




# **Data Analytics for Housing**

**Data Capture and Decision Making, Simplified**



Hitachi Solutions is a global leader in the delivery of software solutions built upon Microsoft's safe and secure technology stack. We have decades of knowledge and experience across many highly regulated industries and have invested heavily to support UK housing associations to digitally transform, improve operational delivery, enable optimal decision making and achievement of tangible business outcomes.

Achieving the goal of optimised service delivery requires better data led decision making, which requires a partner with specialist IT technical knowledge to implement.

However, technical knowledge alone is not enough to achieve and maximise the potential business benefits of projects. Our investment in the UK housing sector, with consulting resource qualified in data & analytics, machine learning modelling, tooling and industry expertise, means that our team already understands the environment and many of the challenges.

We bring proven best practice and lessons learned from working in the sector with partners such as HACT to develop a data analytics solution built on industry data standards. Other Housing Associations we have worked with include VIVID Homes where we implemented Power BI in a rapid time to value, and another Housing Association where we are assisting them

with change management and training following a successful Microsoft Dynamics 365 implementation.

We recognise the importance that Housing Associations play in the lives of many, which is why Hitachi Solutions is committed to supporting the housing industry and HACT.



## What is HACT?

HACT is the housing sector's ideas and innovation agency, and it exists to provide "future-orientated solutions, projects and products" for UK Housing Associations. HACT delivers thought leadership and drives new ideas for business transformation through its platform of research, impact measurement and data analytics, as well as through its engagement with other sectors and our work on connected technologies.

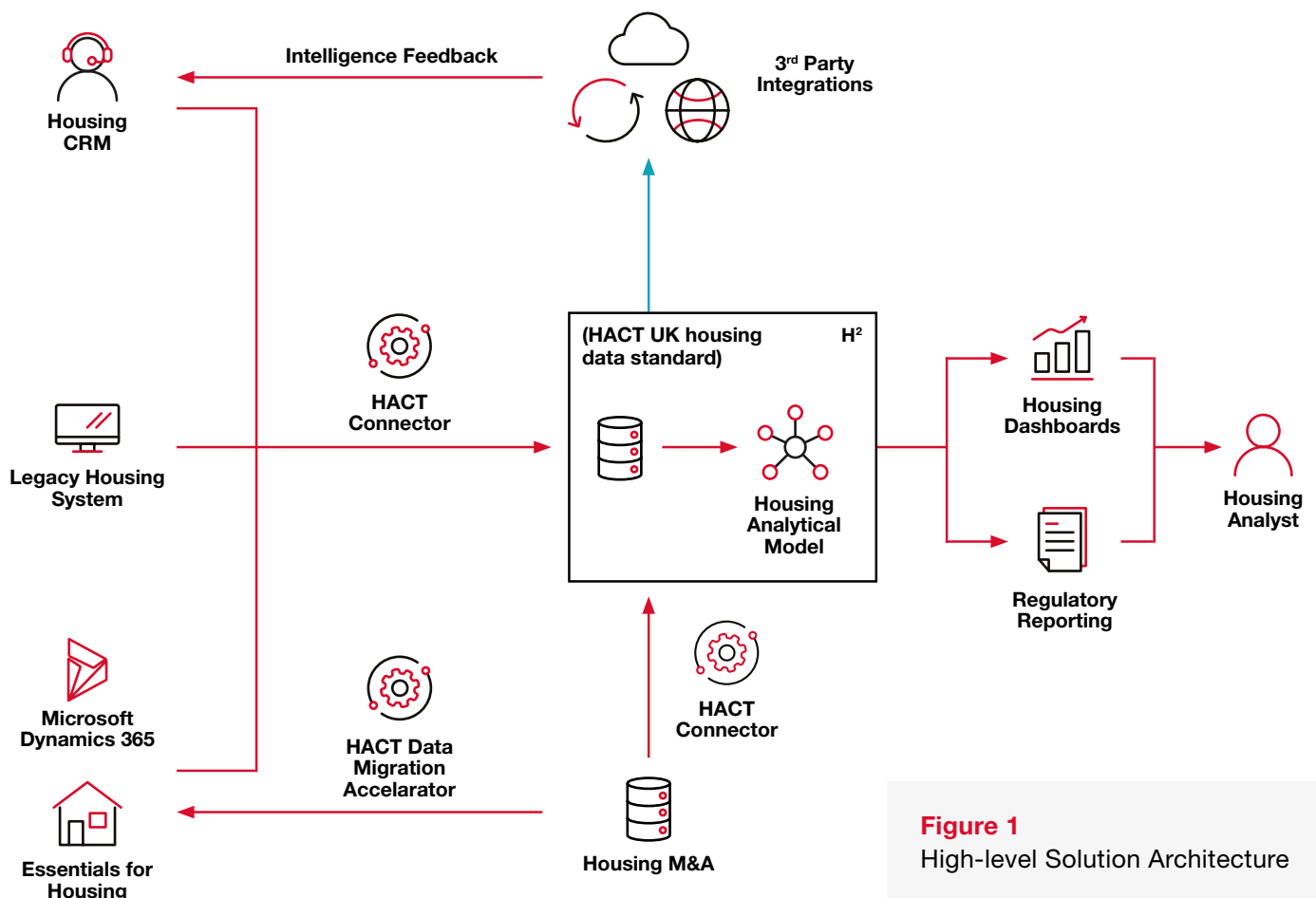
HACT's key objective is to help housing providers maintain and refine resilient and successful businesses. It achieves this by generating actionable evidence to inform the development of new, smarter, and more efficient ways of working. Key to HACT's success and future development of innovative solutions is its strategic partnerships with not only housing providers but also technology companies. HACT's UK housing data standards are being developed and supported by over 50 leading housing associations and software companies.

## Our Partnership with HACT

Hitachi Solutions has been working with HACT since 2018 to develop versions 3.0 & 3.2 of the housing data standard (see <https://www.hact.org.uk/DataStandard>). This has been created in partnership with housing providers including Coastline, Halton Housing Trust, L&Q, Lewisham Homes, Magna, Metropolitan Thames Valley, Poplar HARCA and Settle. This standard provides a common understanding of data entities across the housing sector which in the long run will simplify and reduce integration cost and importantly enable collaboration. Hitachi Solutions uses this standard from HACT as the basis of our data analytics solution.

## Our Data Analytics Solution

As well as supporting the HACT data standards, Hitachi Solutions has invested in the development of an analytical model that incorporates the HACT standards in interactive reports and dashboards. This solution takes advantage of the Hitachi Solutions modern data platform which utilises cloud-based technologies including data lake, optimised data mart and Online Analytical Processing (OLAP) models. Ultimately, this is used to feed the data into pre-configured reports and dashboards in Power BI for quick and easy analysis.



**Figure 1**  
High-level Solution Architecture

## Use Cases

Our data analytics solution is built specifically for housing associations, and has several key use cases within the sector, including:



### Housing Management System Migration (HMS)

When migrating to a new Housing Management System your reports and analytical/reporting systems are not changed. The data analytics solution remains populated by a connector to the new system.



### Benchmarking

The ability to benchmark against other housing associations becomes simpler and more accurate because everyone is using the same model and measuring the exact same variables.



### Mergers in the Housing Sector

When 2 or more housing associations merge our data analytics solution reduces the Business Change implications through the use of standard datasets and analysis structures.



### Preparing for the future

Our data analytics model is built on a modern, cloud-based platform that is flexible and scalable to support future analytical needs including AI and IoT, or social media analytics.

Our data analytics solution is pre-built and ready to be deployed within your existing IT landscape. It is agnostic of the source system and has several pre-built data connectors to expedite and de-risk the delivery of the solution. Furthermore, we have created a portfolio of dashboards which can be used to immediately deliver insight and aid in the decision-making process.

The core business benefits of our Housing Associations data analytics solution include:

- Provides a single version of the truth
- More accurate and optimised data led decision making
- Provides templates for statutory and regulatory reporting
- Engage with customers in a proactive manner
- Provides interactive and mobile ready dashboards for analytical reporting
- Has connector modules for major housing management systems
- Delivered on end to end Azure cloud-based technology for security and scalability
- Can easily be augmented and extended to include other line of business or upstream data sources



**Figure 2**  
Example Dashboards

## More than Analysis

Traditional business intelligence focusses on reporting and analysing what has already happened (hindsight). This diagnostic and descriptive approach has been around this for a long time. It uses traditional business intelligence techniques including operational and statistical reports. To drive more positive change within a business, advanced analytics techniques such as predictive modelling and artificial intelligence can embed intelligence into business process to provide a view of the future in the overall picture (foresight).

## IoT

Our modern data platform architecture also provides the ability to analyse streaming data generated by sensors and devices connected to the Internet of Things IoT. This allows data from all aspects of a housing association to be combined with in a single place. Hitachi Solutions has used this technology to develop solutions for people living in sheltered accommodation. By analysing the data streamed from wearable devices together with devices also in their homes, our solution helps to monitor their wellbeing and allows proactive action to be taken to help some of the most vulnerable tenants.

Looking ahead, our roadmap includes the development of data science and artificial intelligence capabilities within our HACT data analytics offering. Our IoT offering could allow your organisation to apply statistics to help discover hidden insights from your data and generate genuine business outcomes. This will be achieved with clean, secure, and reliable data using the HACT data standards. Coupled with best of breed technology and a trusted partner you will be able to make better data driven decisions, simply.

## Next Steps

Working with Hitachi Solutions means giving your business the very best in data science and analytics.

For example, VIVID chose Hitachi Solutions' specialist housing association team to undertake a Power BI project. VIVID was impressed with Hitachi Solutions' relationship with Microsoft and ability to deliver the very latest benefits of Power BI. They welcomed the proof of concept as the first in a long line of opportunities for longer-term partnership with Hitachi Solutions on management information and business intelligence.

Hitachi Solutions welcomed the opportunity to showcase the capabilities of Power BI by providing a solution to a real-world problem. Working closely with VIVID both remotely and on-site, its team of experts captured VIVID's data and analytics across multiple systems and provided a friendly, self-service dashboard. The interactive dashboards visualised VIVID's KPIs, highlighting performance trends against service level agreement targets.

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These are solutions that work.**

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