



ESO Technology Advisory Council

TAC-4

3 September 2021

Pre-read pack

TAC-4 agenda – 3 September 2021

Item	Duration	Time	Topic	Presenter / lead	Notes
1	10 mins	09:00 – 09:05	Welcome and apologies	Vernon Everitt – Chair	
2	5 mins	09:05 – 09:10	Minutes of last meeting and matters arising	Vernon Everitt – Chair	
3	5 mins	09:10 – 09:15	Feedback from the last meeting	David Bowman	
4	75 mins	09:15 – 10:30	Digitalisation strategy	Matt Howson Niall Branley	<ul style="list-style-type: none">Pre-read: Digitalisation Strategy and Action Plan
		10:30 – 10:45			BREAK
5	30 mins	10:45 – 11:15	Customer and stakeholder	Matthew Wright Emily Leadbetter	
6	30 mins	11:15 – 11:45	Introduction to Networks	Iain Shepherd	<ul style="list-style-type: none">Introduction in advance of TAC-5
7	15 mins	11:45 – 12:00	Subgroups update	Vernon Everitt – Chair	
8	5 mins	12:00 – 12:05	Next meeting and calendar	Vernon Everitt - Chair	
9	5 mins	12:05 – 12:10	AOB	Vernon Everitt - Chair	
		12:10	Close		



Welcome and apologies

Item 1

Vernon Everitt





Minutes of last meeting and matters arising

Item 2

Vernon Everitt

Minutes of last meeting and matters arising

- Minutes of TAC-3 were agreed via circulation and published online
- The feedback from the meeting has also been published
- This section will be used to discuss any matters arising

The background features several thick, vibrant yellow lines. Some are curved and sweep across the top left, while others are straight and parallel, running diagonally from the bottom left towards the top right. The overall effect is a dynamic, modern aesthetic.

Feedback from the last meeting

Item 3

David Bowman

Digital Engagement Platform(DEP) and Single Markets Platform(SMP) – insights from TAC-3

Key insights

Don't try to build a perfect end to end solution that does many things poorly. Build core functionality that does limited things well and build from there.

Human interaction will continue to be important due to the complexity of the energy industry. Great platforms enable specialists in a company to do end-to-end customer journey management. The ESO needs people, and the associated technology, that guide users through the whole process.

Linking up with industry initiatives such as Modernising Energy Data (MED) and Energy Data Visibility (EDVP) being coordinated by BEIS and IUK

DEP and eso.com should be one. Data and information provided by the ESO is valuable in one place and alongside the systems that facilitate market participation.

What we are doing about it

The foundational release for SMP is being built on a core functionality to facilitate registration (provider and asset), accede to specific service terms and pre-qualify units. This will be for new and enduring Response and Reserve products initially prior to integration with downstream capabilities (such as auction capabilities) in the future and extension to wider balancing services markets

DEP and SMP will adopt an approach that frees up specialists to provide more value add support to customers

We are engaging with the Modernising Energy Data (MED) and Energy Data Visibility (EDVP)

We are scoping the DEP solution to replace the capability currently provided by the eso.com website



Digitalisation strategy

Item 4

Matthew Howson & Niall Branley

Digitalisation strategy – agenda

Pre-read

- Digitalisation strategy and action plan (June 2021)

Focus on three areas

- **Digital mindset** Adopting a digital culture (20 min)
- **Product model** Creating customer-centric products (20 min)
- **Agile Delivery** Scaling iterative and incremental delivery (20 min)

Approach

- Short introduction to each section (5 mins)
- Discussion (10 mins)
- Capture feedback with AXIS (5 mins)

Why are we doing this?

Drivers

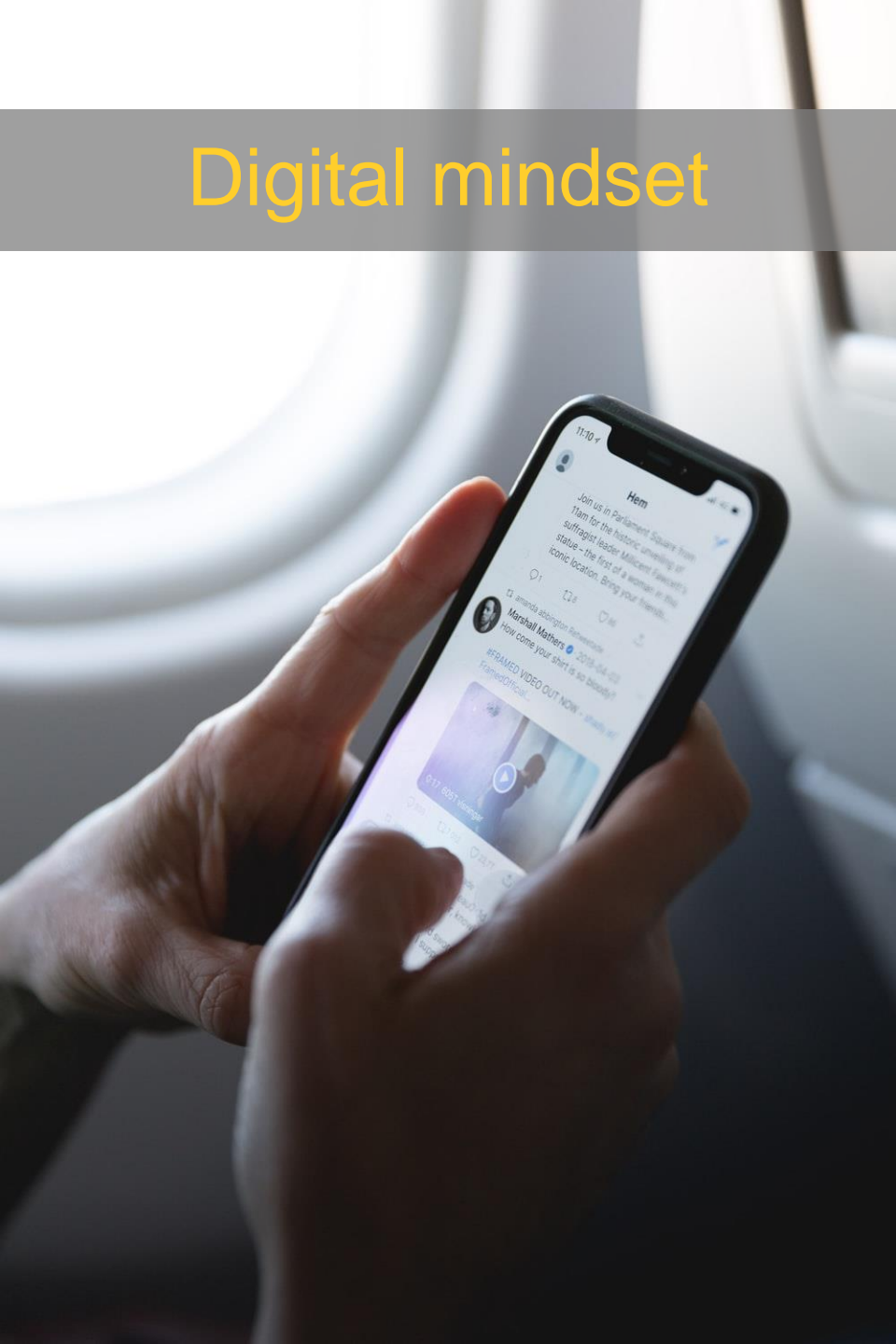
- Customer first and digital first mindset
- Partnership between technology and operations
- Scale of change (volume and frequency)
- Prioritisation and dependency management

Benefits

- Customer centricity
- Responsivity to marketplace
- Focus on value and priorities
- Increased collaboration = better co-creation
- Improved transparency (data, roadmap)
- Continuous, iterative, and incremental improvement



Digital mindset



Overview

- Strategy sets out the importance of culture
- We have baselined culture through a survey
- We have designed our first culture sprint with focus on behaviour (rather than values)

Discussion

- What has been your experience of cultural transformation?

Questions to aid discussion

- What were the most influential change drivers?
- How did you win hearts and minds?
- How long did the cultural transformation take?

Poll

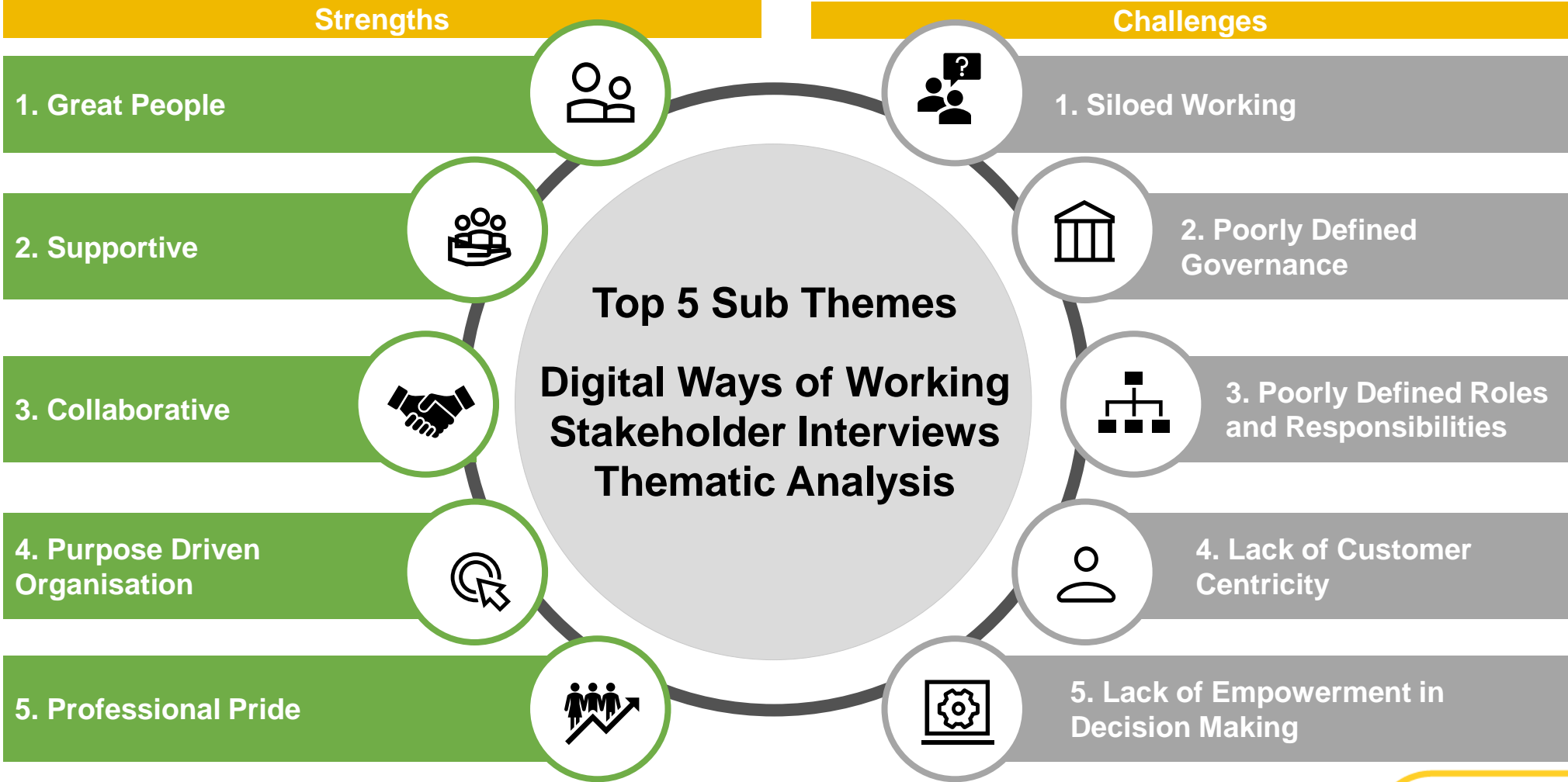
- What should we look out for?
- What advice can you give?

Digital mindset

- Customers first
- Culture and behaviours
- Innovation

Culture survey feedback results

This snapshot shows the most common sub-themes within our TechOps cultural strengths and challenges.



Key attributes for success

Strategic priorities

Customer Care

Collaboration

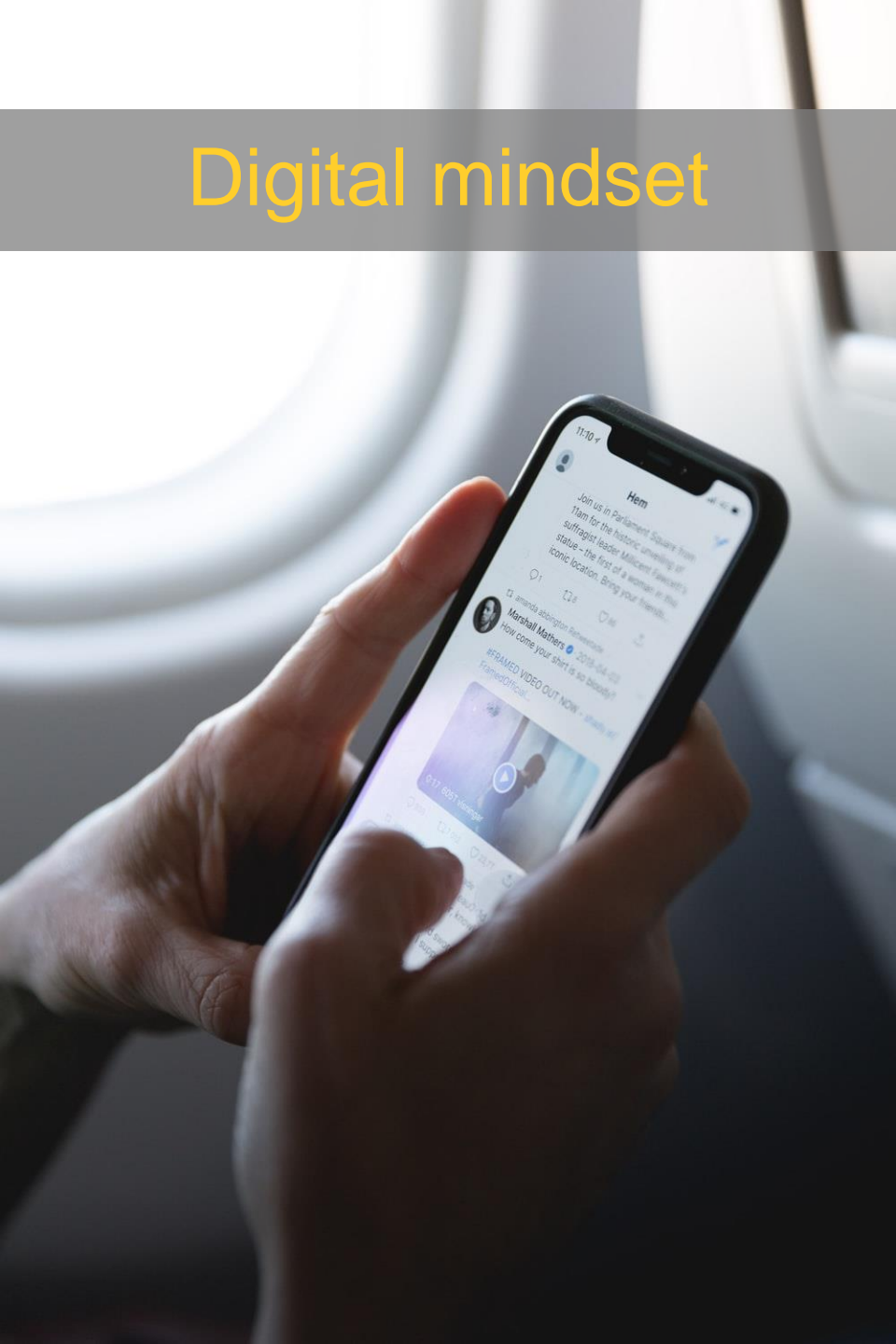
Operational Excellence

Attributes



- 1) Embrace learning and new ways of doing things; proactively working to fix the root cause of problems.
- 2) Working together with a TechOps mindset; work outside the parameters of your immediate team and sharing knowledge.
- 3) Place our customers at the heart of what we do, engaging them early and ensuring an outstanding experience working with us.
- 4) All colleagues to make decisions in their area of accountability, evaluate risks and proactively develop solutions.
- 5) Deliver value early, with a focus on creativity, innovation, continuous improvement and courage. Utilising Design Thinking where possible and appropriate.

Digital mindset



Overview

- Strategy sets out the importance of culture
- We have baselined culture through a survey
- We have designed our first culture sprint with focus on behaviour not value

Discussion

- What has been your experience of cultural transformation?

Questions to aid discussion

- What were the most influential change drivers?
- How did you win hearts and minds?
- How long did the cultural transformation take?

Poll

- What should we look out for?
- What advice can you give?

Digital mindset

- Customers first
- Culture and behaviours
- Innovation

Product model

CONNECT

f

🐦

📷

p

G+

👤

Overview

- Historically, solutions focused on capabilities or technologies
- We have a first pass mapping of our customer experience journey (CEJ)
- Products will map to our CEJ to achieve greater customer centricity

Discussion

- How have you transitioned from a capability focused solution to a product model?

Questions to aid discussion

- Realistically, what was the timeline? Plan vs actual?
- Did you have to manage a bimodal IT - legacy systems and delivery with digital?

Poll

- What should we look out for?
- What advice can you give?

Product model

- Customer-centric products
- Integrated portfolio backlog
- Ways of working
- Multidisciplinary teams
- Digitalisation
- Data

Draft customer journey and product model

We are in the process of drafting and validating our customer (internal/external) journeys. This shows our approach and uses steps/terminology for illustration.



Customer experience journey

Explore

- Access data/insight
- Investment case
- Build/commission asset

Connect

- Register with ESO
- Connect to transmission

Monetise

- Register a unit
- Pre-qualify for market(s)
- Receive instruction, dispatch, response
- Review operational plan
- Pay/Get paid
- Review performance

Products

Market information

Code mgt.

Connections

Registration

Auction

Settlements

Payments

Technology platforms and services

Data

CRM

Digital experience

Market platform

Finance system

Product model

CONNECT

f

🐦

📷

p

G+

👤

Overview

- Historically, solutions focused on capabilities or technologies
- We have a first pass mapping of our customer experience journey (CEJ)
- Products will map to our CEJ to achieve greater customer centricity

Discussion

- How have you transitioned from a capability focused solution to a product model?

Questions to aid discussion

- Realistically, what was the timeline? Plan vs actual?
- Did you have to manage a bimodal IT - legacy systems and delivery with digital?

Poll

- What should we look out for?
- What advice can you give?

Product model

- Customer-centric products
- Integrated portfolio backlog
- Ways of working
- Multidisciplinary teams
- Digitalisation
- Data

Agile Delivery



Overview

- Our base assumption was to use the scaled agile framework (SAFe)
- We have been successful with point solutions addressing a pain or innovation
- We're finding that a blend of scrum, scrum of scrums, SAFe, product mgt., seems to be more appropriate
- We are creating a product management office to manage dependencies

Discussion

- The value is iterative and incremental delivery. How do you manage that at scale and transition to it?

Questions to aid discussion

- How do you deal with dependencies without creating a monster?
- How did you scale scrum?

Poll

- What should we look out for?
- What advice can you give?

Agile

- Agile methodology
- Flexible technology



Customer and stakeholder

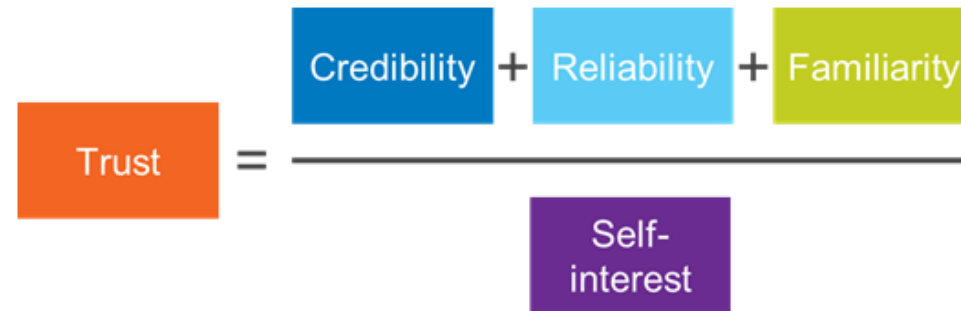
Item 5

Matthew Wright & Emily Leadbetter

Trusted Partner by 2025

To deliver an excellent experience and add value
to consumers, customers and stakeholders by ...

Building trust: using solid expertise, delivering on our promises, building an understanding of our impact on their activities, and demonstrating our position as a neutral system operator



Building partnerships: to deliver projects, to lead debates, to jointly solve problems and build value, and to set up the energy transition for success

Improving our stakeholder engagement

Understanding our customer journeys

- Mapping an ESO end to end journey
- Focusing on pain points and prioritisation of improvements
- Co-creating on our future journeys

Improving our communications and engagement

- Building better relationships
- Being more transparent in our decision making
- Communicating with you clearly

Increasing opportunities to co-create

- Communications and engagement plans developed looking for co-creation opportunities
- A better calendar of events on our website
- Increased information about our projects and their impact on you



What are we doing to make this happen

Increased training for ESO colleagues

Increased guidance and support on communications and engagement

Faster action on the insights we receive into the business

All our communication and engagement focused on;

- Building reliability
- Building credibility
- Building familiarity
- Reducing self Interest

Questions for discussion

- How do we engage with customers and stakeholders on our strategic transformation programmes?
- How do we engage regularly with the TAC on these programmes?

The background features several thick, vibrant yellow lines. Some are curved and sweep across the top and bottom of the frame, while others are straight and parallel, running diagonally from the bottom left towards the top right. The overall effect is a dynamic, modern aesthetic.

Introduction to Networks

Item 6

Iain Shepherd

Networks

- This section will be used to provide an introduction to the Networks area of the ESO.
- This is similar to the introductions we have given to other areas in previous TAC meeting.
- We intend to hold a more detailed session on Networks in the next TAC. In advance of this, please consider:
 - What would you like to hear about within Networks?
 - What expertise or experience could you contribute?

Networks' Teams

	Network Development	Network Operability	Network Access Planning	Customer Connections	Whole Electricity System
Purpose	Recommend system infrastructure investment needs	Provide solutions for future network operation	Enable asset access to build and maintain the network	Enable customers to connect to the network	Plan for the future in collaboration across energy vectors and stakeholders
Customers	TO's Ofgem	Control Room Developers	Control Room TO's	Developers TO's	Wider energy stakeholders
Outputs	Network Options Assessment (NOA) CION LOTI	System Operability Framework (SOF) Pathfinders	Operations plans	Customer contracts Compliance assessment	Regional development programmes

Role 3: System insight, planning and network development

Unlocking consumer value through competition and driving towards a sustainable, whole energy future

Role 3, Theme 3: Unlocking consumer value through competition

- Seek the best whole electricity system solutions working collaboratively with TOs and DNOs to deliver electricity to GB homes and businesses as efficiently as possible.
- Transform our approach to identifying and meeting new network requirements to consider the increased complexity arising from clustered variable renewable generation.
- Deliver consistent, coordinated cost-benefit analysis for network investment
- Facilitate competition as needed to provide appropriate solutions and providers to meet network needs at the best value to consumers.
- Develop technical standards that are appropriate for the decarbonised energy system we are planning and operating.

Role 3, Theme 4: Driving towards a sustainable whole energy future

- Help GB meet net zero through driving debate and collaborative action across the energy sector.
- Identify and accelerate no regrets strategies that deliver consumer value over the long term transition to net zero.
- Take a whole energy system view to facilitate the transition to clean heat by helping prepare the energy networks and optimising between them.
- Work closely with DNOs and TOs to deliver a more efficient, whole electricity system. This will include streamlined processes for connections and accessing the electricity networks.
- Develop a mature capability to model and understand interactions between different network needs and simulate optimal operability solutions across the whole year.
- Identify and manage the operability challenges of transitioning to a net zero economy and develop the capability to understand and resolve this through Themes 1,2 and 3.



Subgroups update

Item 7

David Bowman



Summary

- TAC-3 agreed the principle of having four working groups
- Two of these already exist and could be suitable modified; two would need to be created

Technology transformation

This group would discuss technology and ways of working, and be the main forum for detailed discussion on our key transformation programmes

We propose to set up these two groups, as described in the following slides

We have done a draft mapping of who could be included in each subgroup, including those who have expressed an interest, but anyone who feels they could contribute is very welcome to

Control room of the future

This group would discuss more abstract, theoretical and “art of the possible” concepts.

RDP joint forum (existing)

ENA Data and Digital Steering Group (existing)

Proposed subgroup: *Technology Transformation*

Remit

The *Technology Transformation* working group will advise the ESO on the following topics:

- Case studies from external parties on technology transformation
- Update and input into key transformation programmes, for example:
 - Balancing
 - Network Control
 - Data & Analytics Platform
 - Digital Enablement Platform
 - Single Markets Platform
- Technology Strategy, including:
 - Assessment and review of planned technology solutions
 - Input into areas where we currently have no technology view
 - Ways of working (TechOps, Scaled Agile)

Suggested membership

Name	Organisation
Gary White (Chair)	ESO
Anastasia Vaia	BP
Ulrika Wising	Shell
Alastair Martin	Flexitricity
Andy Hadland	Arenko
Fred Drewitt	Limejump
David Sykes	Octopus
James Houlton	Amazon Web Services
Teodora Kaneva	TechUK
Melissa Stark	Accenture
Alvaro Sanchez Miralles	STEMY Energy

Proposed subgroup: *Control Room of the Future*

Remit

The *Control Room of the Future* working group will advise the ESO on the following topics:

- Adoption of machine learning and artificial intelligence
- Human-machine interface and decision making
- Simulation, visualisation and optimisation
- The use of digital twins

Suggested membership

Name	Organisation
TBC (Chair)	ESO
Claudia Centazzo	Smith Institute
Chris Dent	University of Edinburgh
Chris Kimmett	Reactive Technologies
Peter Stanley	Elexon
David Sykes	Octopus Energy
Vernon Everitt	Transport for London
Simon Pearson	Energy Systems Catapult



Next meeting and calendar

Item 8

Vernon Everitt

Next meeting and calendar

Meetings are every quarter for a half-day on the first Friday morning of the month, 9am-12.30pm

- 3 December 2021
- 4 March 2022
- 10 June 2022 (Note: meeting a week later due to Platinum Jubilee bank holiday)
- 2 September 2022
- 2 December 2022
- 3 March 2023



AOB

Item 9

Vernon Everitt



