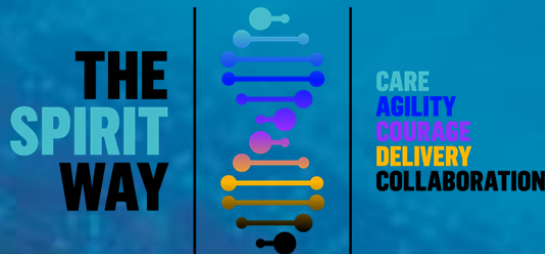




SPIRIT ENERGY- How making data visible and actionable in real time is changing our organisation

Glen Milne

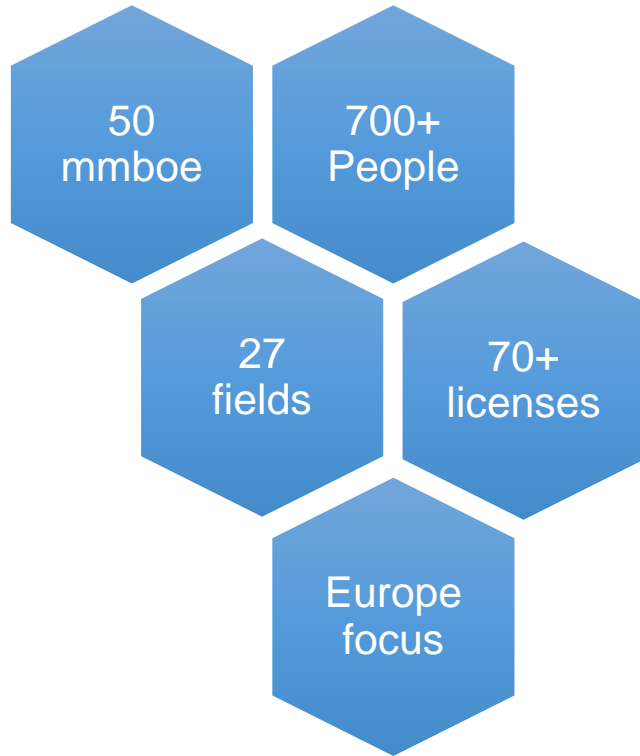


Company Overview

- Spirit Energy, one of Europe's top independent exploration and production companies
- 700-strong team oversees production of 50 million barrels of oil equivalent per year
- "Spirit Energy's focus is on maximising the potential of our assets through thinking differently, acting quickly and doing it safely" CEO Chris Cox



Spirit Energy Core Business



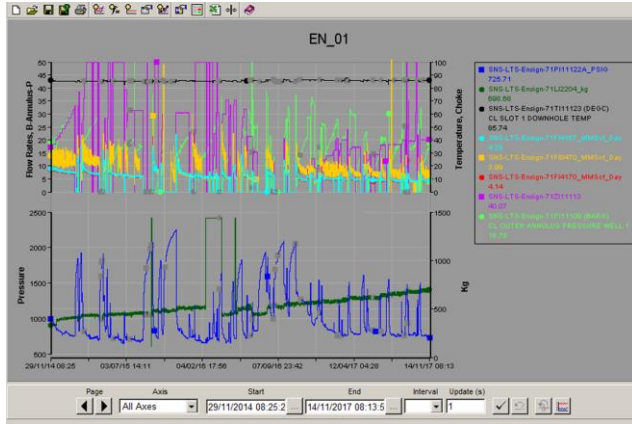
OUR OPERATIONS ACROSS EUROPE



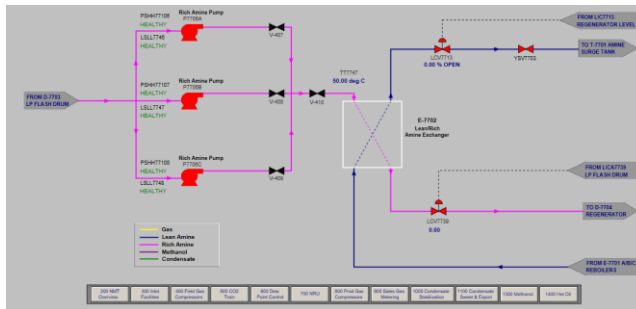
Initial Problem Statement

- Limited use of product supporting HCA sales
- Underused PI System landscape
- No insight into performance at any level of organisation
- Basic PI System use – HMI and DCS mimics
- Use of MS Excel to visualise and manipulate data
- Limited userbase – People didn't know what it could do
- Lack of governance – no real focal point to determine vision
- Challenge around user community perception

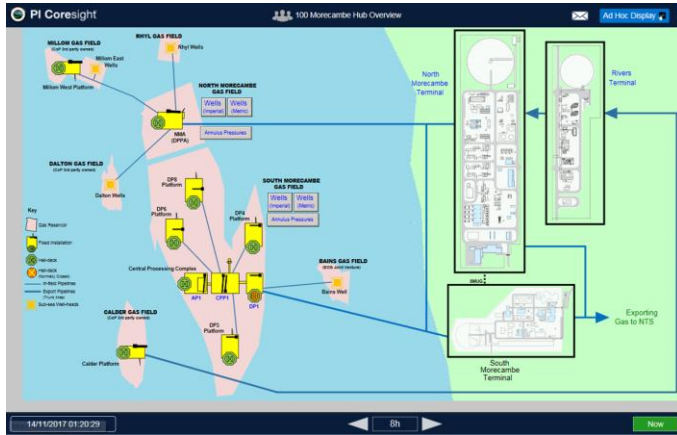
What did it look like?



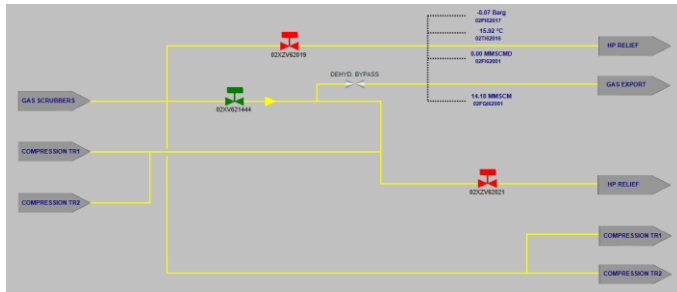
- Simple trending
- DCS Mimics
- No real vision
- No performance view at facility, hub or regional levels
- Single point in time
- Lots of information but so what?



What could it do?



- Basic functionality
- Images with no real purpose
- Entire screen with 3 pieces of data
- Replicating what we already knew



First steps towards smart

- Small MS Excel dashboards
- Inform people we can have live updates
- Basic but a huge step forward
- Discussions between 3 key parties in company ramped up.
- Then we met with OSIsoft....

Asset Key Production Parameters

Select date/time: 29/09/2017 09:41

Press F9 to update

York & Ensign

4 wells online

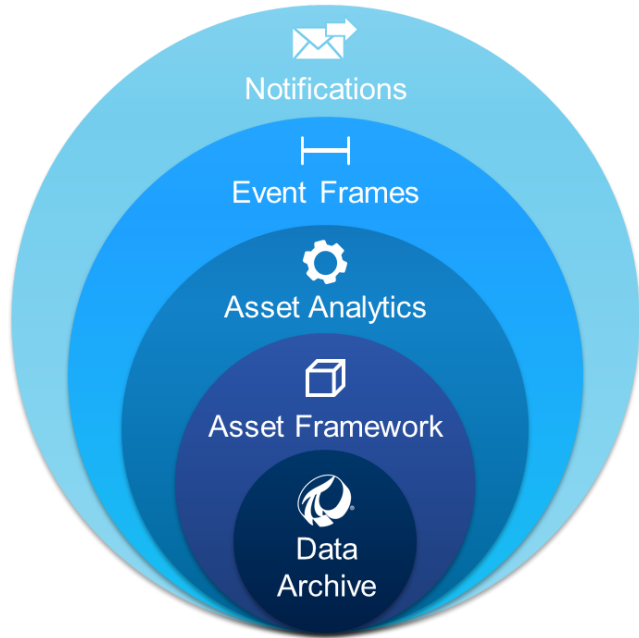
		EN01	EN02	York 1	York 2	York 5	York 6
FWV	Status						
UMGV	Status						
Choke	%				51	100	
Methanol	km3/d	0		0			
THT	degC	38		25	48	25	
THP	barg			63	129	63	
SSSV	Status						
A-annulus	barg	17	2	2	-1	0	0

= within envelope
 = outwith envelope
 = far off envelope or closed
 = instrument U/S

Pros and Cons of where we were

Positives	Negatives
People understood Excel	Errors were common
Some issues were captured	Manipulation was done sparingly
Visualise data individually	Silos of information
People comfortable with what they knew	No common approach

The OSIsoft visit was my Eureka moment



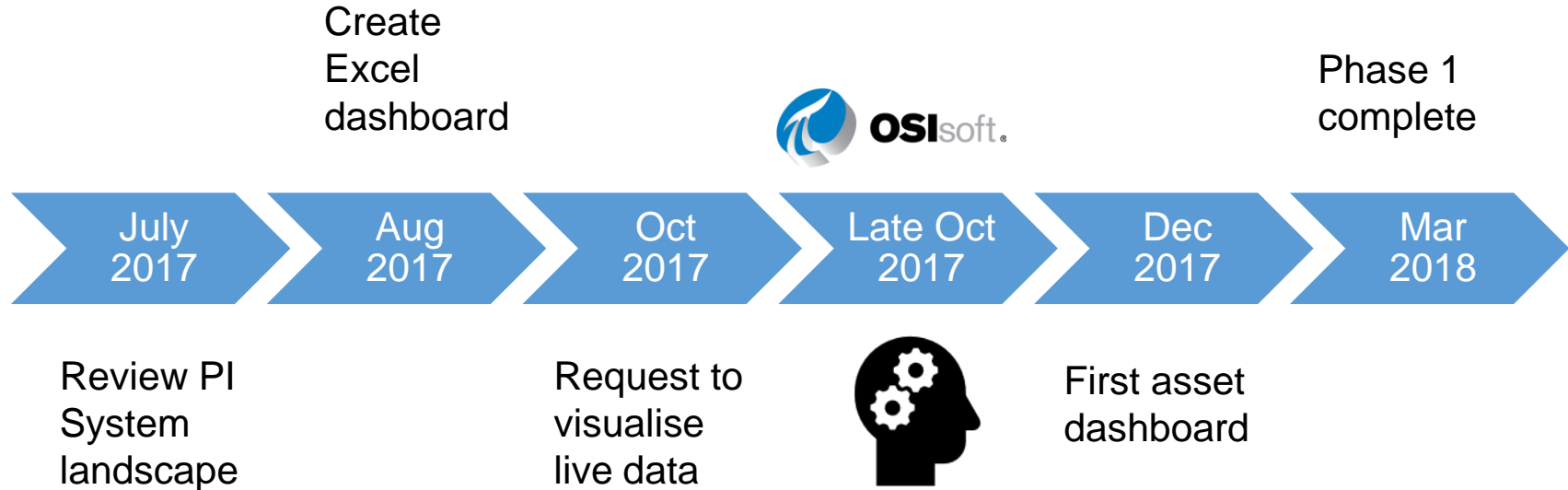
- First view of PI AF
- Explanation of what we could do
- Many possibilities but it was a simpler image that really set the ball rolling



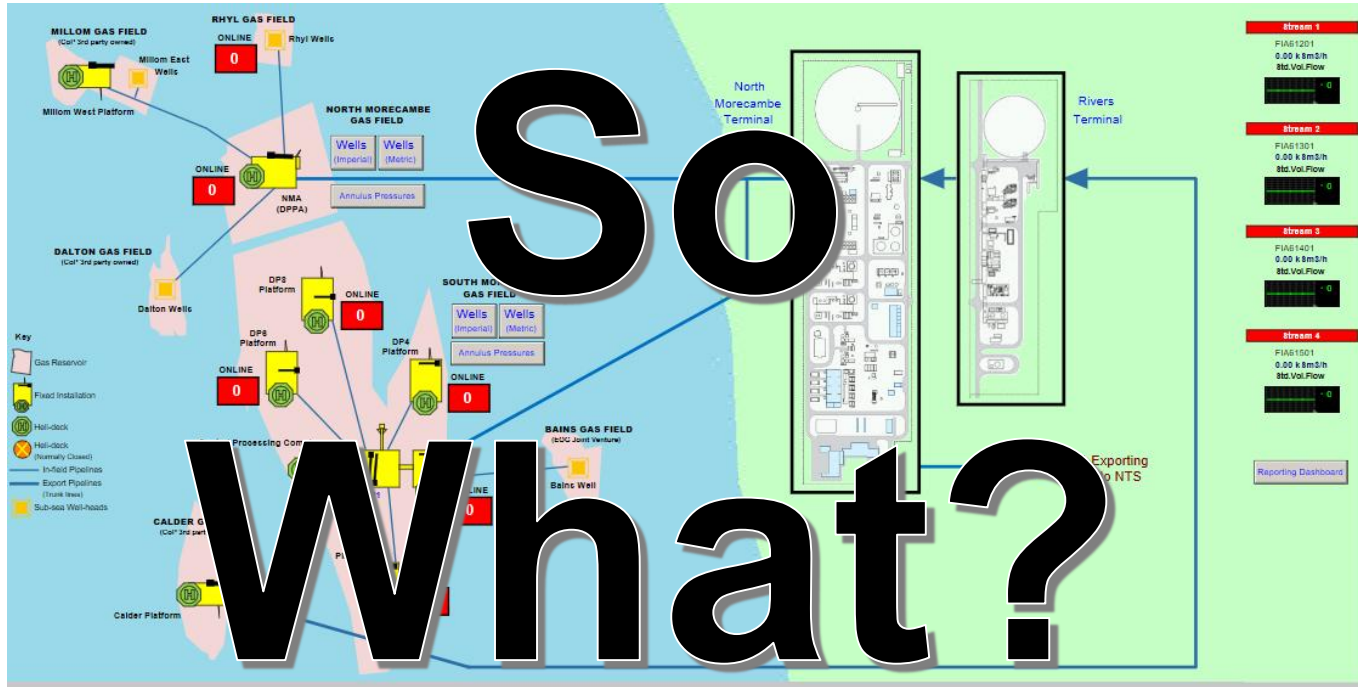
What was it about PI AF that appealed?

- Looked new
- Simple to use
- Data that provided value
- Moved on from DCS mimics and simple trends
- OSIsoft understood what we wanted to do
- DAI understood it too

Our initial journey



Asset dashboard before the OSIsoft visit



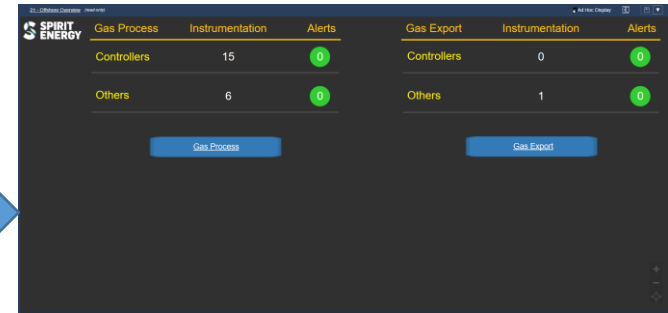
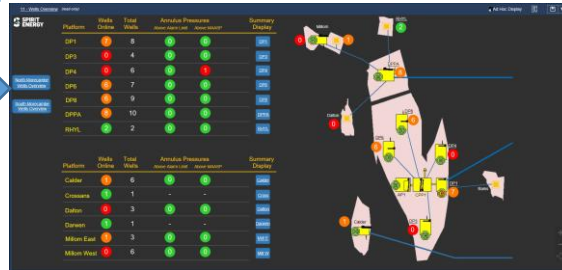
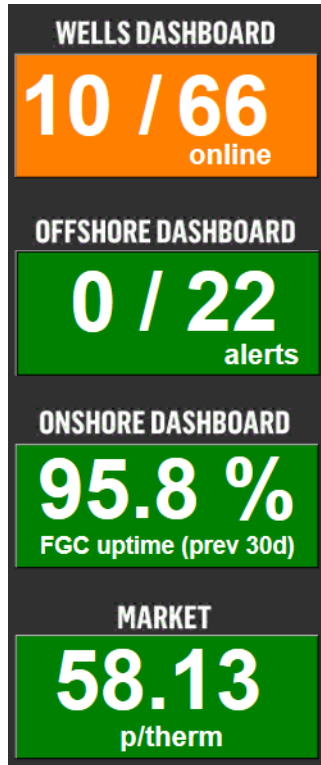
Basic design brief – Where we went next

- Not to duplicate HMI or DCS screens
- Move away from screens with large areas not used
- Allow key stakeholders to get view on asset performance
- Ability to review historic data
- Trends were key – Step away from a spot figure
- Accelerated path to establish product in core areas
- Have structure and not a scattergun approach
- Start small and deliver quickly
- 80/20 model – Build workable basics and then fine tune

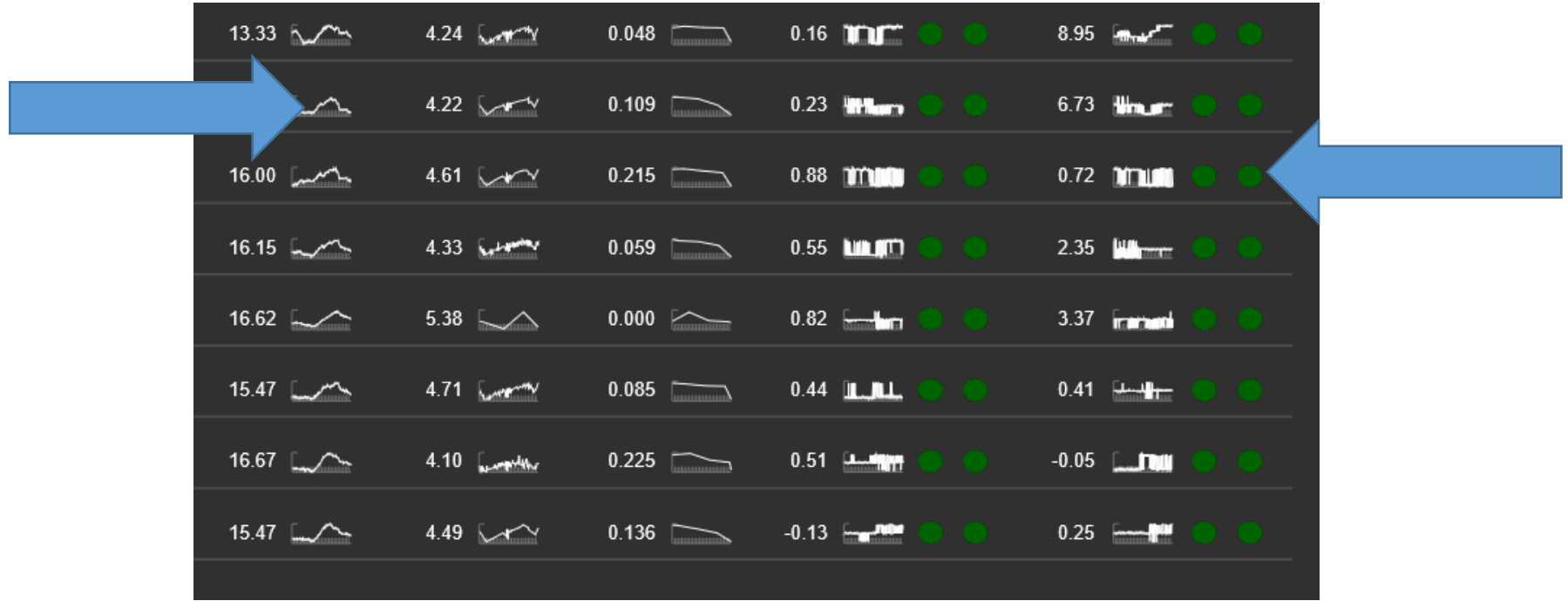
The asset dashboard after the OSIsoft visit



What happened next?

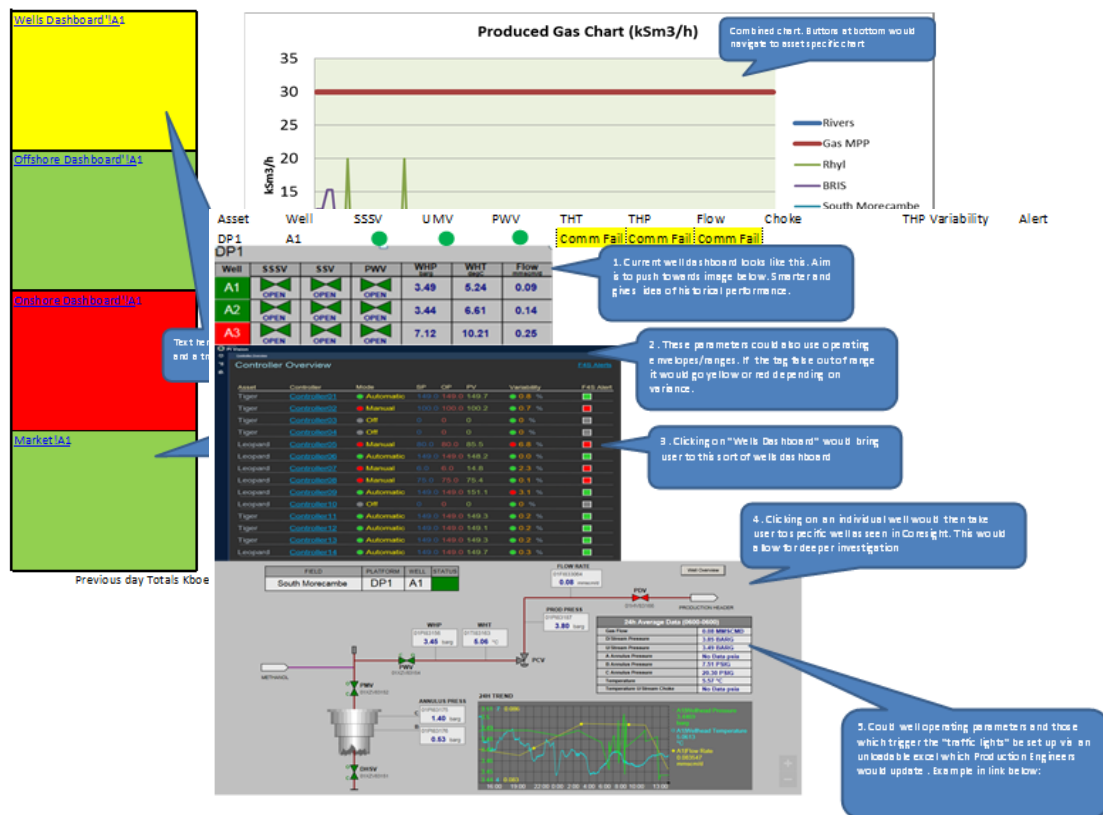


Behind those landing pages



How did we build this?

- Worked closely with DAI
- Created our vision in Excel
- Visualised how it all linked together
- Get what is in your mind onto paper



We had now solved some challenges

Challenge	Solution
Move away from DCS mimics	Showed that visual alarms & trends were now key
Change company mindset on the PI System	Engrained perceptions challenged daily – Myth busting
Monitor performance intraday	Visualising data allows for ongoing discussions
Overcome the fear of technology	Show what the PI System can do and how it helps
Low userbase	Show the value and quick wins

How did we get there?



PI Vision



OSIsoft®

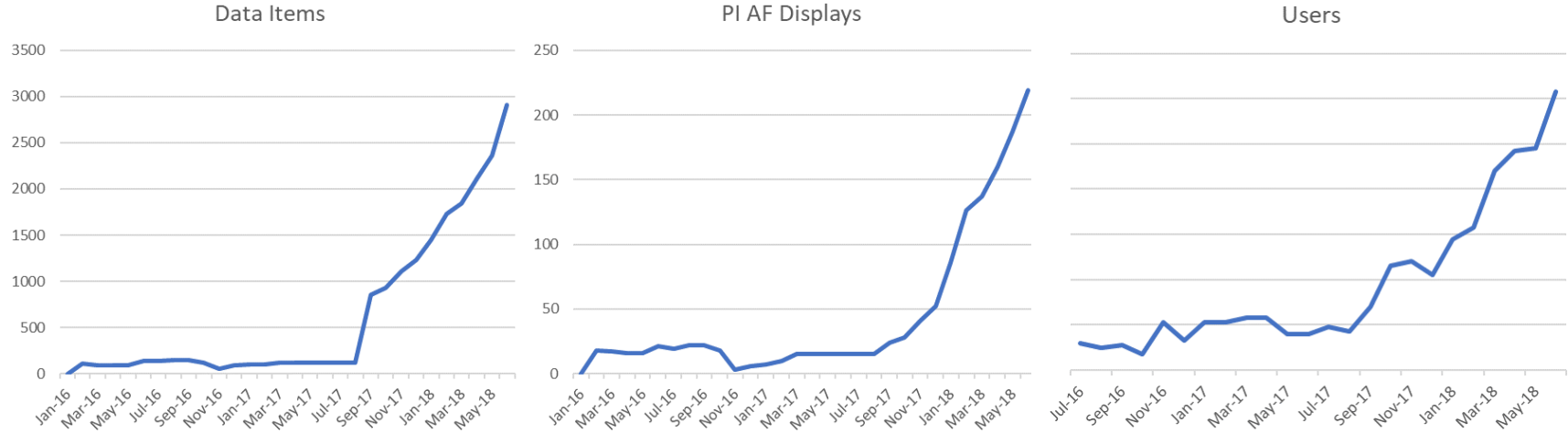
How did we do it?

What	Delivery
Data better than opinion	Used the PI System to deliver smart visualisation of equipment uptime. Previous bad actor no longer the issue
Short Interval control	Discussions taking place now instead of waiting until daily call
Continual evolution	Regular small updates kept momentum & interest

The changes we experienced

- Daily usage of the PI System increased
- People started talking about performance
- Started solving business challenges - Developed live overview of well stock – Some not visible for 7 years
- Asset dashboard in place – The business could get a detailed view of what was happening
- Created a standardised view of performance – one version of the truth

Numbers show people started to buy in



It also gave us tools to go further

- A first for our company – A Collaborative Working Environment.
- Connects 4 locations by video conferencing.
- The main purpose of The Link is to optimize production and the tool we use is the PI System.
- We are already seeing the benefits.



WHAT IS THE LINK?

THE LINK IS A NEW VIDEO CONFERENCING FACILITY LINKING:



What does it look like?



THE MORECAMBE HUB COLLABORATIVE WORKING ENVIRONMENT

THE LINK

WHAT IS THE LINK?

THE LINK IS A NEW VIDEO CONFERENCING FACILITY LINKING:

ABZ NMT SMT CPP

USING **OSIsoft PI VISION** WE'RE ABLE TO VISUALISE OUR DATA ACROSS ALL PARTS OF THE MORECAMBE HUB IN REAL TIME

WHAT DATA?

FLOW RATES TEMPERATURES PRESSURE VOLUMES

WE HAVE VISIBILITY OF OUR DATA FROM THE RESERVOIR TO THE NATIONAL GRID

WHAT DOES THIS DELIVER?

BETTER COMMUNICATION **BETTER SAFETY** **OPTIMISED PRODUCTION** **BETTER UNDERSTANDING** **BETTER ALIGNMENT**

HOW DOES THE LINK WORK?

ABZ/ENR LINE	NORTH MORECAMBE TERNAL LINK	SOUTH MORECAMBE TERNAL LINK	CENTRAL LINK
4 SCREENS ANALYST WORKING AREA + VIDEO CONFERENCING AND DISCUSSION	2 SCREENS ANALYST WORKING AREA + VIDEO CONFERENCING AND DISCUSSION	2 SCREENS ANALYST WORKING AREA + VIDEO CONFERENCING AND DISCUSSION	2 SCREENS ANALYST WORKING AREA + VIDEO CONFERENCING AND DISCUSSION
3 PEOPLE DRAWN FROM OPERATIONS TEAM	2-4 PEOPLE DRAWN FROM OPERATIONS TEAM	1 PERSON DRAWN FROM OPERATIONS TEAM	2-4 PEOPLE DRAWN FROM OPERATIONS TEAM
MANNED 0700 - 1700 AT ALL TIMES	24/7 MANNED	0700 - 1700 MANNED	24/7 MANNED



The Link successes

- 20% uplift in daily production
- Discovered our real maximum potential
- Showed that our perceived limitation was incorrect
- Driving standardised operations across linked assets

Lessons learned & Limitations

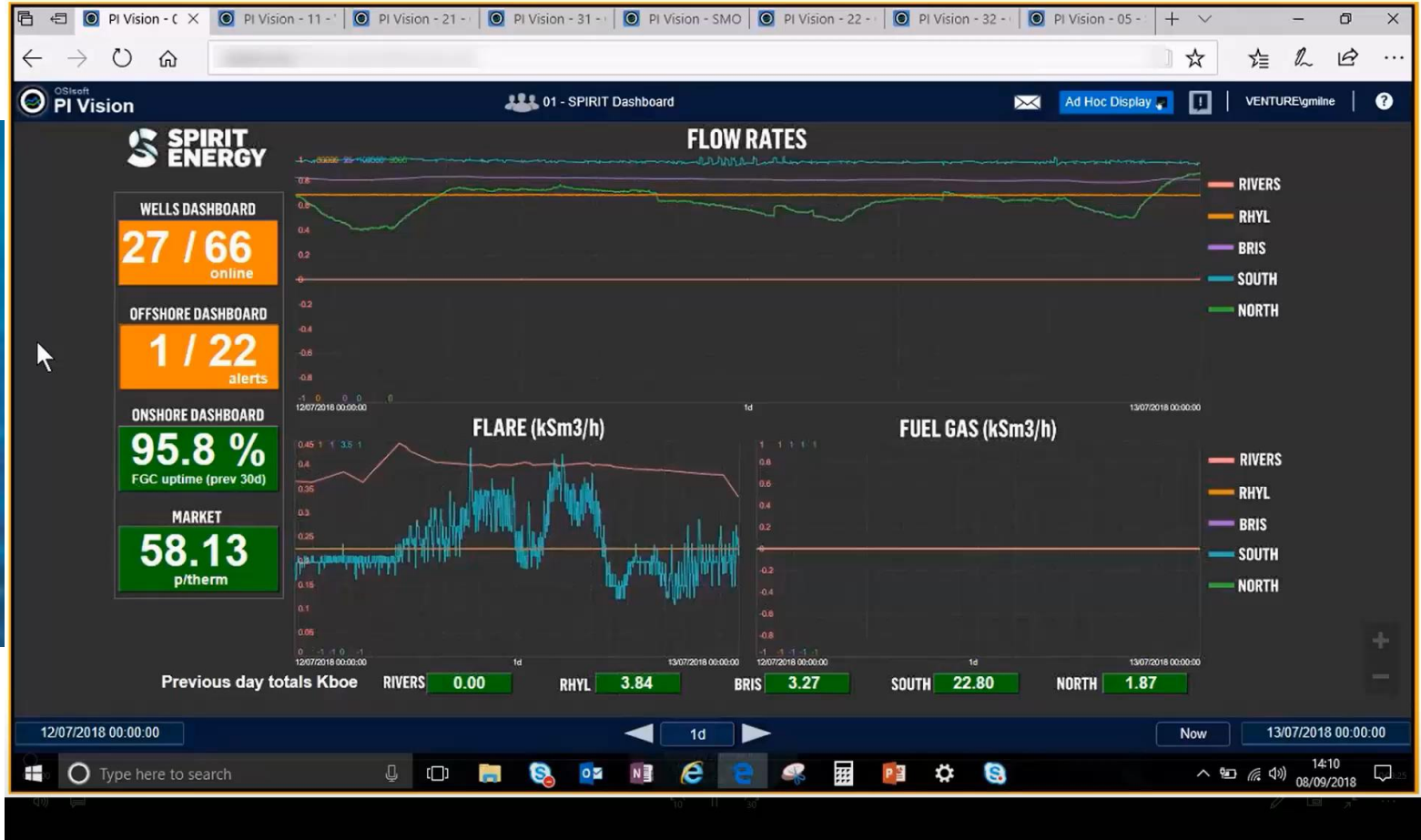
- Not I.T led – It needs frontline input
- Keep the momentum going
- Don't involve the world – Keep the team small to prevent slowdown
- Identify a small number of key areas for initial focus
- Use the 80/20 rule

More lessons.. Big Data & A.I

- Lots of noise
- Risk to cloud the progress
- No silver bullet
- Building blocks needed
- Analytics are available in PI AF

Design Brief for next steps

- What else can the PI System do?
- Lets try and predict things
- More regions pulled in across the business
- Learn from our previous events
- Become self sufficient



Spirit Energy

How making data visible and actionable in real time is changing our organisation



CHALLENGE

We were trying to make the PI System a tool that people would use

- We had issues with silo's of information
- PI System was used sparingly
- People saw it as DCS mimic tool

SOLUTION

We made data visible and accessible

- Small team PI vendor, I.S & Operations
- Constant delivery
- 80/20 model (80 finalized. 20 fine tuning)

RESULTS

Mind set change across business

- Saw a 20% uplift in production from 1 asset
- People now talking about performance
- Usage of the PI System increased dramatically

How making data visible and actionable in real time is changing our organisation



- Glen Milne
- Production Optimization Lead
- Spirit Energy
- glen.milne@spirit-energy.com

Questions?

Please wait for
the **microphone**

State your
name & company



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for this session

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THE MOBILE APP**

- Rate sessions and provide feedback
- Meet and connect with other attendees

Join the conversation and SHARE
what you saw #osisoft #piworld

A smartphone displaying the PIWorld app interface, which features the OSiSoft logo and the text 'PIWorld'.

THANK YOU

OSIsoft. PIWorld

謝謝 KEA LEBONA
TARADH LEIBH 고맙습니다
BAЯPЛAЛAA MISAOTRA ANAO
DZIĘKUJĘ CI NGIYABONGA TEŞEKKÜR EDERIM GRACIES
OBRIGADO شڪرا SALAMAT
DANKON TANK TAPADH LEAT
DANKIE TERIMA KASIH
KÖSZÖNÖM
СПАСИБО
PAKMET CIZGE
GO RAIBH MAITH AGAT
БЛАГОДАРЯ GRACIAS
ТИ БЛАГОДАРАМ
MAHADSANID
TAK DANKE
RAHMAT
HATUR NUHUN
CẢM ƠN BẠN
WAZVIITA
FALEMINDERIT
DANK JE
AČIŮ SALAMAT MAHALO IĀ 'OE TAKK SKALDU HA
GRAZZI PAKKA PĒR
PAXMAT CAĞA
EΥΧΑΡΙΣΤΩ GRATIAS TIBI
DI OU MÈSI
ĐAKUJEM
MATUR NUWUN
SIPAS JI WERE TERIMA KASIH
UA TSAUG RAU KOJ
ТИ БЛАГОДАРАМ
СИПОС
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TEŞEKKÜR EDERIM
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ESKERRIK ASKO
HVALA