

POWERS

SMARTER



Presentation describing the process for efficiently **planning, controlling and monitoring Electrical Inspection and Testing (EI&T)** works

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Executive Summary

- EDIS is a cloud application that powers the Smarter Electrical Inspection and Testing
- Electrical inspection and testing is required in order to meet statutory electrical safety requirements.
- The electrical inspection and testing requires an integrated and multi-stakeholder process that includes:
 - Planning
 - Testing
 - Monitoring
 - Documentation
 - Data updates
- Electrical testing programmes are challenging for organisations, the current process is not effective or efficient.
- Smarter EI&T powered by the EDIS application provides a solution that will reduce the :
 - Costs
 - Risks
 - Time
- Implementation requires a business process, the EDIS system and appropriate governance

This presentation aims to present EDIS and the Smarter EI&T approach

Electrical Inspection and Testing with EDIS?

IT'S THE LAW

- The Electricity at Work Regulations 1989 (EAWR) places a legal responsibility on employers and employees, as duty holders, to ensure that electrical systems used at work under their control are safe this involves amongst other things, **proper inspection and testing of electrical systems by competent people and the creation and maintenance of electrical testing records.**

AN EFFICIENT SOLUTION

- EDIS is unique in its focus on managing the **creation and maintenance of electrical testing records** for electrical compliance management

EDIS MEETS THE CHALLENGE

- Large estates of buildings can have 10,000's of pages of distribution board schedules, electrical schematics, installation certificates, minor works and condition reports. EDIS meets this data and document management challenge by providing tools, portal, automation and workflows to create, edit and manages 10,000's of electrical records to ensure adherence with EAWR's.

IT'S PROVEN

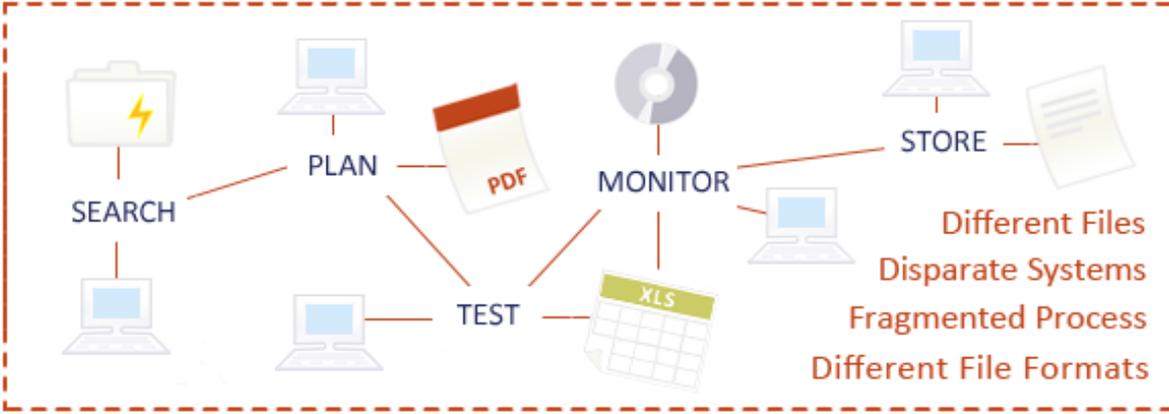
- 1000's of certificates and distribution boards are created annually on EDIS.

PROBLEM: THE CURRENT PROCESSES ARE BROKEN

SEARCHING PLANNING TESTING MONITORING STORING
electrical certificates - distribution board schedules - test results - electrical schematics - next test date

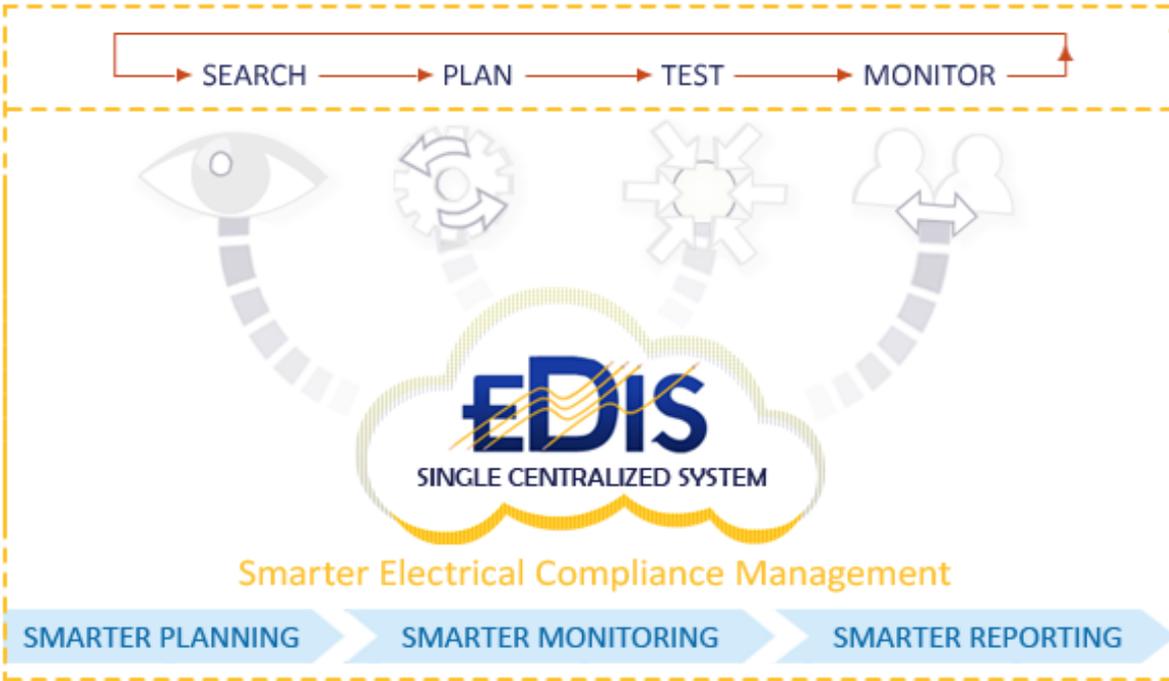
a broken electrical compliance process that uses disparate systems....

BEFORE



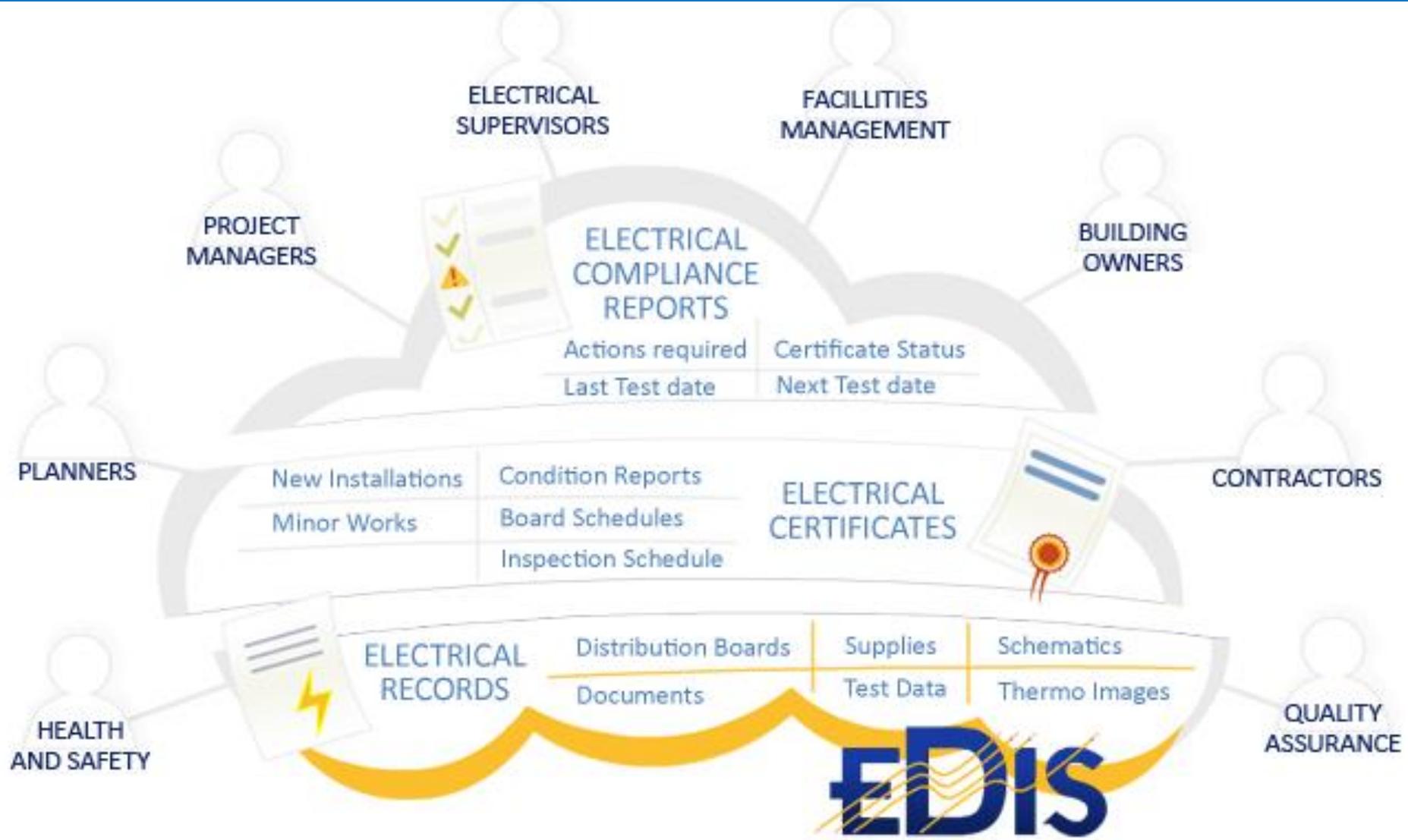
An efficient, electronic process that meets all stakeholders' requirements, providing a central repository for storing, editing, planning and reporting

AFTER



The process is broken but it can be fixed, however there are challenges

A cloud based service - with no IT support required



Electrical Distribution Information System

Summary of EDIS features

- Create, edit and manage list of Estates
- Create, edit and manage list of Buildings in an Estate
- Self registration and requests for permissions
- Request, approve and manage user access to Estates and Buildings
- Request, approve and manage user permissions

- Distribution boards: Create, edit, download excel, upload excel
- Electrical certificates: Create, edit, download/upload excel certificates
- Workflow to complete certificates; no paper systems required everything is done digitally
- Distribution network created from board and circuits data
- Manage actions required, actions required workflow
- PDF certificates generated from data, PDF created stored and archived

- Manage electrical compliance
- Plan, edit and manage the last, next and planned test dates

- Estate reports for certificates, compliance and actions required

KEY CHALLENGES IN THE SMARTER EI&T

SEARCH

PLAN

TEST

MONITOR

LV electrical distribution systems have a **LARGE** volume of data - this can make the job of planning, testing and monitoring a data intensive task a major challenge

SEARCHING FOR DATA and DOCUMENTS

Challenge: Where is the list of boards? Where are the boards? How many circuits? Which are the high risk boards? What circuit feeds which room?

PLANNING THE PROJECT

Challenge: Which circuits are due for testing, What was tested last, where is the highest risk, what is practicable?

TESTING 10's, 100's or 1,000's OF CIRCUITS TO BS7671

Challenge: What test has been done (Zs, IR, polarity, RCD), How do I track the faults?

MONITORING

Challenge: Tracking the status, Which areas, which circuits, which tests, how much still needs to be tested?

Each of these challenges needs to be addressed...

EDIS provides a System for Compliance Management



Automate as much as possible - updates board and circuit details when certificate is completed, update compliance reports, update planned testing dates

- What do we need to test?
- When do we need to test it?
- Where is the data?
- What is the status?
- Where are the risks?
- Are we spending unnecessarily?
- Where do I store the certificates?
- How we efficiently collaborate?

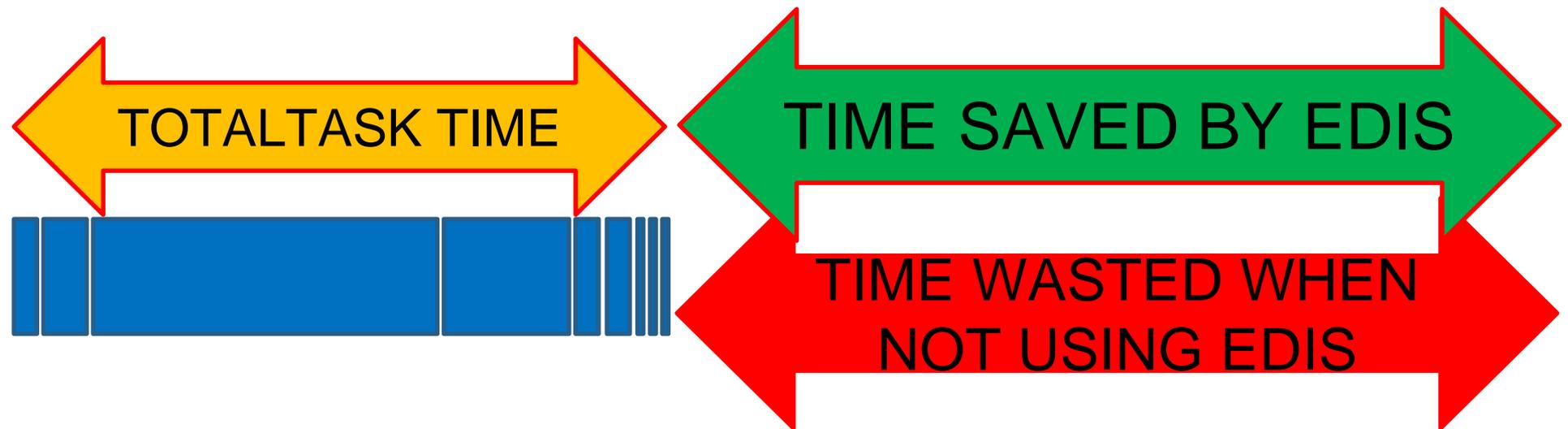
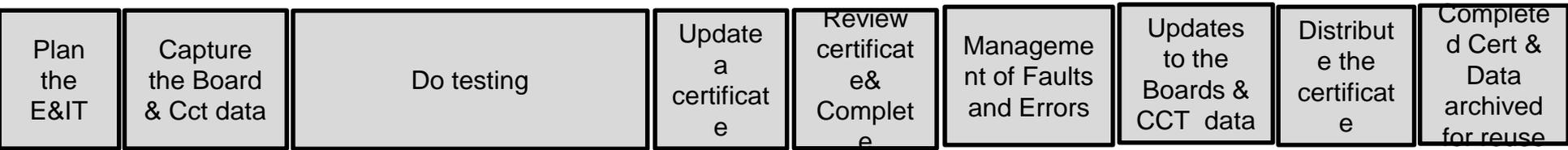
Smarter EI&T Saves Time and Money

Risk Cost Time

Plan the E&IT	Smarter EI&T is a data driven, risk based planning process supported by a system that automates as many of the data gathering, management and manipulation steps as possible. Having data and automation saves time and cost.
Capture the Board & Circuit data	Board and circuit data is captured once then re-used for certificates, compliance planning, risk management, distribution board schematics, and faults and improvements tracking. Re-use of data saves time and cost
Do testing	Testing approaches differ based on the risk: Tests can be 100%, sample tests or other exclusions and limitations – a data driven approach that tracks tests circuit by circuit, reducing the time and administration required for managing the testing process - saving time, cost and reducing risk
Update a certificate	Certificate data can be huge – a system that provides a workflow, data management, data backup and re-use of common data saves time and reduces the cost of data manipulation.
Review certificate & Complete	An automated data driven workflow that tracks and alerts the status of certificates enables electricians and qualifying supervisors to collaborate in completing the certificate to the required standard. Sharing documentation, tracking status and reporting faults.
Management of Faults and Errors	Tracking the test results and observations across an estate is essential to reducing the risk, a data driven and automated process will reduce risk through better controls, reduce administrative costs and reduce the time to identify and correct the faults.
Updates to the Boards & CCT data	On completion of the certificate distribution board schedules, distribution schematics need to be updated – a data driven workflow will provide these results at the click of a button.
Distribute the certificate	A data driven and integrated system will ensure the certificates is delivered and shared with the right stakeholders automatically and instantly – reducing time and cost by eliminating CD's, emails and other ways of distributing the certificate.
Completed Cert & Data archived for reuse	Smarter EI&T ensures all data is backed up, archived and available for reuse to all stakeholders. Compliance managers, project managers and engineers can re-use the data to make their tasks faster and easier, saving time and money



EDIS Powers Smarter EI&T - Saving Time and Money





THANK YOU

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BUSINESS DRIVERS



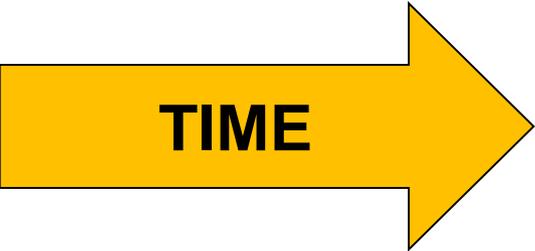
COSTS

- Better planning and tracking reduces the costs of unnecessary testing.
- Better monitoring ensures that test costs and payments are correct
- Audit trail provides accountability and ensures accuracy



RISK

- Accurate records and workflows ensure better risk management
- Better planning ensures the highest risk items are addressed soonest
- Better records ensure remedial actions are not missed



TIME

- Reduces management time required to collect and manage records
- Reduces management time to plan the electrical testing projects
- Reduces time in auditing and evaluating the work completed
- Reuse of data reduces re-keying of existing data

A large hospital can have <1,000 boards, which translates to more than 20,000 circuits. Each circuit needs to be tested based on its risk criticality

EDIS reduces the cost, risk and time associated with the management of these records.

What is electrical compliance

- **IT'S THE LAW**

The Electricity at Work Regulations 1989 (EAWR) places a legal responsibility on employers and employees, as duty holders, to ensure that electrical systems used at work under their control are safe this involves amongst other things, proper inspection and testing of a system by competent people and the creation and maintenance of records.

- **BRITISH STANDARDS**

BS 7671:2008+A3:2015 Requirements for Electrical Installations

The national standard in the United Kingdom for electrical installation and the safety of [electrical wiring](#) in domestic, commercial, industrial, and other buildings

- Electrical services **Health Technical Memorandum 06-01**

Provides comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare, including electrical infrastructure. (Refer : appendices at the end of this presentation)

- Other...