



High-grading Business Decisions through Semantic Technologies

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Global Knowledge Management Team

Agenda

1. Our Business

A High Risk Environment

2. The Role of Knowledge Management

Managing the Risks

3. Why Semantics Matters

Finding the right answer

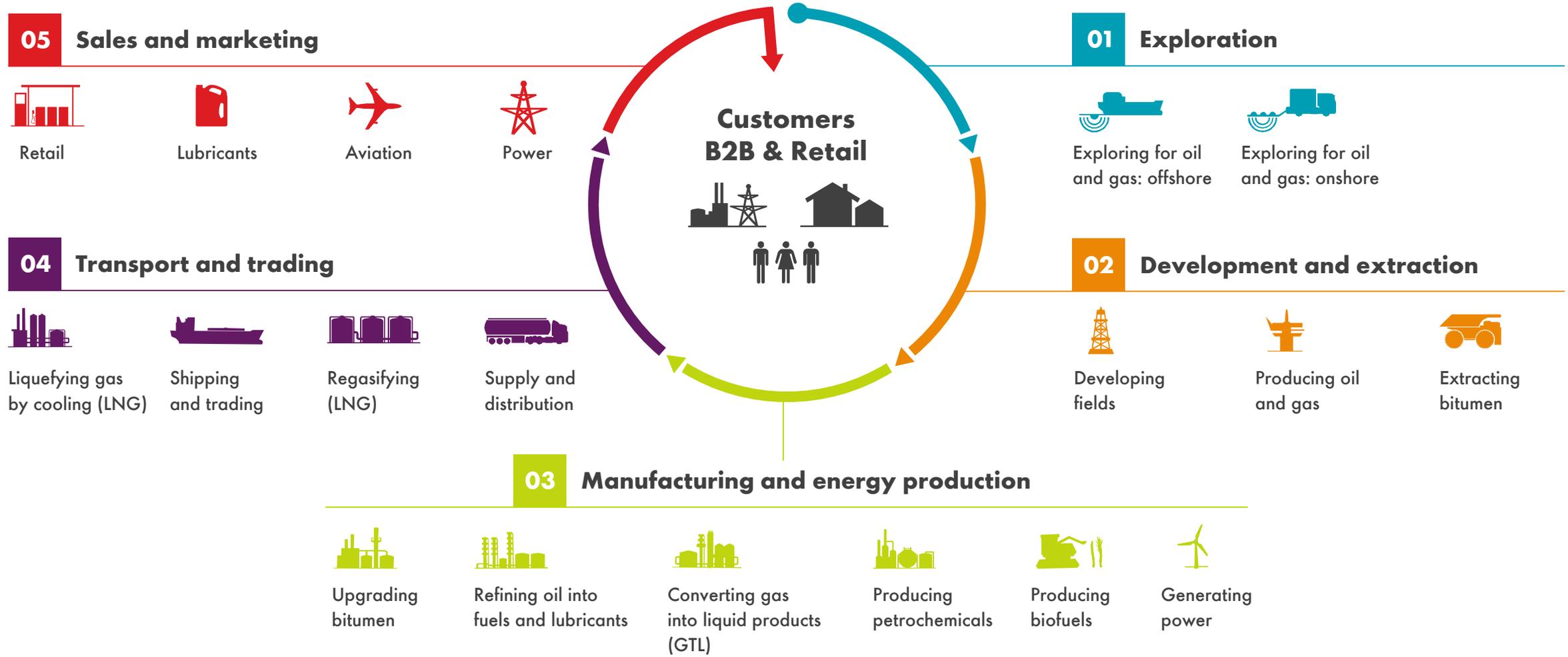




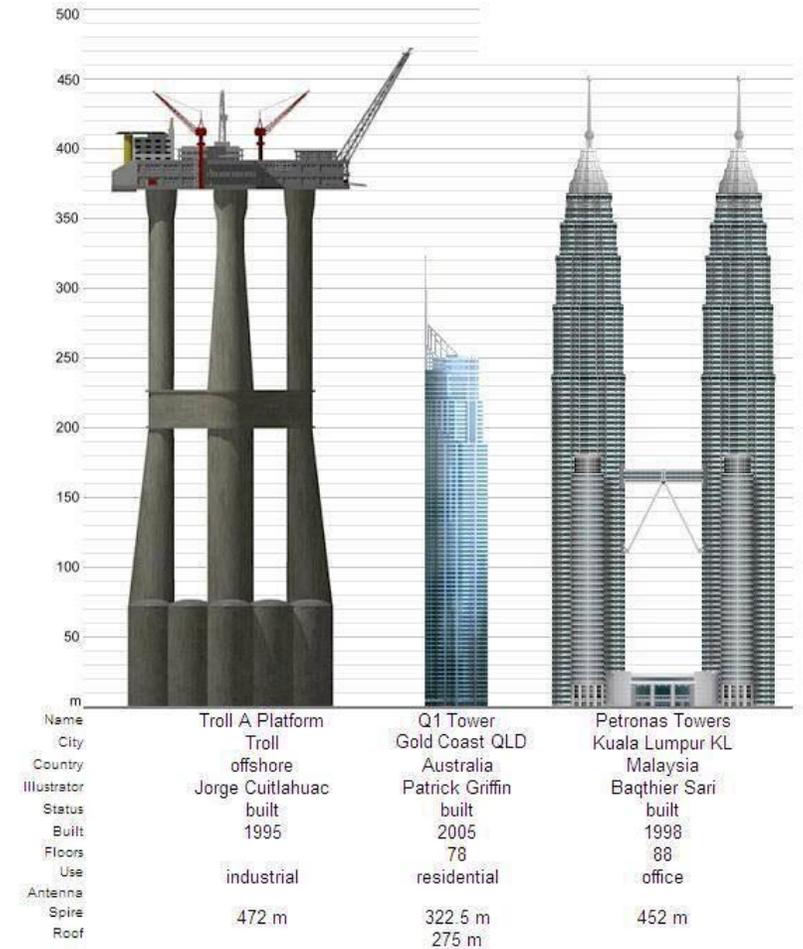
Our Business

A High Risk Environment

Shell is involved in a wide range of business activities



Shell has always pushed the boundaries



Shell successfully imagines, designs and delivers huge scale engineering projects





The Role of Knowledge Management

Managing the Risks

Making knowledge available to others when they need it can save tens of millions of dollars

Altaf's Challenge

Altaf
The Creator



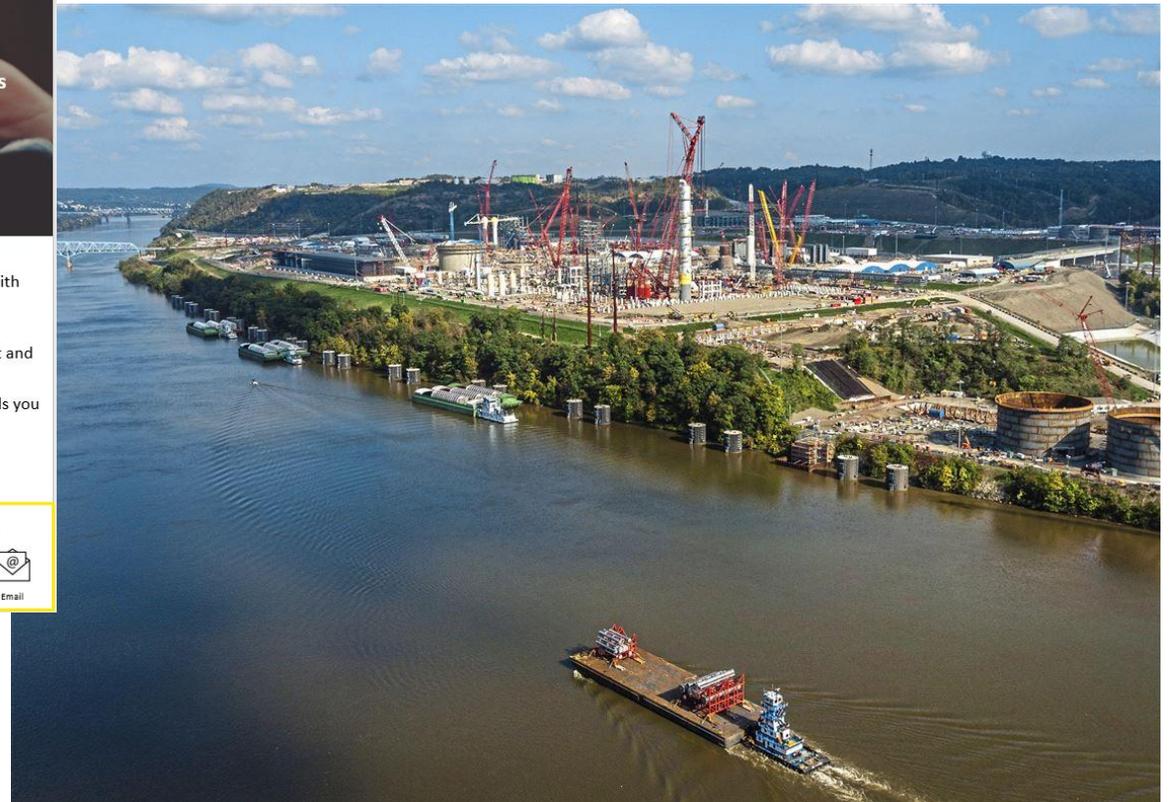
Process Engineer
Houston, USA

Altaf is a Process Engineer based in Houston and has been working on water master planning at Shell for 5 years, most recently on the Franklin Petrochemical Project. He's quick off the mark and keen to learn. Altaf is responsible for technical design of utilities on large capital projects. He needs to search for information on a daily basis to support his role. His needs range from understanding business processes to specific requirements from codes and standards.

"I think that technical design is all about knowledge. Creating value for the company is making sure I know what the best practices are and having a replication mindset."

YEARS AT SHELL	MOTIVATIONS	FREQUENT INTRANET USE	PAIN POINTS
<p>5 years (experienced hire)</p> <p>PERSONALITY TRAITS</p> <ul style="list-style-type: none"> Organised Knowledgeable Data and knowledge driven Curious Hard working 	<ul style="list-style-type: none"> Wants to be known as credible engineer Wants to know who can help him with a technical query Is proud of being part of a ground breaking project 	<ul style="list-style-type: none"> Shell codes and standards Researching wider company such as corporate values and group strategy Searching for background and context Community forums, to make sure he has the right knowledge at hand 	<ul style="list-style-type: none"> Shell's shift to digital coupled with limited access means valuable information can be lost Search functionality is not great and needs to be addressed 50% of the time the search leads you down a rabbit hole Too many channels, too much content

FIRST LANGUAGE	TECH COMFORT LEVEL	DEVICES	MEDIUMS	COLLABORATION
<ul style="list-style-type: none"> Arabic <p>OPERATING LANGUAGE</p> <ul style="list-style-type: none"> English 		 Phone  iPad  Laptop  Desktop	 Audio  Text  Video	 Intranet  Forums  P2P  Email

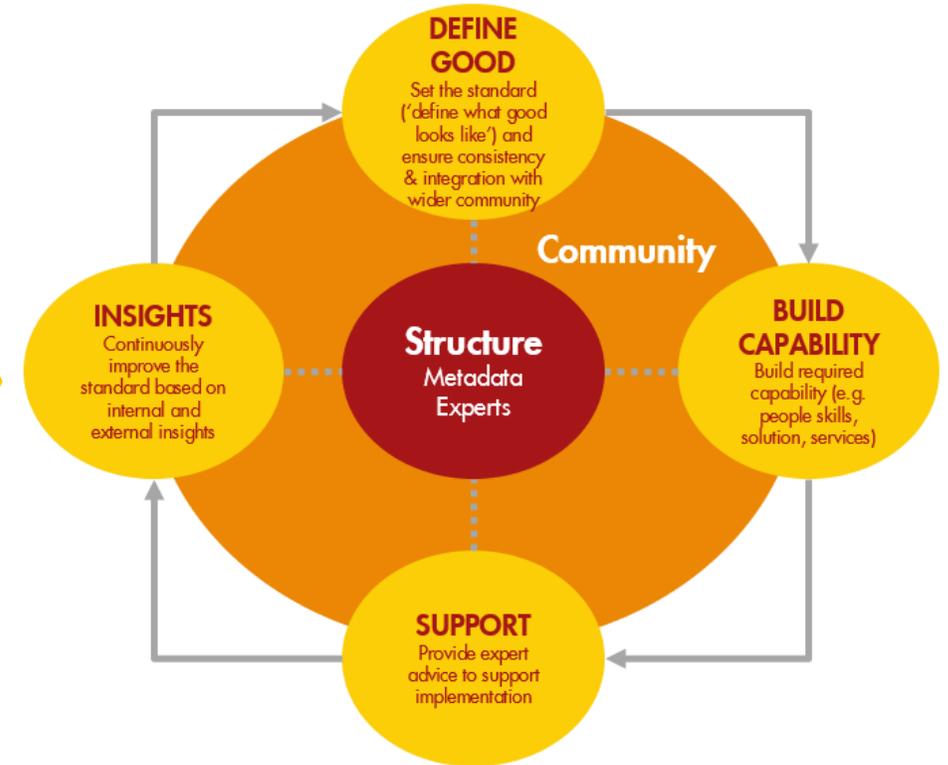
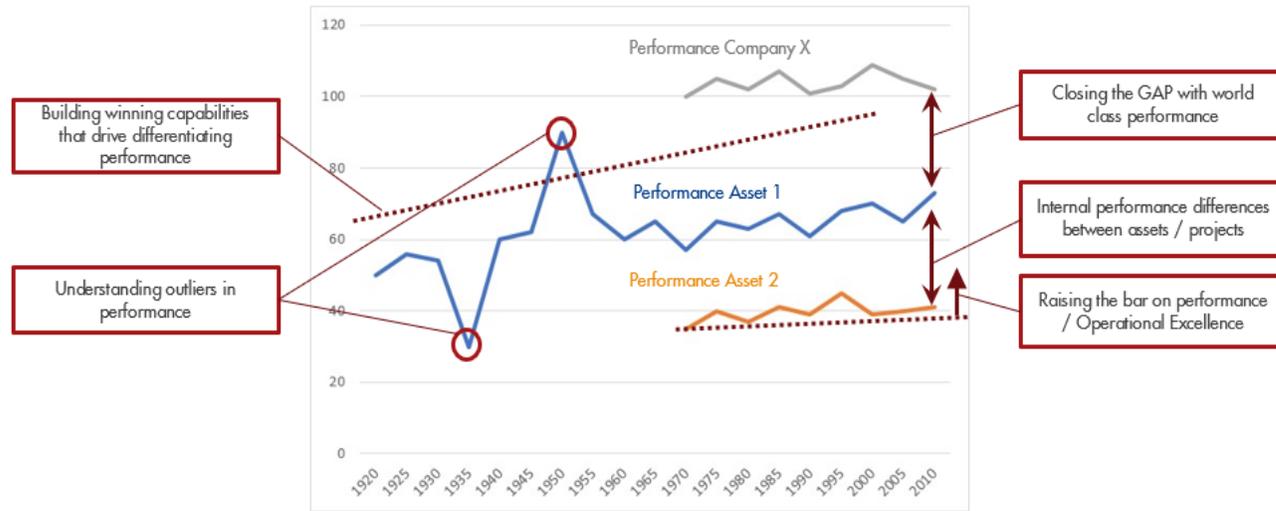


Knowledge Management supports Shell Strategy (target: \$1 billion value by 2020)...



Knowledge Management supporting continuous improvement

KM 'bridges' gaps of knowledge over time, geography and organizational / business boundaries.

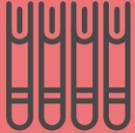


Shell uses KM to create a number of key vehicles to support continuous improvement by making different types of critical knowledge available at the moment of need.

KNOWLEDGE MANAGEMENT IN NUMBERS

August 2019

2,993
DOCUMENTS
IN THE
KNOWLEDGE REPOSITORY
>80000 VIEWS



126 SIGN NETWORKS
60,474 POSTS
581,092 VIEWS





94 SPoA
SINGLE POINT OF ACCESS
BUILT & LAUNCHED



3,074 EXPERTS
IDENTIFIED, ONBOARDED & STORED IN EFML
355 PTEs
2304 SMEs
38 GDHs
23 GPOs
318 SPOs
7 Cos
2 SUPPORT LEADS



>16,000
PEOPLE FILLING IN THEIR EXPERTISE PROFILES
>80% completed



284
KM SUCCESS STORIES



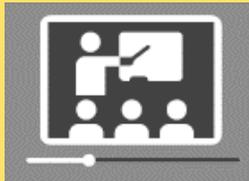
34,546
ENTERPRISE ENCYCLOPEDIA ARTICLES



12 FUNCTIONS IMPLEMENTED
83 DISCIPLINES / COMPETENCIES / PROCESSES

125 WORKING OUT LOUD CAMPAIGNS

4,800 LESSONS CAPTURED
300,000 LESSONS RE-USED

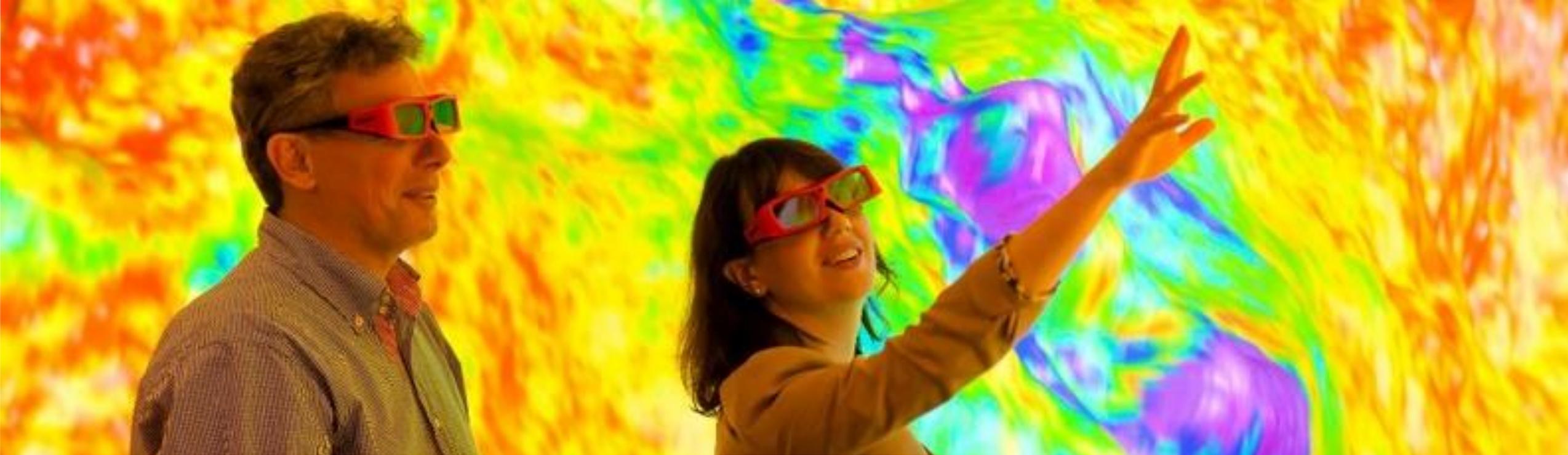


OPPORTUNITIES SUPPORTED WITH **>150**
CAUSAL LEARNING, LESSONS LEARNED & AARs

>95,000 KNOWLEDGE MANAGEMENT MEETINGS HELD
>40,000 CUPS OF COFFEE CONSUMED




KM Success Stories Cumulative Value \$470m	
2018 \$180m	\$470m
	\$450m
	\$430m
	\$410m
	\$390m
	\$370m
	\$350m
	\$330m
	\$310m
	\$290m
2017 \$117m	\$270m
	\$250m
	\$230m
	\$210m
	\$190m
	\$170m
	\$150m
2016 \$117m	\$130m
	\$110m
	\$90m
	\$70m
2014 & 2015 \$27m	\$50m
	\$30m
	\$10m



Why Semantics Matters

Improving Business Decisions

What are we currently doing?

Semantic Search POC – using 

Who can help me?

- Who is the expert?
- Has anyone done this before?
- Who has the relevant skills?

What has been done before?

- What did we learn?
- What should we replicate?
- What should we avoid?

Search

*what is the best way to dewater sludge
from an ethylene cracker?* 

Knowledge Exploration:

- Synonyms
- Broader / narrower / related

What does GOOD look like?

- What Standards & Guidelines exist?
- What do they say?
- What Best Practices are available?
- Where can I learn more?

Where can I get support?

- Where can ask my questions?
- Has this been discussed before?
- Can the community help?

What is needed to make it work?

- It is linked to the Business's Bottom Line – define a clear Use-Case
- Start small, but it needs to be scalable; with Technology to support it.
- It's not just about structuring Data; It's about Knowledge and the knowledge needs to come to life!
- Partnering with a great UX
- It's all about **trusting** that the answer is correct.
- Access and integration across different platforms
- **Data Science** competence needs to work hand in hand with **Business Domain** proficiency and **Enterprise Architecture** expertise.

Conclusion

1. Our Business is a high risk environment: Complex and Hazardous
2. Knowledge Management helps us manage these risks
3. Semantics can help to save lives!

Questions and Answers

Q&A

