



Tree & Greenspace Management

CONNECTED ASSET MANAGEMENT FROM YOTTA

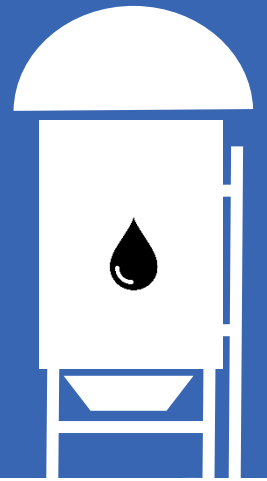
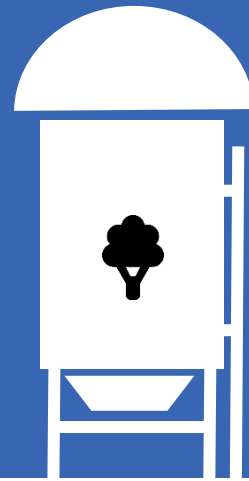
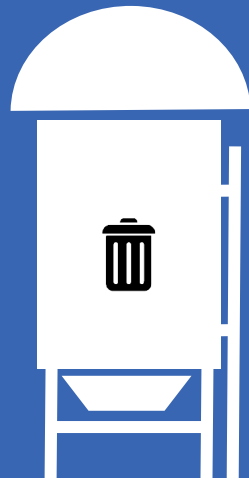
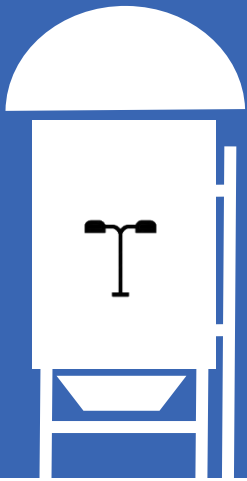


# SOFTWARE AND SERVICE SILOS

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# SOFTWARE AND SERVICE SILOS



# RATIONALISATION OF SYSTEMS



# Interesting Times..

Cloud Computing

Public Expectations of Service

Software focus shift from pure productivity to connecting and sharing data

Climate Emergency

Covid

Shifting balance to Green Assets



# Challenges

- ✘ Decentralised historic & current data
- ✘ Variable data quality
- ✘ Inaccurate tree/zone location data
- ✘ Unable to share data
- ✘ No GIS/mapping for inspections
- ✘ Errors in works undertaken
- ✘ Unable to search or analyse
- ✘ Limited traceability of changes





DATA GOVERNANCE



MANAGE



MAINTAIN



MONITOR



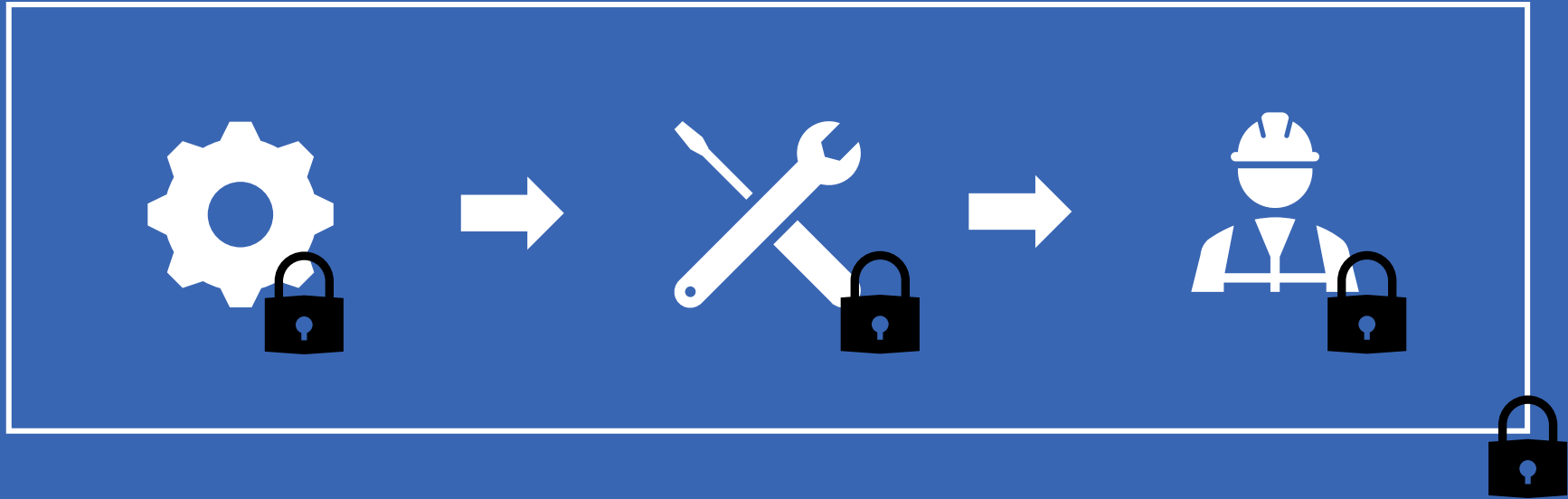
# Data

- The importance of good Data Governance-“You can do it now, or you can do it when your hair is on fire”
- Stewardship
- Data Maturity
- Quality/Accuracy/Availability
- Standardisation



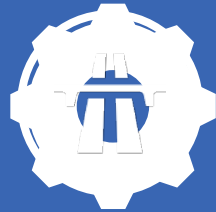


# Traditional Architecture Vs Alloy



# Alloy Architecture

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# Data Designer

**ALLOY**

← Back

Add attribute

Available types  
Please choose a type

- AQS
- Date
- Date and Time
- Geometry
- JSON
- Link
- Number
- Seasonal
- Text
- Time
- Yes/No

System attributes

- 123 Crown Spread North (m) Number
- 123 Crown Spread East (m) Number
- 123 Crown Spread South (m) Number
- 123 Crown Spread West (m) Number
- 123 Crown Base (m) Number
- 123 Stem Count Number
- 123 Diameter at Breast Hei... Number
- 123 Root Protection Area - ... Number
- 123 Root Protection Area - ... Number
- ? Staked Yes/No
- ? Tree Protection Order Yes/No
- ? Restricted Yes/No
- ? Root Damage Yes/No
- Geometry Geojson
- Tt Title Text
- Tt Subtitle Text
- Tt Reference Number Text
- Tt Notes Text
- Installed Date Date Time

Custom attributes

Attributes

- Species Link
- Height (m) Link
- 123 Crown Spread North (m) Number
- 123 Crown Spread East (m) Number
- 123 Crown Spread South (m) Number
- 123 Crown Spread West (m) Number
- 123 Crown Base (m) Number
- Link First Significant Branch Ori...
- 123 Stem Count Number
- 123 Diameter at Breast Height (c... Number
- 123 Root Protection Area - Radiu... Number
- 123 Root Protection Area - Area (... Number



# Data Designer

The screenshot displays the Data Designer mobile application interface. On the left, a map shows a residential area with a tree icon highlighted. On the right, a data panel provides details for a specific tree record.

**Tree Record Details:**

- Species:** Quercus robur
- Crown Spread East (m):** 17
- Crown Base (m):** 1.7
- Diameter at Breast Height (m):** 11
- Root Protection Area - Radius (m):** 1.5
- Root Protection Area - Area (m<sup>2</sup>):** 3
- Life Stage:** Mature
- Physiological Condition:** Good
- Staked:**
- Tree Protection Order:**
- Restricted:**

The interface includes a top navigation bar with a search icon, a star icon, and a menu icon. A bottom navigation bar contains icons for editing, a tree, a star, a menu, and a red button labeled 'RJ'.



# Data Audit

The screenshot displays a mobile application interface for a data audit. On the left, a map shows a green area labeled 'Grass Area' with a white triangle icon. The map includes various icons like trees and grass tufts. On the right, a vertical panel shows the audit details for the 'Grass Area' feature (ID: GA20). The panel includes a search icon, a star, a list icon, a link icon, a share icon, a menu icon, a question mark, and a red 'RJ' button. The audit log shows the following entries:

- Last activity 2 years ago 5D973CE0...
- Grass Area GA20
- Audit
- Edited 2 years ago by samorton
- Created 2 years ago by alloybot
- That's a wrap

At the bottom of the panel, there is a 'No actions' button.



# Manage- Visualisation of Data

- Tree and Greenspace asset locations
- Data Held
- Ownership





# Manage Locations

The screenshot displays the Alloy web application interface. The browser address bar shows the URL: <https://uk.alloyapp.io/#/item/601872bd1eb20065d6e346?signature=60212acd8fe81d006647d022>. The application header includes the Alloy logo and a navigation menu with icons for home, search, and other functions.

The main content area is divided into three sections:

- Left Sidebar (Navigation):**
  - Activities:** 912 (with a wrench icon)
  - Open Jobs: 912
  - Closed Today: 0
  - Arb Jobs:** 4 (with a hammer and pickaxe icon)
  - Contracted Jobs: 4
  - Budgets:** 2 (with a document icon)
  - Budgets: 2
  - Budget periods: 2
  - Designer:** 139 (with a person icon)
  - All designs: 139
  - Custom designs: 51
  - Items: 20,528
- Map:** A satellite-style map showing a road junction. A green tree icon is placed on the map, with a callout box displaying "Betula pendula" and a tree icon. A 100m scale bar is visible at the bottom left of the map.
- Right Panel (Item Details):**
  - Header: "Last activity 5 months ago 601872BD..."
  - Item Name: "Betula pendula" (with a tree icon)
  - Reference: "Ref: G001234 Recently Pl..."
  - Section: "General"
  - Tree Ref: G001234
  - Species: Betula pendula
  - Age Class: Recently Planted
  - Tasks: 5 items
  - Defects: Defect: Leaves unusu...
  - Number of Stems: 10
  - Last Visual Inspection: 1st February 2021 21:29
  - Bat Potential: S1: Unknown Potential
  - Functional Value



# Manage Layers

The screenshot displays the ALLOY software interface. On the left, a sidebar contains a 'Back' button, a 'Create item' button, and an 'Item creation process' section with five steps: 1. Select design (Required), 2. Enter item details (Optional), 3. Item location (Optional), 4. Parents (Optional), and 5. Network references (Optional). A 'Create' button is at the bottom of the sidebar. The central map shows a street layout with various assets like trees, grass, and buildings. On the right, a 'Layers' panel lists 11 results with checkboxes for each layer: Car Parks (3 styles), Carriageway (1 style), Carriageway Pot Hole (6 styles), Commercial Property (5 styles), Grounds Assets (11 styles), Grounds Tree Assets (1 style), Highway Assets (26 styles), Inspection Status (5 styles), Street Lighting (7 styles), Team Pot Holes (5 styles), and Traffic Signals (1 style). An 'Add layer' button is at the bottom of the layers panel. The top right corner has a search bar and navigation icons. The bottom right corner has a red 'RJ' logo.





# Manage Important Data

The screenshot displays the ALLOY software interface, which is used for managing tree data. The interface is divided into several sections:

- Left Panel (Summary):**
  - Activities:** 474 total, with 474 Open Jobs and 0 Closed Today.
  - Budgets:** 5 total, with 5 Budgets and 10 Budget periods.
  - Defects:** 137 total, with 137 Raised defects and 28 Completed faults.
  - Designer:** 754 total, with 754 All designs, 352 Custom designs, and 895,733 Items.
  - Finance:** 3 total, with 3 Accounts, 0 Invoices, and 1 Payment.
- Map:** A central map showing a green landscape with several trees. Each tree is represented by a green circle with a central icon. A large purple circle highlights a specific tree. A blue river is visible at the bottom right of the map.
- Right Panel (Tree Spreads):**
  - Tree Spreads:** 2 styles.
  - Styles:**
    - Crown Spread / Can...:** 12 items.
    - Root Protection Area:** 14 items.



# Manage Ownership

The screenshot displays the ALLOY software interface. On the left is a dark blue sidebar with various project metrics. The main area shows a map of a site with a 'Grass Area GA41' highlighted in orange. A 'Land Ownership' dialog box is open in the center, allowing selection of ownership types. On the right, a details panel for 'Grass Area GA41' is visible, showing metadata and attachments.

**ALLOY**

**Activities** 474

Open Jobs 474  
Closed Today 0

**Budgets** 5

Budgets 5  
Budget periods 10

**Defects** 137

Raised defects 137  
Completed faults 28

**Designer** 754

All designs 754  
Custom designs 352  
Items 895,733

**Finance** 3

Accounts 3  
Invoices 0  
Documents 1

**Grass Area GA41**

Last activity 3 months ago  
50973CED...

**Grass Area GA41**  
Jephson Gardens

General

**Attachments**

Image  
<https://i.imgur.com/NRQF...>

Land Ownership  
Public

Description  
Jephson Gardens

Area (m2)

Ground type  
Grass Area

Location Description  
Jephson Gardens

Parameter

Ward

Cost Code

Comments

Expenditure Code

**Land Ownership**

Search

- Public  
Land Ownership Type
- Private  
Land Ownership Type
- Housing  
Land Ownership Type

That's a wrap




# Maintain

- Activity
- Reactive and Planned



# Maintain- Mobile Jobs and Service Requests


SM T825 15:29 100%

Issued - Tree Visual Inspection - INS:121423 

Target - 25/07/2021 15:11  
Completed: 1.9 Miles

### Details

Inspection Number*	Service Request Description
121423	Blocking the path
Status*	Priority
Completed	Medium (P3)
Raised Time	Target Time
23-07-2021, 15:11	25-07-2021, 15:11
Team	Team Member
Field Team	Alexander Croston
Start Time	Completion Time
23-07-2021, 15:25	23-07-2021, 15:25
Are there large, dead branches in the tree?	Are there detached branches hanging in the tree?
<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the tree have cavities or rotten wood along the trunk or in major branches?	Service Request Requires Action?
<input checked="" type="checkbox"/>	<input type="checkbox"/>
Risk Likelihood	Risk Consequence
Very High	Very High
Risk Severity	Risk Score
Urgent	25





# Maintain-Track and Visualise Jobs

The screenshot displays the Alloy web application interface. The browser address bar shows the URL: <https://uk.alloyapp.io/#/item/609276a11b4603016952200a?signature=60f6c85ceccf82016c1a4758>. The interface is divided into several sections:

- Left Sidebar (ALLOY):**
  - General views: 020
  - Dog Waste: 16
  - NI - Manage...: 1,919
  - Total NIMUs: 1,919
  - NIMUs with PCC trees: 567
  - NIMUs: 1,919
    - All: 1,919
    - With Query: 1
    - Weather check to be determined: 0
    - Frequency not set: 4
  - Networks: 2
  - Permissions: 49
    - Users: 49
    - Groups: 59
- Map:** A map of Freedom Fields showing various job markers. A red wrench icon indicates a job. A tooltip for 'Freedom Fields ID145 || City' and 'Freedom Fields Play area ID 40' is visible.
- Right Panel (Job Details):**
  - Job Number: PJ4
  - Status: Issued
  - Job type: Remedy defect
  - Defect type: Broken part
  - Defect description: panel section above opening has one bolt missing and another near corroded away
  - Proposed solution: Repair
  - Additional parts or too... (X)
  - Contractor Required (X)



# Monitor

- Scheduled Inspections
- Public Interaction
- IoT





# Monitor- Inspections and Schedules

The screenshot displays the ALLOY mobile application interface. On the left, a sidebar menu includes a 'Back' button, a 'Create schedule' option, and a 'Calendar schedule' section with the instruction 'Specify the schedule dates' and a 'Dates' field. The main area shows a map of a residential area with a 'JG Grass Cutting' project overlay. A calendar modal is open, showing the month of July 2021 with 5 dates selected. The calendar has buttons for each month from January to December, a 'Back' button, and 'Cancel' and 'Save' buttons at the bottom. On the right, a project details panel shows 'JG Grass Cutting Project' and a 'Schedules' section with a gear icon and the text 'No schedules'. The top right corner shows 'Last activity 3 minutes ago' and a project ID '60FAD47C...'. The bottom of the screen features a standard mobile OS navigation bar.



# Monitor- Inspection Routes

The screenshot displays the ALLOY software interface for monitoring inspection routes. The browser address bar shows the URL: <https://uk.alloyapp.io/#/item/60dda05038856d01/268037f?signature=60dda05738856d01/26806b3>.

**Left Sidebar (Navigation):**

- ALLOY**
- Activities** (41 items)
  - Open Jobs: 41
  - Closed Today: 0
- Budgets** (0 items)
  - Budgets: 0
  - Budget periods: 0
- Designer** (298 items)
  - All designs: 298
  - Custom designs: 114
  - Items: 653,103
- Finance** (0 items)
  - Accounts: 0
  - Invoices: 0
  - Payments: 0

**Map:** A map showing a purple inspection route. A red location marker is placed on the route. A tooltip for 'WENTWORTH PLACE' is visible, showing two items:

- WENTWORTH PLACE (41302903)
- B6295 (28810433)

**Right Panel (Details for WENTWORTH PLACE):**

- Last activity: 22 days ago (60DDA050...)
- Method: Walked
- Team: Tynedale Area Highw...
- Status: Issued

**Bottom Right:** MS logo.





# Monitor- Public Service Requests



[Where I Live](#) | [Feedback](#) | [News](#) | [MyReports](#)

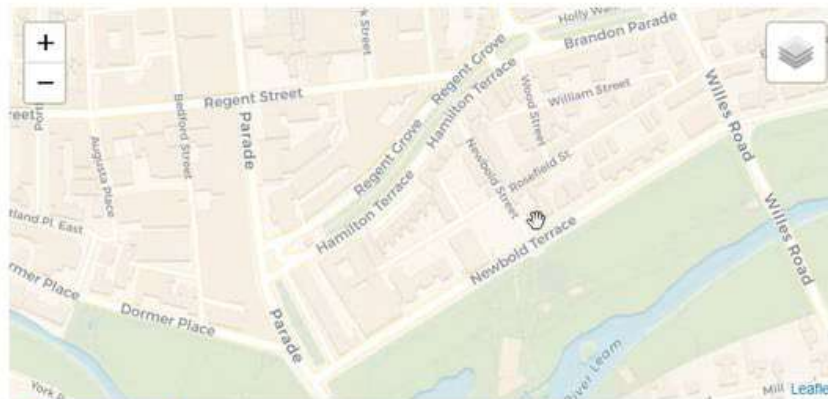
## Report a Tree Defect

Please pan the map to the defective tree location and fetch the trees within the current extension

Select the defective tree on the map

Select the type of fault and severity and give a brief description

Leamington  Rochdale



**Fault Type**

- Decay
- Cracks
- Root problems
- Weak branch unions

**Fallen** No

**Hazardous** No

Enter a description



# In Summary..

- ✘ Decentralised historic & current data
- ✘ Variable data quality
- ✘ Inaccurate tree/zone location data
- ✘ No GIS/mapping for inspections
- ✘ Errors in works undertaken
- ✘ Unable to search or analyse
- ✘ Unable to share data
- ✘ Limited traceability of changes

- ✔ Centralised historic & current data
- ✔ Standardised data model
- ✔ Accurate tree/zone location data
- ✔ Integral mapping for all activity
- ✔ Correct work undertaken
- ✔ Powerful search and analysis
- ✔ All data able to be shared
- ✔ Full audit and traceability



# Available and Connected Tree and Greenspace Data



Thanks for listening!

[www.weareyotta.com](http://www.weareyotta.com)

