

# CV - Mark Carter, Software Developer, Milton Keynes

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## Software Development Experience, 10+years

### The Whaddon Show App - Collaborative script writing and show management tool currently used by 30 users.

Designed and built a **C#.net public API** authenticated using **Azure Ad**

Coded unit tests and live monitoring to ensure fast and reliable access to **SQL server**.

Designed and built syncing process to allow for live collaborative script writing and uninterrupted typing.

Created fun and engaging user interface and made it fully responsive using the **React** framework.

Developed **progressive app** with appropriate **caching** to enable use in a rehearsal space with very poor connectivity.

Improved loading from 15 to <1sec optimizing **SQL** queries, reducing **component re-renders**, and reducing **Http** traffic.

Configured **Webpack**, **Docker** and **Azure** to give responsive Development and Test environments matching Production.

Authenticated data using Azure Ad.

### Hightown Workflow - Workflow Diagram Tool and Monitor used by 1000 users for more than 8 years.

Connected 13 databases spanning all departments into one overarching system for monitoring overdue tasks. Users can draw a workflow diagram and specify mobile forms, emails, text etc to be triggered by events in each database.

Specified the architecture and design of the original application.

Designed and built dashboards linked to **Active Directory** to give users tailored views of performance data.

Interrogated **3rd party databases** to understand how the data was structured to integrate with the application.

Managed product changes and enhancements as the application increased in usage.

Reduced speed issues as the application went from small to large-scale use by introducing new indexes, refactoring, and transferring functions from **C#** to **SQL** to make best use of set based calculations.

**Results:** Improved Health & Safety compliance in Care Homes from 80% to >99%

Repeated this kind of performance improvement in over 100 Workflows across the organisation.

### Chester - Rota Management and Payroll App used by 850 users in 80 locations for more than 10 years.

Specified the architecture and design of the application.

Pair programmed the complex calculation of overtime, sickness deductions and leave entitlement in **SQL/C#**.

Designed the rota creation tool and front-end reports and oversaw and assisted in the coding of these.

Coded management dashboards to proactively monitor unallocated shifts and agency usage.

**Results:** Eliminated paperwork from payroll process and reduced time to upload pay data by 1 week a month.

Moved from manual to automated timesheets running 2 systems for 9 months with less than 5 errors in any month.

Continued to manage shifts and pay correctly as staff base grew rapidly from 550 to 850 in large TUPE Transfer.

### DevApp - Project Management and Development Expenditure Forecasting Application used for more than 9 years.

Specified the architecture and design of the application.

Pair programmed the complex calculations of IRR, NPV and Payback Periods apportioned between property tenures.

Improved speed of global calculation from 1min 40seconds to 12seconds by reducing the amount of data required.

Coded automated board reports and dashboards that monitored current and future capital expenditure.

Designed, oversaw, and assisted in the coding to reconcile development and finance databases in **SQL/C#**.

Accessed additional data automatically from Government Funding website through public **API**.

**Results:** £1.4bn of development expenditure has been approved and managed over the last 9 years using the app.

Reduced 6 sources of completion dates to 1 by changing processes & reports in Operations, Development & Finance.

Improved communication between Development and Operations by integrating DevApp with operational databases.

## **Employment History:**

### **Mar-2023 to Feb-2024, Updating Skills in Modern Web Development**

Produced The Whaddon Show App - a progressive web app used by 30 people.

### **Jul-2022 to Mar-2023, Chief Operating Officer, Acorn Early Years Foundation**

Responsible for IT Systems, Facilities, and identification and implementation of initiatives to improve Operational efficiency.

- Created a live monitoring report combining Staffing, Occupancy and Expenditure Forecasts from 3 different web applications.
- The report was created with advanced usage of Power Query functionality within Excel.

### **Sep-2008 to Sep 2021, Hightown Housing Association (various roles as outline below)**

#### **Director of Care & Support (incl Business Transformation), Sep-2018-Sep-2021**

Directed the Operations of 850 staff providing Registered Care and Supported Living services to people with Learning Disabilities and Mental Health issues. Continued responsibilities for Business Transformation across the wider organisation managing IT and Business Projects teams.

- **Promoted to Operational Role and further embedded the use of IT in all aspects of the organisation.**

#### **Director of Business Transformation, Sep-2012 to Sep-2018,**

A wide-ranging role driving change across the organisation. Persuading the CEO, Directors, Managers and Staff to change their working practices and motivating a dedicated team of IT Infrastructure Officers, Software Developers and Projects Officers to carry out the work of implementing these changes.

- **Built up and managed an effective Software Development team with high levels of retention over 9 years.**

- Created a team of 5 software developers writing applications and reports in SQL, C#, MS Reporting Services and VBA (in legacy systems).
- Repeatedly developed in-experienced junior software developers into highly valued Senior Software Developers.
- Led key decisions on application design and development and assisted the team when struggling with coding or application architecture.
- At critical junctures I coded myself (having done much of the coding in the first 3-4 years as the department grew)
- Eliminated Application and Data errors through creation and monitoring of overnight jobs pro-actively testing applications.
- Achieved right balance between long- and short-term work through weekly stand-up meetings prioritising workloads and scheduling tasks.
- Ensured long term maintainability of systems by deliberately varying ticket allocation and running Scrums of all developers on 1 application.

- **Transformed a failing IT & Service Review team into an innovative department driving change across the organisation.**

- Reduced staffing costs by 10% through a restructure that removed problem staff and outsourced 3rd level support.
- Eliminated monthly site-wide crashes by overhauling central hardware, virtualising central servers and re-provisioning network.
- Reduced open IT orders from 300 to 30 by monitoring performance openly and transparently to the organisation.
- Achieved monthly satisfaction ratings of 98-100% within a year by focussing on strategic goals vs short term pressures.
- Achieved the lowest IT expenditure per user when benchmarked against 60 Housing Associations for 6 years running.

**Head of Asset Management & Procurement, Oct-2008 to Sep-2012** - Responsible for the reactive and planned maintenance of 4000 homes and communal areas with a budget of £2.5m.

- **Turned around an underperforming department through strong management, commercial acumen and use of IT**

- Limited staffing increases to 15% despite an increase in properties of 42% by implementing more efficient IT systems.

- **Improved the use of our main IT system within our wider Operations department**

- Reduced the time taken to manage bulk arrears from 3 days to 1 day by replacing the IT system used to monitor arrears.
- Standardised processes for writing letters and emails across Operations linked to the use of our IT system.
- Despite not having any authority over the teams involved I was able to take them with me and make the changes happen.

### **Sep-2000 to Jul-2008, Various Land Manager roles for National HouseBuilders**

## **Education:**

1<sup>st</sup> Class Chemistry Degree, Oxford University, 2000