



How the Internet of Things
can help fight against rising
Disrepair claims

Who are PinacL?

- Focus on Digital Transformation
- Over 35 years of industry experience turnover £24M FY18/19
- Now part of a £50M UK wide Group formed by Aliter Capital
- Heritage as specialists in Wireless and Networking
- IoT technologies was a natural evolution
- Deployed Smart City solutions across York, Newport & Aberdeen
 - Selected Newport as our IoT 'prototype' in 2017
- Created a network of complementary IoT partners
 - Sensor manufacturers
 - Specialist solutions





Who are Cornerstone?

- Formed in 2009
- Pioneer change in Property Damage Management
- Proven understanding of Moisture Mechanics in Buildings
- Professional Damp and restoration Specialists
- HA's seek professional & legal assurances from Cornerstone for reported damp and mould
- Deliver CPD training for Housing Associations looking for increased understanding of damp causes.
- Worked with Liverpool Housing Trust and helped them achieve a regional award for significantly reducing their spend on disrepair issues

Background:

- **Disrepair Claims**
 - ***Fitness for Human Habitation Act 2018.***
- **Pre-emptive maintenance**
 - ***Early intervention before problems arise***
 - ***Effectively manage resource***
 - ***Transition from reactive to pre-emptive***
- **The next PPI?**



Introducing Tempus

Property monitoring solution in surveyed properties

- Property MOT (train Housing Associations staff)
- Co2 – vacant property
- Temperature – fuel poverty

Proactive remote management of property portfolio

Automated alerting based on thresholds from the property MOT

Onboard Knowledge Centre with proposed Solutions to Causes

GDPR Compliant



How does Tempus Work?

Step One: House Moisture MOT

- Health MOT's, Vehicle MOT's
- Planned and/or periodic assessments
- Proven early warning system

Process:

- Designed to provide a Moisture related survey of a structure
- Can be combined with an existing Void Survey
- Provide Advisory measures for any identified issues
- Uniform and consistent process undertaken by trained persons
- Sequential data capture

External

- Rainwater management
- Structural penetrations and bridging
- Defects

Internal

- Structural moisture profiling
- Insulation and ventilation performance
- Heating and plumbing conditions

- Certificate of Condition issued
- Innovative and Proactive approach
- Delivers clear outcomes for issues found
- Aligns to the *Homes (Fitness for Human Habitation) Act 2018* regarding upholding the health of a structure prior to occupancy



How does Tempus Work?

Step One: House Moisture MOT Benefits

- Pre-designed sequential surveying system
- Embraces qualitative and quantitative data
- Details a structure prior to, during or post occupation
- Advanced warning system for possible future moisture issues
- Scalable and repetitive
 - Yearly / Occupational change / post works
- Certification issued alongside existing tenant pack
- Provides historical data of stock and tenant activity
- Provides trends with stock types and issues
- Provides a credible platform for complaint/legal cases
- Better decision making to focus expenditure on recognised defect areas
- Significant cost saving potential
- Reduced complaints
- Protection of reputation with an open engagement service
- Educational material for landlords and tenants
- Empowered workforce
- And...

Surveys can be undertaken by your trained staff



How does Tempus Work?

Step Two – Sensors collect data and send to tempus application

- Technology agnostic (LoRa, Nb-IoT)
- Sensors send readings every 30 minutes
- Data encrypted
- Hosted Cloud Platform



How does Tempus Work?

Step Three – Alarms triggered when defined parameters are breached.

- Warning and critical alarms triggered when thresholds are breached for a sustained period.
- Email alerts can be set up for multiple departments within the Housing Association



How does Tempus Work?

Step Four – Alarms provide likely causes and informed decision making

- Knowledge Base
- General Guidance
- Specific Guidance
- Trend analysis
- Reporting



The Knowledge Centre

Process:

Whilst the monitoring of properties and atmospheric criteria is not new, the ability to utilize a dashboard with a built-in Knowledge Base is.

The process readily allows end users to align an Alert to a number of possible causations with further clicks advising the likely sources and ultimately what can be reviewed as a resolution.

Benefits:

- Timely alerts aligned to action points
- Improved tenant interaction with credible data
- Focused expenditure aligned to the defect or issue
- Better decision making
- The landlord is in control demonstrating a pro-active service with ultimate outcomes.
- Will support legal challenges for disrepair
- Aligns to the *Homes (Fitness for Human Habitation) Act 2018* with regards to the ongoing health of an occupied structure

Tempus - Knowledge Base

KB-1

Check function and flow rate of installed extraction units - compare with MOT

The performance of an installed extractor unit will be determined during an MOT. A re-check is recommended to ensure the flow rate is adequate for the size of the room once the unit has been switched off and an overrun is underway.

KB-2

Confirm mode of operation and any tampering

Check the unit for any blockages, deliberate or natural and determine if the tenant isolates the device or simply does not use the extractor unit. Units that are manually operated will require manual operation by the tenant.

KB-3

Check and record overrun after use (where applicable)

When testing the unit, an overrun is the time in minutes the unit will continue to function after it has been switched off. This aids dispelling moist air to the exterior after the room has been used.

KB-4

Confirm door undercut to room is compliant with Part F of the current Building Regs

To ensure extractor fan units are effective make up air must be able to flow freely in to the ventilated area. To this end Part F of the Building Regulations requires a gap of 10mm.

KB-5

Discuss with tenant mode of operation when

CLOSE

Why Choose Tempus?

- Return on Investment
- Audit trail to fight false disrepair claims
- Move from reactive to pre-emptive maintenance
- Educational material for Landlords
- Historical data available for trend analysis

TEMPUS ROI

PLANNED MAINTENANCE

COSTS



£6 MILLION

PLANNED REPAIRS

COST

£7 MILLION



TEMPUS WILL SAVE

£3 MILLION

WITH AN

ROI OF

UP TO 75%

IN 7 MONTHS





Q&A

Want to learn more? Come and talk
to us on Stand H261

PINACL

