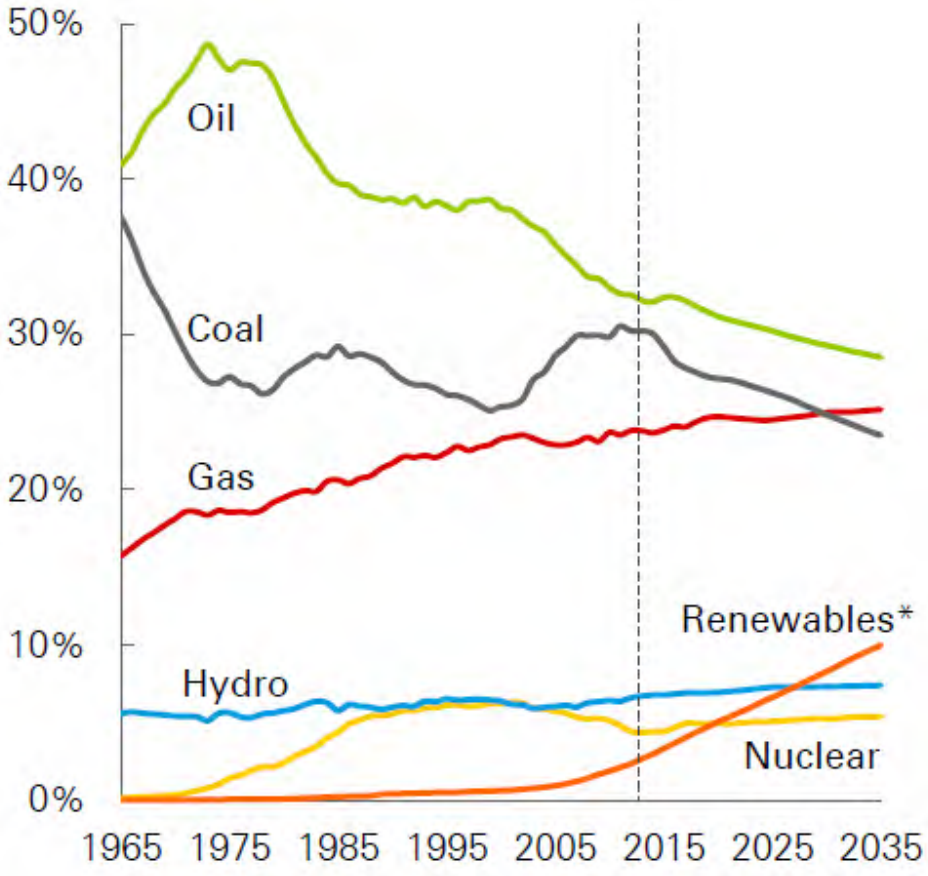

2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Kr
0
0.5
1
1.5
2
Lr


2014
depth(%)
length(mm)
2019
depth(%)
length(mm)

中美燃气-蒸汽联合循环机组平准成本对比



Shares of primary energy



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安全

What went wrong?

The BP report identifies eight key elements in the Deepwater Horizon drilling operation - each of which could have prevented the disaster

The key times

20 April 9.40pm
Report: "This over-whelmed the ... system"

20 April 9.43pm
Report: "The fire and gas system did not prevent ... ignition"

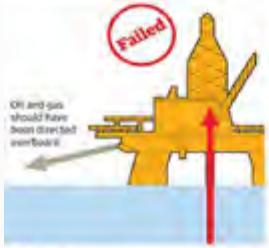
1 The cement that was supposed to stop oil and gas reaching the well pipe casing did not work. The report blames the type of cement used

2 The cement and valve at the bottom of the drill pipe failed to stop oil and gas bursting into the well pipe

3 Staff misread a key pressure test thinking high readings were an error

4 Oil and gas were now pouring up the well, but it took 40 minutes for this to be noticed

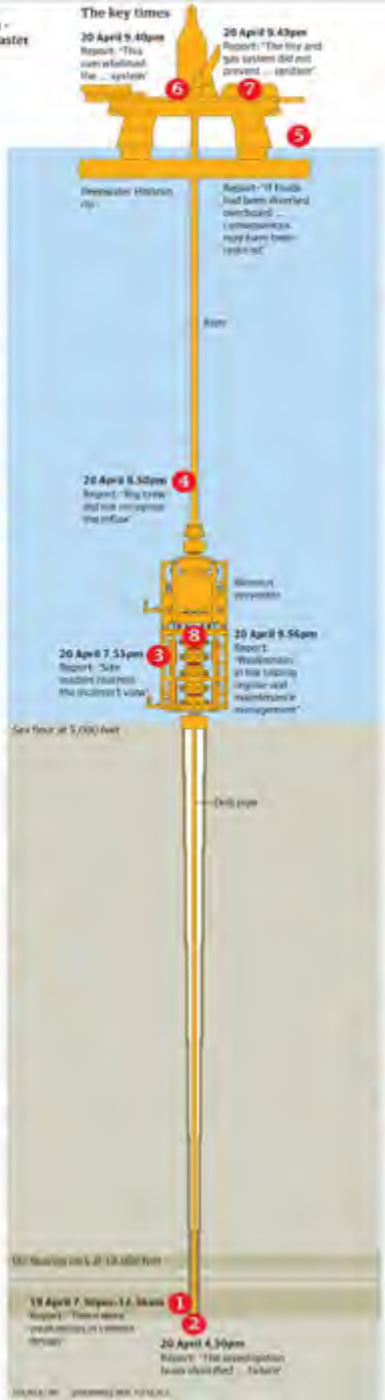
5 Once oil and gas started flooding to the surface, they were not diverted overboard but swept on to the rig



6 The oil and gas "vented directly on to the rig". This made an explosion was inevitable

7 The fire prevention system on the rig failed. The report says the 'heating, ventilation and air conditioning system ... transferred a gas-rich mixture into the engine rooms'. Two huge explosions followed, killing 11 crew members

8 The 'failsafe' blowout preventer (BOP) failed. Fire on the rig stopped it being remotely shut down, while an automated system also failed. The BOP had flat batteries in one control pod and a faulty solenoid valve in another



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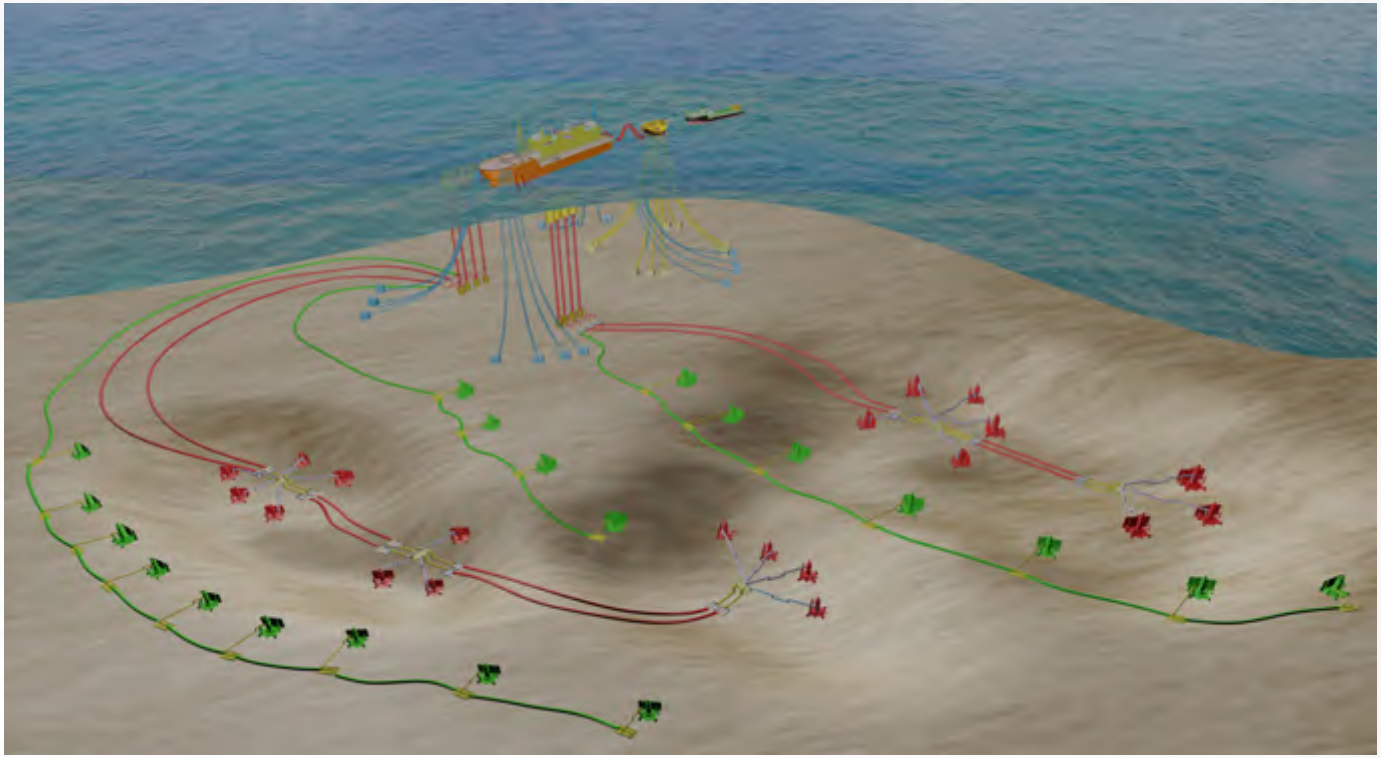
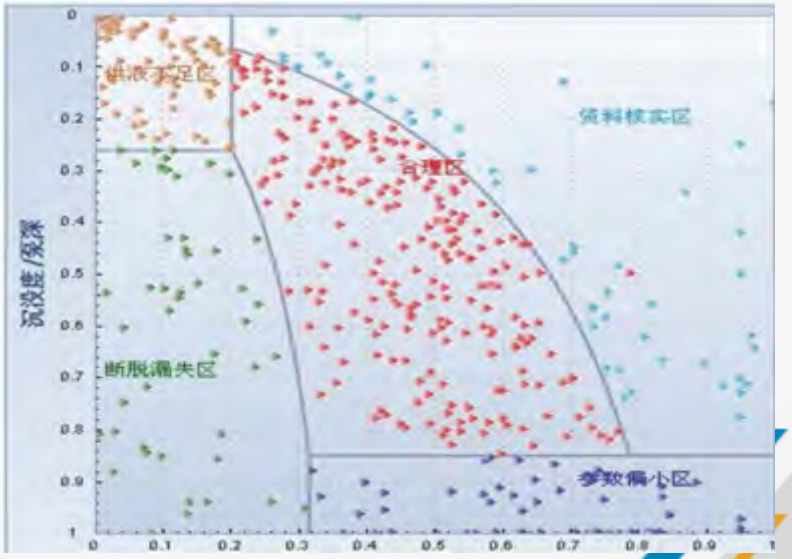
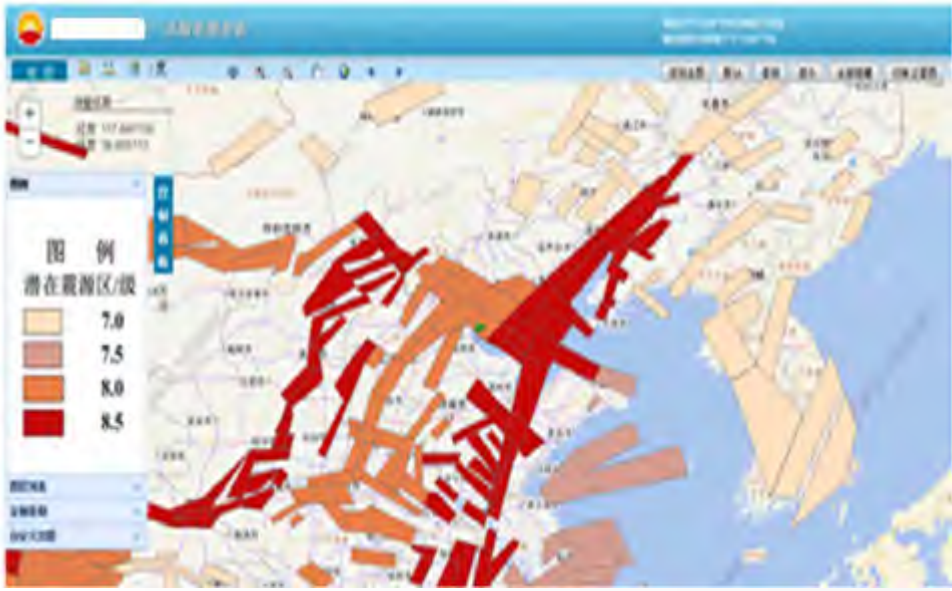
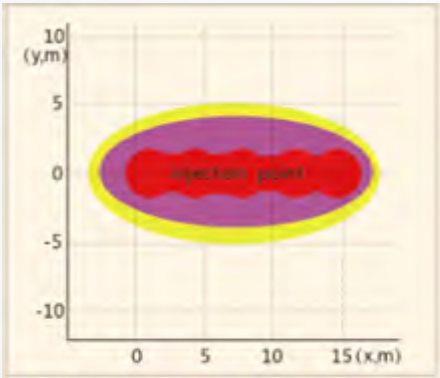
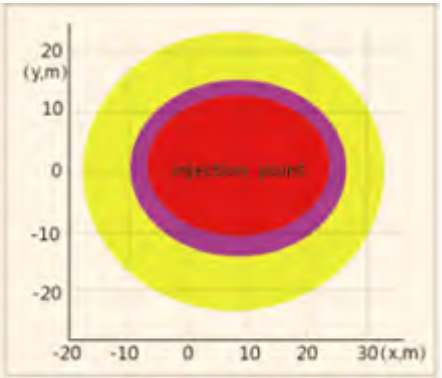








喷射火风险可能造成的财产损失范围



喷射火风险可能造成的人员伤亡范围

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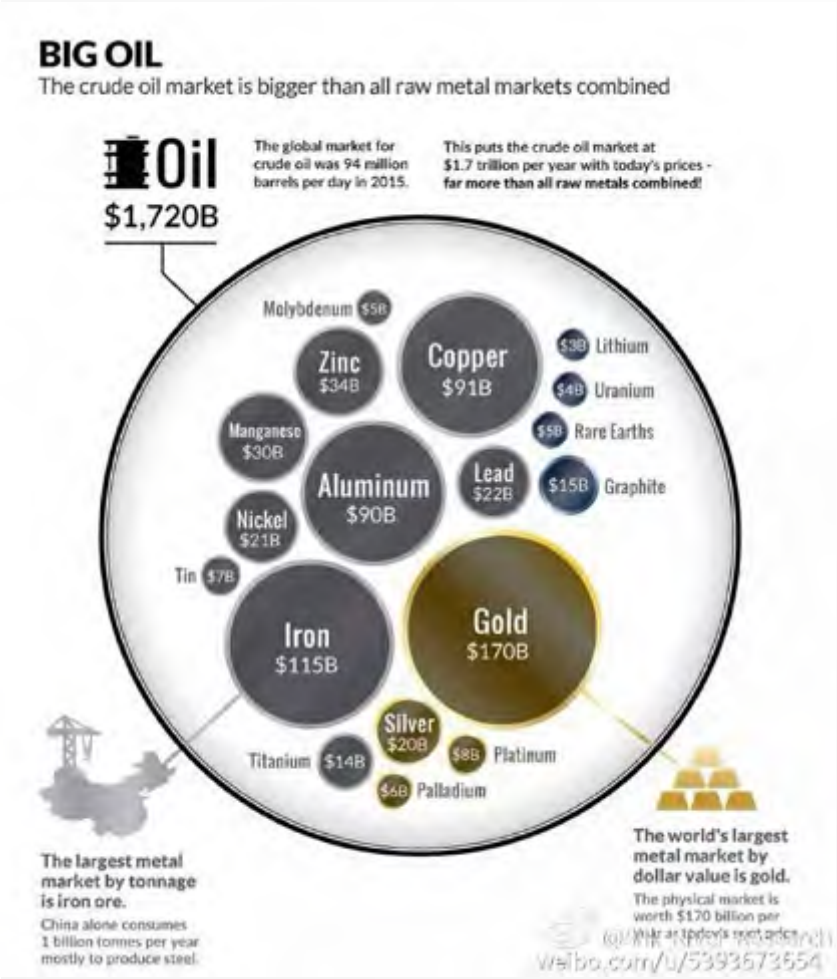
大宗商品



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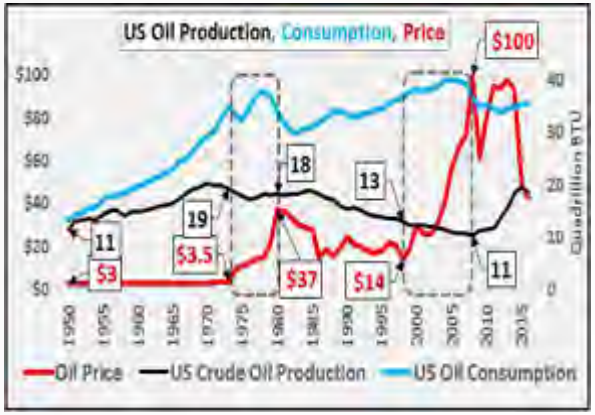
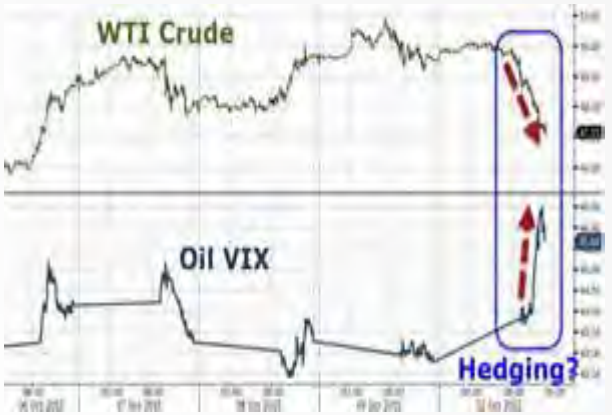
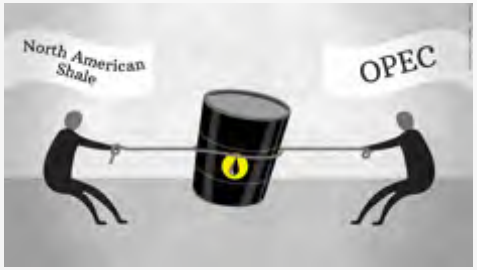
量化策略



战略对冲

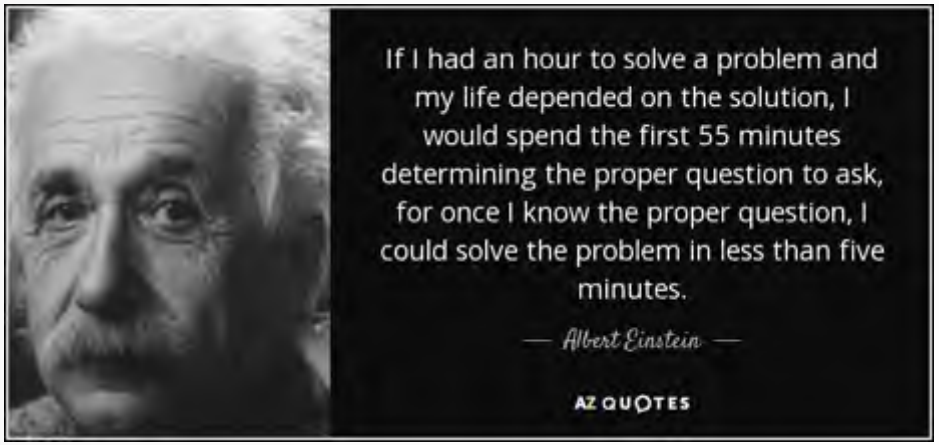


深度学习



投资并购

- 应用现状
- 建议体会



行业理解

- 性能管理
- 运行优化
- 能源分析
- 维护优化

+

数据工具

- 资产链接
- 能源数据管理
- 能源数据科学
- 云和移动端


The Economist
Crunch time in France
Ten years on: banking after the crisis
South Korea's unfinished revolution
Biology, but without the cells
The world's most valuable resource
Google
Data and the new rules of competition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Obama the warrior
Misgoverning Argentina
The economic shift from West to East
Genetically modified crops blossom
The right to eat cats and dogs
The data deluge
AND HOW TO HANDLE IT: A 14-PAGE SPECIAL REPORT

信息名称： 教育部关于公布2016年度普通高等学校本科专业备案和审批结果的通知

信息索引： 360A08-07-2017-0006-1　　生成日期： 2017-03-17　　发文机构： 中华人民共和国教育部

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内容概述： 教育部公布2016年度普通高等学校本科专业备案和审批结果。

教　育　部　文　件

教高[2017]2号

教育部关于公布2016年度普通高等学校本科专业备案和审批结果的通知

各省、自治区、直辖市教育厅（教委），新疆生产建设兵团教育局，有关部门（单位）教育司（局），部属各高等学校：

按照《普通高等学校本科专业设置管理规定》（教高〔2012〕9号）的要求，我部组织开展了2016年度普通高等学校本科专业设置工作，经申报、公示、审核等程序，对各地各高校向我部正式申请备案的专业予以备案；在以上工作基础上，根据教育部学科发展与专业设置专家委员会评议结果并征求有关行业部门意见，确定了审批同意设置的国家控制布点专业及尚未列入目录的新专业名单。现将2016年度普通高等学校本科专业备案和审批结果予以公布。

请加强对新设专业的检查和评估，合理控制招生规模，切实保证人才培养质量。

附件：2016年度普通高等学校本科专业备案和审批结果

教育部

2017年3月13日

TiD2017

谢谢