Balancing Transformation

Control Room Fax Machines

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Fax Summary

Fax machines have been used for many years for communication between National Grid Control Rooms and External Parties.

One of the main advantages has been a 'received receipt' is available to confirm that the fax has been successfully received, this being particularly important when fulfilling Grid Code obligations.

As a technology fax machines are seen as "end-of-life" and so NGESO would like to consider alternative technologies to allow for better communication & data transfer with External Parties. We believe that the adoption of these future technologies will reduce the inefficiencies created by faxes across the industry

The following slides present the problem and offer some thoughts on future solutions but we want feedback from industry to be sure we are moving in the right direction

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Grid Code & STCPs

The Grid Code has several points in it where it mentions that certain transfers of data have to happen via the fax machine

"facsimile"

- CC.5.2.1 part (l)
- CC.6.5.9
- ECC.5.2.1 part (l)
- ECC.6.5.9
- BC.2.6.1 part (f)
- BC.2.6.1 part (h)
- GC.6.1.1

"fax"

- OC7 – Appendix 1
- BC1.4.1
- BC2.A.3.2
- BC2.A.4.2

There is also an investigation into the STCPs that relate to the Transmission Faxes.
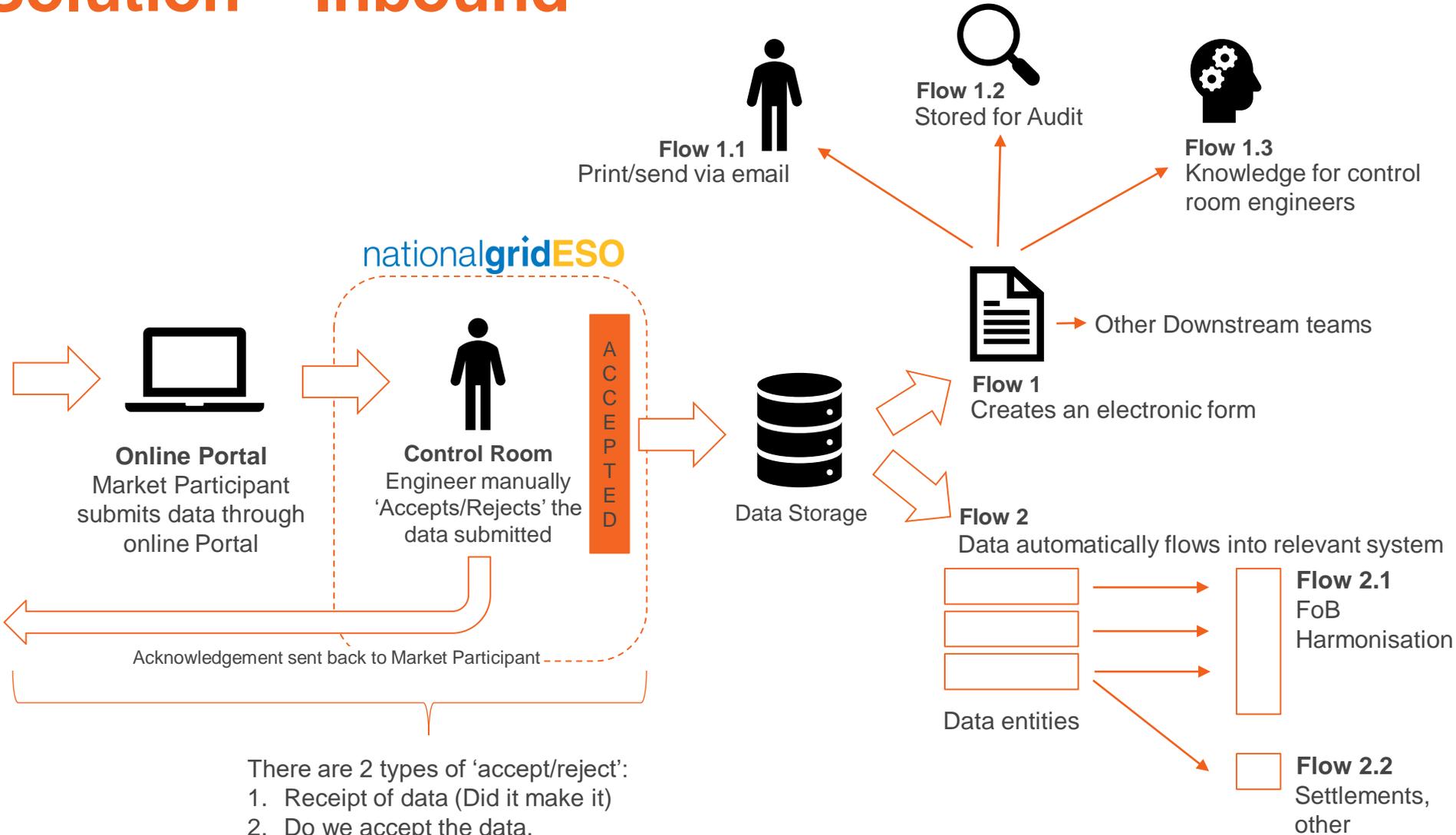
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Control Room Faxes Categorisation

Initial discussions with the Control Room Engineers has resulted in faxes being put into 5 different categories, these are detailed below. It should be stated that these categories are not final and up for change, along with the faxes that sit within them.

- **Category 1 –** These faxes are targets for harmonisation with existing or future interfaces with Market Participants e.g. EDL/EDT (19 different types)

- **Category 2 –** These faxes are targets for an *'online portal'* solution (6 different types), this is due to:
  - An interface not being found for harmonisation
  - Requiring a manual acceptance of the data incoming to the control room.

- **Category 3 –** These faxes are ad-hoc, rarely received, received through emails, or other unique scenarios and are too low value to change now. An alternative "ad-hoc" process will be investigated (11 different types)

- **Category 4 –** These faxes are currently in progress for automation by other National Grid ESO projects, we are currently awaiting confirmation on this (5 different types)

- **Category 5** – These faxes have a unique scenario and will need further investigation (3 different types)

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Category 2 - Online Portal High Level Solution – Inbound

Market Participant

Online Portal
Market Participant submits data through online Portal

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Control Room
Engineer manually 'Accepts/Rejects' the data submitted

ACCEPTED

Acknowledgement sent back to Market Participant

There are 2 types of 'accept/reject':
1. Receipt of data (Did it make it)
2. Do we accept the data.

Data Storage

Flow 1.1
Print/send via email

Flow 1.2
Stored for Audit

Flow 1.3
Knowledge for control room engineers

Other Downstream teams

Flow 1
Creates an electronic form

Flow 2
Data automatically flows into relevant system

Data entities

Flow 2.1
FoB Harmonisation

Flow 2.2
Settlements, other
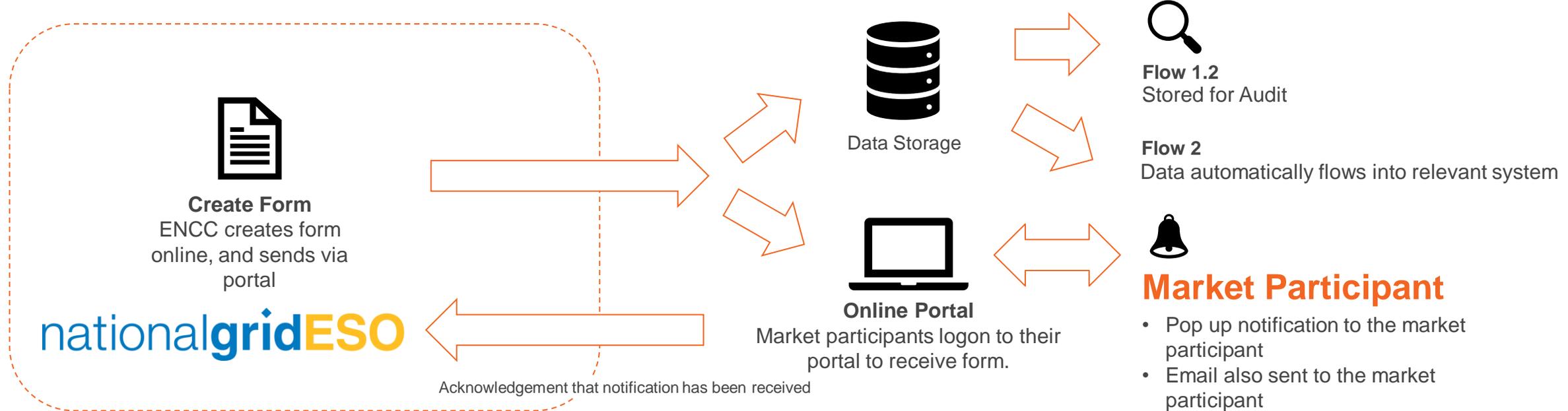
Principle: As soon as the market data (previously by fax) is received, then it must flow immediately into the system calculations.

Assumption: If the data flows 'correctly' into the 'to-be' system then the manual passing of fax information between control room engineers is not needed

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This is a high-level concept and not committed to delivery by any programme as of yet

Category 2 Online Portal High Level Solution - Outbound

Create Form
ENCC creates form online, and sends via portal

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Acknowledgement that notification has been received

Data Storage

Online Portal
Market participants logon to their portal to receive form.

Flow 1.2
Stored for Audit

Flow 2
Data automatically flows into relevant system

Market Participant
- Pop up notification to the market participant
- Email also sent to the market participant

The benefits of a digital solution for outbound faxes include:
- Ability to reach more recipients concurrently
- Notification is better than a fax, and more likely to be picked up by recipient.
- More Secure than a fax
- Aligns with the open data initiative within the sector

High Level Requirements
- Need acknowledgement that it was sent and received.
- The notification needs to be sent out at the same time to all relevant market participants.

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Resilience

- In the current Balancing Systems the fax machine acts as a redundancy for the Control Room to receive and send data to Market Participants.
- With the replacement of the fax machine, future redundancy will have to be explored.
- The fax machine replacement will need to be separated from the main system, so that it does not suffer the same failure scenario.

Audit

- There are agreed audit processes that depend on the storage and retrieval of faxes
- Any new solution must be agreed with our external auditors

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Next Steps

- Feedback from GCDF

- NG ESO to look at technology solutions in more detail

- NG ESO to share options with Industry

- Initiate Grid Code changes if acceptable

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