



# *Electrical Control*

*The story so far*

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## This session provides an overview of the Electrical Control Project with key thinking and factors considered

### **Objectives of this presentation:**

- Project Overview:
  - Outline of challenges and current thinking
  - Future programme and milestone dates
- Next Steps:
  - Key communication dates
- Questions and close:

# There are a number of challenges with our current systems and processes that need to be addressed

## Challenges

### Control Systems

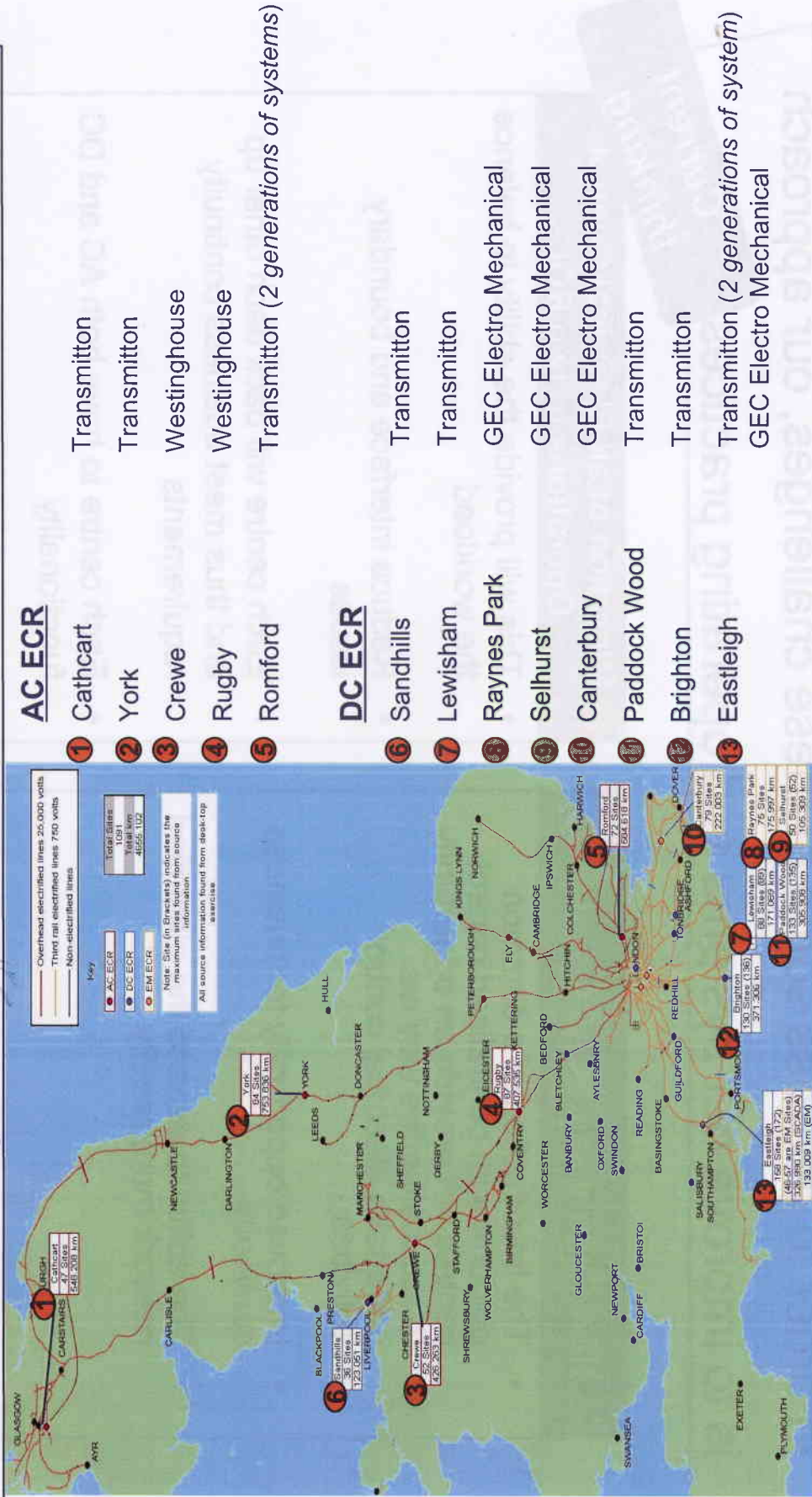
- Nationally 7 Electrical Control systems are due for replacement in CP4.
- Within 13 ECRs, we have 16 control systems
- The inability to develop a common platform for future integration
- Unable to deal readily with an expanding electrified network
- Currently our systems do not have an adequate back up capability

### Operational and working procedures

- How to improve functionality, instigate common working practices, process and systems?
- How do we better align operational procedures in AC and DC areas?
- How do we get to a single process for isolation planning?
- How to improve training and competency?
- How to gain efficiencies?

The current systems and ways of working do not readily support future growth and additional functionality

Currently we have 13 ECRs, each operating effectively as stand alone systems with no cross control between them



Ongoing supplier support and spares is getting evermore difficult on the older systems

In order to address some of these challenges, our approach is to improve our systems and operating practices

**Current thinking**

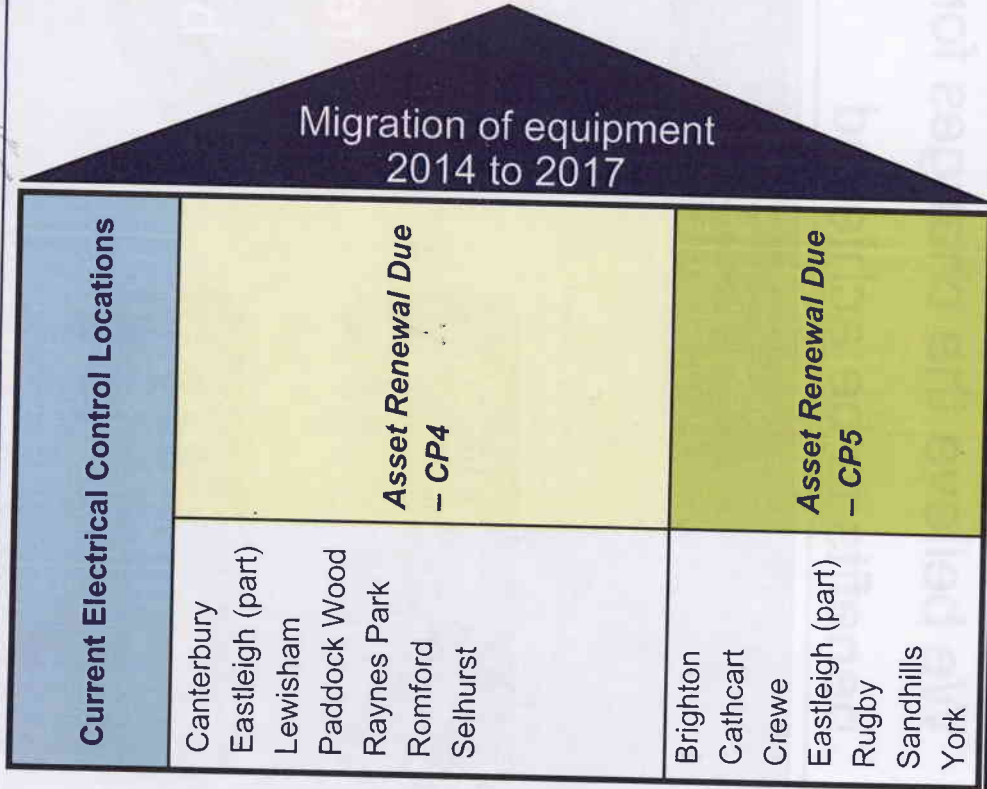
### 1 New Centralised SCADA system

- The introduction of a common platform with centralised control centres will provide an opportunity to rationalise the way we undertake electrical control activities
- Improved opportunity for business continuity
- The ability to expand the electrified network more readily

### 2 Migration of all Electrical Control Operations to two ROCs

- This will provide the ability to balance the workload
- Reduce interface and boundary issues
- Each centre will back each other up and thus meet business continuity requirements
- Each centre to have both AC and DC functionality

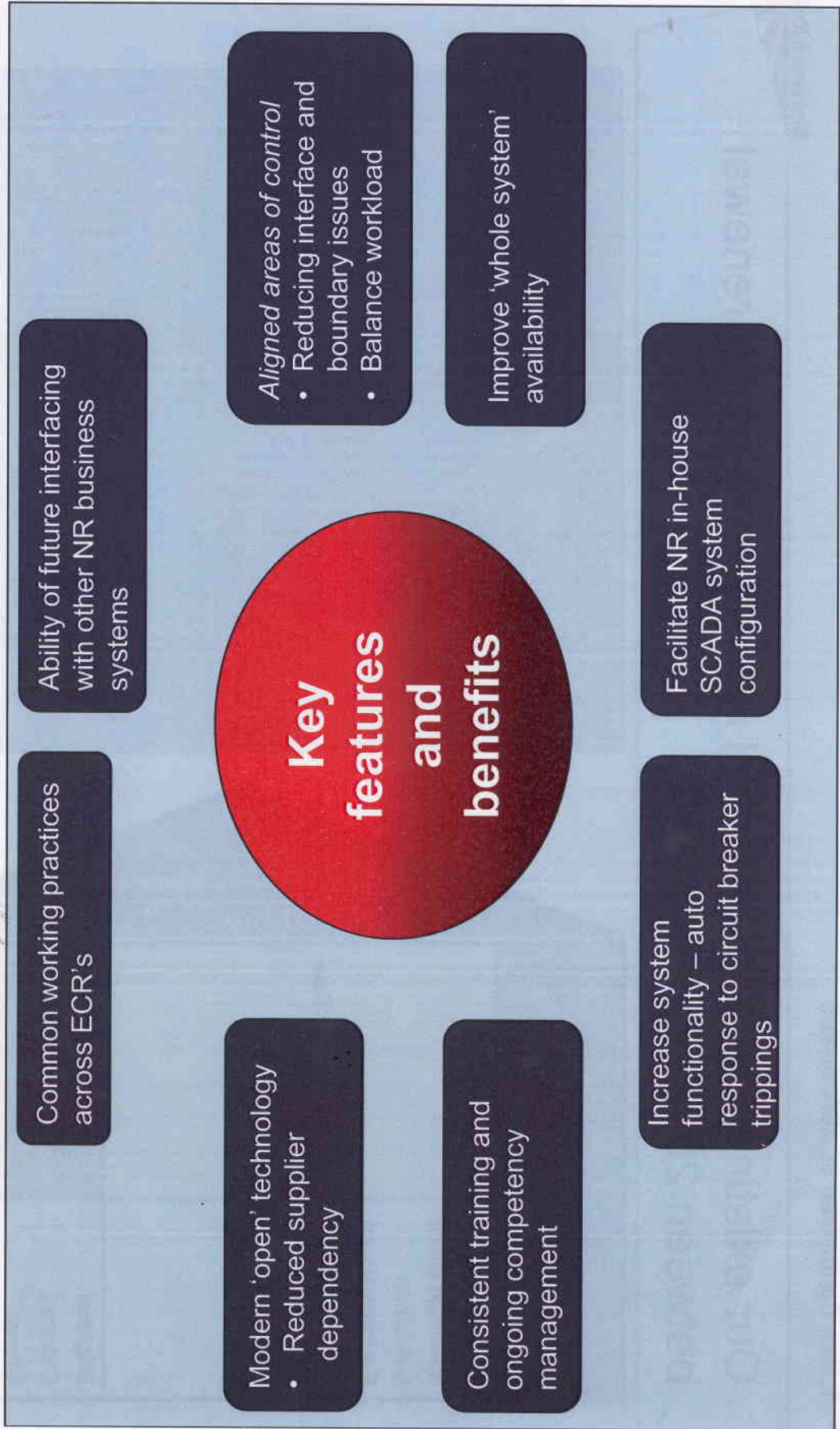
# Our existing Electrical Control Assets are due for renewal between 2014- 2017



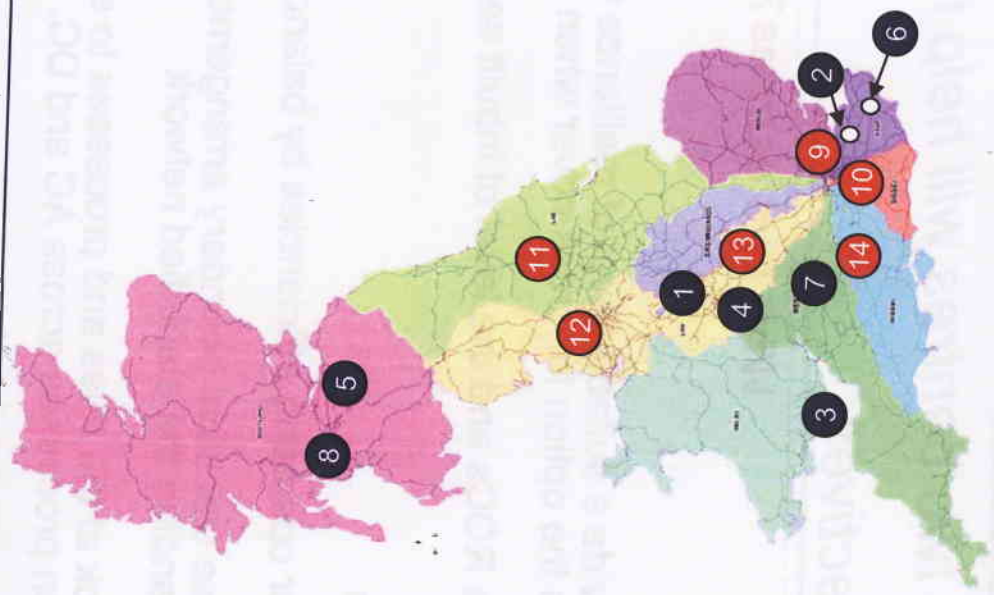
- Objectives:**
1. Provision of robust long term management of technology – reduce early obsolescence
  2. Use NR telecoms infrastructure where feasible
  3. Provide capability to optimise electrification power management
  5. Provide engineering solutions that deliver optimum lifecycle costs.
  6. Provide a solution that integrates with current and future projects.

The replacement of current Electrical Control systems with a central master system will allow consolidation of sites, financial savings and the introduction of common ways of working

# We believe the changes for EC systems will allow for several benefits to be achieved



# The Operating Strategy Programme identified 14 ROCs, from which future EC locations could be selected



**Key**

- New Buildings
- Existing buildings

Centres built during CP3 or investment complete	
1 - Derby	
2 - Gillingham	
3 - Cardiff	
4 - Saltley	
5 - Edinburgh	
6 - Ashford	
Existing buildings requiring investment	
7 - Didcot	
8 - Glasgow	
New buildings proposed	
9 - Romford 2014	
10 - Three Bridges 2013	
11 - York 2014	
12 - Manchester 2013	
13 - Rugby 2016	
14 - Basingstoke 2015	

# Migrations to two centres will help meet some of our business objectives

## Why Two centres?

### Resilience:

- Two locations provide a suitable level of resilience with the ability of running the whole system with the option for cross cover when necessary.
- Alignment with the ROCs and the level of inbuilt security that the new centres will offer.

### Future efficiencies

- Potential to deliver operating efficiencies by balancing the workload.
- Ability to rationalise electrical boundary arrangements and enable a more flexible approach for expanding the electrified network
- Opportunity to look at the roles and processes to support EC into the future and introduce common processes across AC and DC.



## Demographics suggest Three Bridges and Manchester offer the best option for employee redeployment

### **Why Three Bridges and Manchester?**

- Buildings due to be ready at the right time to align with the asset renewal plan
- Initial demographic evaluation suggests that these locations offer the best option for existing staff to re-deploy
- Creates a balance between North and South operations



*We still have several activities to complete before we are in a position to formally consult on our proposals*

Key activities	
★	<b>August 2011 - December 2011</b> Data collection on site
★	<b>October 2011</b> Process mapping activity
★	<b>October 2011</b> Task Analysis activity
★	<b>February 2012</b> Fibre install for Raynes Park and Selhurst control areas
★	<b>February 2012</b> Workload Assessment complete which will provide better guidance for understanding people impacts
★	<b>February 2012</b> Further project updates
★	<b>August 2012</b> GRIP 5- 8 authority for SCADA fit out

*We will have a better understanding of proposed people impacts once the workload assessments are completed in February 2012*

## *Key next steps*

- Project update at NOC meeting
- Further update
- Involvement in user groups

December 2011

February 2012

Late 2011 onwards

Any questions?