

5 Step Approach to Data-driven Maintenance Planning



We use data to simplify complex estate-wide decision making

Introduction to data-driven maintenance

The purpose of long-term maintenance planning is to maintain and protect an asset to prolong its use and value. For large estates and multi-building owners, this involves identifying future maintenance requirements across a considerable number of buildings. The process for identification is continuous, therefore if not correctly managed and planned, the programme of maintenance projects can quickly increase. The risk with an increased programme of work, concerning long-term maintenance, can include:

- A large volume of small projects spread over multiple buildings
- Limited budgets assigned to maintenance projects
- Varying types of projects
- Becoming non-compliant with regulation and legislation
- Impacting the operation of the business

With multiple, small projects spread over different buildings, it can become difficult to visualise and understand the overall requirement. This guide explains how utilising data to model the estate/buildings allows organisations to visually understand the extent of their maintenance projects. Visualising an estate in this way and applying estate data enables organisations to:

- Identify common work packages and areas
- Understand areas of prioritisation
- Schedule works without impacting business operations
- Clearly allocate funding and budgets

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Step 1 - Define

The first stage is to determine what data sources are available in relation to the maintenance works. These data sources could include:

- Estate Asset Register
- Building Valuation Information
- List of Impending Work Items
- Utilities Consumption Data
- Building Occupancy Data
- Information on Commercial Arrangements
- Key Events, Timetables or Schedules

This data must then be collated and arranged to define and determine the volume and magnitude of the long-term maintenance programme required across the organisation's assets.

Step 2 - Visualise

With data collated and organised this can then be inputted into a visualisation tool. Visually modelling the required estate works will enable organisations to:

- Contextualise the operational impact of undertaking work services
- Visually understand the extent of the issue
- Analyse the data and view work packages, volume, and cost of works

Step 3 - Group

With the maintenance programme data captured and represented in a visual model, decisions can be made concerning work packages and the grouping of activities. Creating packages of work in this way can indicate the optimum route to procure and deliver works over the plan's timescales. Works can be grouped on a variety of factors such as:

- Building
- Services required
- Decant implications
- Asset Type

Step 4 - Prioritise

With work packages established the process of prioritisation can begin. Each package can then be ranked and prioritised based on the requirement of the organisation and its stakeholders.

Prioritisation, dependant on the data available within the model, can include items such as:

- Compliance
- Health & Safety
- Operations
- Carbon
- Procurement
- Timescales for delivery
- Resource requirements

Step 5 - Schedule

The final stage of the process is scheduling the programme of works, based on the agreed prioritisation and ranking. Works can then be scheduled into a delivery calendar according to the prioritisation outlined in Stage 4. The calendar will indicate the period in which to begin the procurement process to establish a given contract or framework to deliver the work packages. This enables organisations to plan their long-term maintenance programme in conjunction with other construction-related projects.

Estates and Data Visualisation Services

Utilising the power of data and modelling to understand the performance of large estates and simplify complex estate-wide decision making

Data and Estates Visualisation allows organisations to understand their estates data and performance to allow them to unlock and identify the future requirements of their estate and business. Through the collection and analysis of estates data and information organisations can visualise complex estates problems and intelligently, and simply, justify future decision making.

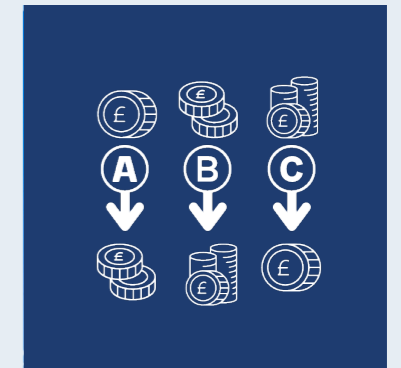
Our expert team of consultants and analysts support organisations with the collection, analysis, modelling, and interpretation of data. Through utilising multiple data sources, they can create data tools, dashboards, reports and visualisations that provide valuable insights into our clients operation, estate and business. Our teamwork with our clients to ensure they have the right information and data to enable informed decisions to be made surrounding their business and operation.



Data Analysis



Cost Modelling



Cost Benefit Analysis



Life Cycle Costing



Scenario Planning



Carbon Modelling



Benchmarking Analysis



Space Utilisation



Impact Assessments

For more information on Data and Estates Visualisation services please contact us at:
Phone: 0117 302 0001
Email: mail@provelio.com



6 St Stephens Avenue

Bristol

BS1 1YL

provelio

www.provelio.com