Property & Housing Services Repairs and the Smart City

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So what is a smart city?

- *The intelligent and integrated use of technology and information to help cities function more efficiently and create a better quality of life for its citizens*

- SC's aim to be centred on the citizen - giving them the opportunity to engage and have more of a say in the services provided to them by the public sector

- A resident may want to manage appointments for work in their property, or know how long a repair takes to complete or how much energy their block consumes.

Repairs & Maintenance

Managing the condition of our properties is extremely important for a number of reasons:

- Well being of residents and building users
- Health & safety of residents and building users
- Maintaining our building assets
- Effective use of resources – Revenue & Capital
- Energy conservation and sustainability

Property repairs in Portsmouth

In Portsmouth we manage and maintain over 15,000 assets and annually undertake the following average number of activities on these properties:

Assets	
Flats	8,080
Houses	4,177
Maisonettes	1,921
Bungalows & bedsits	601
Schools, offices, leisure sites, care homes	236
Activity	
Day to Day repairs	50,782
Electrical Installation Condition report (EICR)	1,786
Gas safety Inspection in 2016	13,665
Hard wired Smoke detector install / replacement	1,098
Void properties	1,059

Energy consumption and production across our Property portfolio

- **Electrical consumption 36Million KWhrs - £4.6Milion**
  - This equates to enough electricity to light and power a 3 bed house for 10,285 years

- **Gas Consumption 35Million KWhrs - £1.1Million**
  - This equates to enough gas to provide heating, cooking etc. for a 3 bed house for 2,840 years

- **Solar PV production in 2016 2.5Million KWhrs**
  - Combined £442,000 income and cost avoidance
  - This equates to enough electricity to light and power a 3 bed house for 714 years

What smart technology are we using in our repairs service to assist our service delivery

- Property & Housing Asset database
- ½ Hour meters for energy consumption
- Sim card / Bluetooth connectivity for PV Solar panels
- Building Management System (BMS) Wi-Fi
- Heat meters in sheltered accommodation
- Mobile Tablets – Gas Engineers
- PDAs – Zeta safe for Legionella records
- Integrated Receptions systems (IRS) for Freeview TV, connection to SKY+, SKY Q and DAB radio.

How do we use this data?

- PHS Database
    - Repair history and status
    - Repair trends, building / element concerns.
    - Resident / vandalism issues.
    - Contractor standard of workmanship / call backs / defective works
    - Future works programmes
        - Health & Safety and statutory compliance for gas, electricity, water and fire
        - Building element actual life span. Kitchens. Bathrooms, GCH boilers.
        - Input for future planned maintenance programmes – budgets, staff and contractor resources.
- ½ hour meter readings – Stark and Systems link
    - Accurate 24 hour energy use data – trends / waste
    - Accurate bill validation and payments
    - Retrospective energy bill validation and repayment

How do we use this data? Cont'd

- Solar PV sim card
  - Remote reporting of solar energy production
  - Remote monitoring of solar panel performance, repairs / breakdowns.

- BMS System
  - Energy conservation and Improved reliability of controls
  - Centralised control, remote monitoring and diagnostics

- Heat meters in sheltered blocks
  - Accurate individual charging of heating use.
  - Analysis of individual usage – lack of consumption / fuel poverty

- Mobile Tablets and PDA's
  - On site access to repair history / plant and installation information.
  - Real time uploading of inspection certificates, test reports.

Future developments?

- At domestic level empowering residents to take responsibility for their properties
  - Via a link to the HPS Asset database booking repairs directly, track progress of repair, arranging appointments for annual gas safety check, EICR's, smoke detector test and replacement etc.

- Heat meters to all communal heating systems
  - Pay as you use rather than an equal fraction of the whole bill
  - Be responsible and manage your own usage

- Roll out of more Solar PV installations
  - Innovative battery storage
  - Sharing of solar generated electricity / solar Co-op

- IRS to all blocks of flats
  - SKY+, SKY Q, Cable TV, DAB radio
  - Wi-Fi, IT connectivity, LiFi (Light Fidelity – Wi-Fi via LED lights)

Future developments? Cont'd

- Further empowerment for School Bursars, Building and FM managers.
  - Registering and tracking repairs "live"
  - Access and re-assurance around compliance and Health & Safety
    - Asbestos records and locations
    - Statutory testing for gas, electricity, water and legionella
  - Energy consumption via Stark and systems Link
    - Monitoring of use and adjustment
    - Payment of bills
  - Continued Solar PV roll out.
    - Income generation for PCC via FiT and PPA
    - Solar battery storage and solar electricity co-op

Any questions?