
Contents

1. Introduction
 2. What are the tenant satisfaction measures?
 2. What are the keys to successful TSM reporting?
 2. Careful and consistent data preparation and transformation is vital
 2. Automate your analysis wherever possible for maximum efficiency and consistency
 3. What analysis is required?
 3. Descriptive analysis
 3. Bivariate and multivariate analysis
 4. Modelling and deployment
 5. Proactive intervention
 5. Summary of the benefits of analysis and modelling
 - 5-7. How does Smart Vision Europe support providers to meet TSMs?
 7. Find out more
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A guide to effective and efficient tenant satisfaction measurement

The [Tenant Satisfaction Measures Standard](#) requires all registered providers of social housing to generate and report on tenant satisfaction measures (TSMs) as specified by the Regulator of Social Housing.

In this white paper we briefly describe the tenant satisfaction measures (TSMs) and tenant survey requirements (TSRs). We then illustrate the reality of the data preparation and analysis that is involved so TSM can be properly implemented to enable the desired organisational behaviours and tenant outcomes.



What are the tenant satisfaction measures?

The TSMs are a core set of measures against which all providers must publish their performance. Providers may also collect or publish additional performance measures or information alongside the TSMs if they wish. The TSM standard specifies the required outcomes that providers must collect and the information they must provide to support the ability of tenants to effectively scrutinise their landlord's performance. Providers must determine what information they need to report on to meet each outcome, beyond the TSMs documented by the regulator.

The central aims of the TSMs are to provide tenants with greater transparency about their landlord's performance and inform the regulator about the

extent to which landlords are complying with consumer standards. In addition, the insight gleaned from the process enables the provider to make procedural and organisational changes to deliver improved satisfaction for tenants.

To achieve these aims, it is critical that TSMs are calculated and reported by providers consistently. This calls for a disciplined, robust and professional approach to survey design, data capture and subsequent statistical analysis and modelling of the data collected. A further step that providers may wish to take, in order to ensure that maximum value and insight can be achieved, is to match their captured research data with other relevant operational data already held within the organisation.

What are the keys to successful TSM reporting?

At Smart Vision we have a considerable amount of practical experience in supporting social housing organisations to meet the requirements of TSMs. We've worked on multiple projects with numerous different social housing providers. In addition to reporting on their survey data, we have also helped many organisations to combine survey data with operational data in order to uncover more practical insights than can be revealed through the survey data alone.

Over the course of numerous projects, we have gained valuable practical experience of the reality of this process. Here are our key learnings, based on our experience from multiple projects.

Careful and consistent data preparation and transformation is vital

Even survey data, captured with the express intent of analysing the collected data, will require significant data preparation and transformation. For example, converting string data into numeric data that is suitable for quantitative analysis, the consolidation of categorical data into more manageable groupings and the transformation of data into new variables, more suited to the types of analysis that you will want to do, are all analytical undertakings that occur time and again.

Automate your analysis wherever possible for maximum efficiency and consistency

TSMs are designed to be longitudinal and ongoing, allowing tenants and providers alike to monitor how standards are being maintained and improved over time. In practical terms this means that the analysis you create now will need to be rerun regularly, and so the project should be designed with this requirement in mind.

Automation can significantly improve the efficiency and consistency of this process and we've deployed

it wherever possible on the projects we have worked on. For example, we capture and document all data preparation, transformation and analytical steps, encoding them as SPSS syntax that can be saved and rerun quickly and easily. In addition to enabling automation which saves time, the syntax and script files created act as a valuable reference and documentation step. This ensures that an organisation can demonstrate exactly how the data has been prepared and analysed, should the regulator require it, and ensures complete transparency.

What analysis is required?

When approaching TSM insight projects it is important to take a methodological approach to the entire analytical undertaking, from data access and preparation right through to reporting and decision support. The analysis of the data is the fulcrum of that end-to-end TSM activity. Within the analysis step, there are analytical sub processes, including:

1. Descriptive analysis
2. Bivariate and multivariate analysis
3. Modelling and deployment

To follow is a summary of what types of activities should be covered in each of these analytical sub processes.

Descriptive analysis

This is the exploration of single elements (variables) within the data. For example, how are the age, ethnicity and other demographic factors within the survey sample (and the tenant cohort at large) distributed? We also explore tenancy characteristics such as tenure type and length. The descriptive analysis would cover frequency counts, means, medians and variance calculations, providing a more detailed view of the study population in both graphical and tabular output formats.

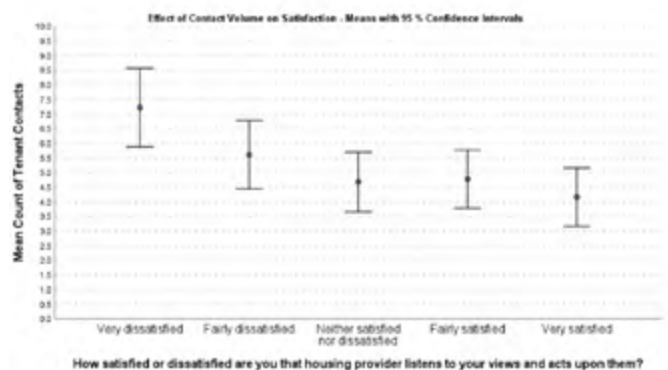
Bivariate and multivariate analysis

This step involves the analysis of two or more variables and begins to explore how different characteristics (variables) of the data interact with one another. For example, we may produce crosstabulations that examine how different age

groups evaluate their satisfaction with repairs or the degree to which different ethnicities agree that their landlord treats them fairly and with respect.

These types of bivariate tables and visualisations can also be tested for statistical significance to help quantify the likelihood that a result is due to mere chance rather than an actual effect that exists in the tenant population. Through this type of bivariate analysis, it is possible to begin to get a sense of how certain tenant characteristics influence tenant satisfaction.

The example below shows a comparison of means/averages (with associated confidence intervals) that illustrates how the average number of contacts a tenant has with the housing provider affects their level of satisfaction. These types of analyses can begin to uncover what is really driving satisfaction.

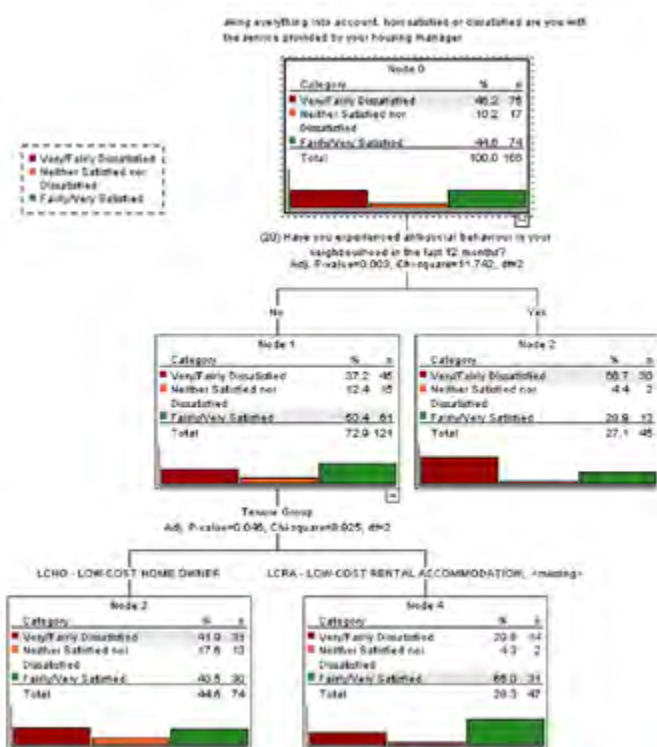


Modelling and deployment

Modelling and deployment should really be approached as two discreet steps.

Modelling is the application of statistical and machine learning techniques to identify the nuanced patterns of many variables in the data sets that you are likely to be analysing as part of any TSMs project. There is a wide range of modelling techniques available to the contemporary data scientist but rather than go into these individually, instead we will highlight how these more sophisticated approaches add significant value to the TSMs process.

The graphical output below shows an example of a decision tree output from an anonymised TSM study. Decision trees are a sophisticated modelling approach that produce highly visual output, allowing the analyst to tease out key drivers, specific characteristics and combinations of characteristics that can lead to increased satisfaction or dissatisfaction.



Other forms of modelling include key driver analysis which enables researchers to quickly create a ranking of factors that have the greatest impact on key outcome measures such as satisfaction.

Deployment is, arguably, the most critical part of the process. It is the practical step of putting the insight uncovered to use in the organisation, meeting the regulators reporting standards and publishing results for the benefit of the tenants.

The most obvious deployment output will be to produce accessible and understandable reports. These will need to be produced and published to ensure compliance with the required standards and to be made available for review by tenants.

The social housing provider will also want to spend time considering and acting upon key findings from the analysis, identifying opportunities for improvement and highlighting process failings, procedural bottlenecks and other key drivers of low satisfaction. At an operational level, the organisation’s leadership will need to implement appropriate changes to process and behaviour to alleviate and minimise situations and practices that contribute to low levels of tenant dissatisfaction. This is the most challenging, yet also the most important element of the entire endeavour. In our experience it is also the most common point of failure.



Proactive intervention

This is a further area of opportunity that we see emerging from TSMs projects. The modelling of tenant satisfaction and operational data can also enable the proactive and predictive modelling of tenant satisfaction. Once the housing provider has established robust models that identify the confluence of factors that often trigger poor satisfaction scores, it is possible to ‘score’ and rank tenants on their likelihood to have a poor service experience, in advance of the situation becoming a crisis. Pre-emptive measures can then be taken to intervene early to avoid a situation escalating.

Summary of the benefits of analysis and modelling

There are, of course, real benefits in the primary objective of the TSM programme, as designed and mandated by the regulator. There is no question that consistent monitoring and transparency around provider performance is a healthy and helpful measure.

Beyond the mandated requirements, social housing providers would be wise to seize the wider

opportunities that the thorough analysis of research and operational data presents. Tenant satisfaction measurement also provides a real and practical opportunity to innovate and improve operational performance that should not be missed. If done properly and with the right support and expertise, these programmes lead to meaningful change and increased operational efficiency.

How does Smart Vision Europe support providers to meet TSMs?

For more than a decade we have been helping social housing providers gain insight and understanding into how they’re performing, through the eyes of their tenants, both by facilitating the analysis of their primary research data (most often tenant satisfaction surveys) and by coupling this with operational data.

The matching and joining of tenant research data with operational data such as repairs, complaints and financial information provides unique visibility into both how satisfied tenants are with the housing provided, the services delivered by the provider and, crucially, what the key drivers of satisfaction or dissatisfaction actually are.

The IBM SPSS suite of statistical and data science tools is widely adopted and trusted across the spectrum of social and affordable housing providers in the UK. The team at Smart Vision Europe already works directly with a range of social housing providers including [L&Q](#), [Hyde Housing](#) and Regenda.

Whilst we have been engaged with our clients in the social housing sector, supporting and enabling

their analytics and data science endeavours, much of the effort by social housing providers was carried out under their own steam and based on their own internal policy initiatives. Whilst valuable, the activity was not standardised, nor was it sector-wide.

The implementation of mandated tenant satisfaction measurement (TSM) means that a new and more consistent system has been created for assessing how well social housing landlords in England are doing at providing good quality homes and services.

The combination of industry leading SPSS analytical technology delivered alongside Smart Vision’s tailored and flexible analytical consulting and training services ensures that your organisation is ready to meet and surpass the expectations of mandatory TSM.



This is how we can assist you and your organisation with tenant satisfaction measurement:

- If you do not already have appropriate analytical tools in place, we can provide your dedicated TSM and insight teams with the range of analytical tools that they will need in the most cost effective way possible. You will then be able to effectively, efficiently and affordably analyse the data that you collect on tenant satisfaction to ensure that your monitoring and analysis meets the required standards of TSM.
- The Smart Vision Europe consulting team can work with your internal specialists to expedite and automate key parts of the analytical process and the production of the key measure from that analysis. For example, saving data cleaning and analysis routines with syntax so the process can be repeated more quickly in the future. This investment will ensure that you are working in the most efficient way whilst meeting and going beyond the TSM requirements.
- Our skills and experience mean that we will be able to help you navigate the challenges that always crop up when undertaking robust data analysis. There will inevitably be issues of data quality, data completeness and data matching that will need to be addressed, especially as you begin to introduce and merge operational data. These can present real issues if they are not identified early, dealt with effectively and documented thoroughly as part of the analytical process. Working proactively with Smart Vision Europe will save your organisation time and money. It will also minimise the risk and stress of embedding new data driven initiatives to enable TSM.
- Our professional services will help you to accomplish the important step of combining operational data with tenant satisfaction to see how contact and works affect key satisfaction measures.
- A well planned TSM project will also include the added and important task of profiling tenants using decision trees to visualize primary drivers of satisfaction.
- Our expertise will ensure good statistical practice of showing means with confidence intervals using error bars instead of just comparing raw averages (see below).
- Beyond TSM applications and use cases, we can help address other key issues through the use of data science, including:-
 - o Predictive arrears – Identifying clients at risk of falling into rental arrears allowing you to develop effective interventions before crisis point.
 - o Predictive maintenance – Analysing property maintenance and repairs data to that you can plan proactively and act pre-emptively to counter the root causes of dissatisfaction.
 - o Help you to identify potential fraud and develop policies to close loopholes and weaknesses that fraudsters exploit.
- We will be able to assist you in the set-up of your analytical infrastructure, the design of your analytical processes and the production of the required output to meet the tenant satisfaction measurement requirements. We guarantee that we can work with you to deliver TSM analytics affordably and in a matter of weeks from start to finish, leaving your organisation with the skills and capabilities to operate on a self-sufficient basis.



- We will provide you with excellent advice, guidance and support to ensure that you make the right investment decision and at the most competitive prices, all delivered by our experienced, friendly, flexible and knowledgeable team.
- We offer unrivalled technical, and end user support to ensure that your SPSS solution is delivered and implemented quickly with minimal fuss. Once up and running, our [technical support team](#) are on hand to provide the support you need, when you need it.
- All our clients are granted free of charge access to all of our online and self-paced training programmes. The [online training catalogue](#) covers the full range of SPSS, statistical and data science courses.
- You will get access to our [expert training and consulting team](#) who can be hired to assist your analytics and data science projects beyond TSM. We work with our social housing clients flexibly, ensuring we adapt to suit your specific requirements and meet your analytical objectives.

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Find out more

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