

eircom Treocht: Hard-wiring for success

Executive Summary

Understanding, predicting and solving faults in a fixed-line telecoms network is crucial to customer satisfaction and long-term success. Trinity Horne built the most comprehensive model to analyse problems with its network that Irish telecoms giant – eircom – has ever had, enabling the company to anticipate problems and focus its on-going investment in the areas where it matters most. “We simply didn’t have the expertise to analyse all the factors affecting line faults and in particular the magnitude of each and the interdependence between them.”

Background

eircom is the main provider of fixed-line telecommunications services in Ireland with approximately 1.6 million fixed-line telephone lines roughly equivalent to 68% of the fixed-line market in Ireland. The company is also the leading internet service provider in the country with approximately 611,000 customers, of which 423,000 are broadband customers. Revenue from these activities and its mobile division totalled €2 billion in 2008.

Service excellence is the bedrock of any fixed-line telecoms business, ensuring existing customers have no incentive to switch supplier and providing a platform for future growth. Moreover, network faults are costly to repair so reducing them has a direct impact on profitability. With 100,000km of cable route distributed across 1,000 exchanges and 500,000 customer connection points maintaining service quality is challenging, particularly in an environment that is quite rural in nature and widely dispersed compared to European averages. eircom had already undertaken a number of initiatives focused on different areas, from the large-scale replacement of network in particular geographic areas to replacing junction boxes at individual geographic points. Now, in September 2008, it was about to embark on a new four-year programme designed to improve its service metrics.

What was the problem / opportunity faced by the client?

“Strengthening the resilience of our network is a top priority for us,” explains Pat Cheshire, the Capital Programme Manager for Network Operations at eircom, “and that entails a significant level of investment at a time when we needed to keep prices, and therefore costs, as low as possible.”

Squaring this particular circle would depend on eircom knowing how best to target the €200 million it planned to spend over the four-year period. “With all our experience, we obviously had a sense of what caused line faults,” continues Cheshire, “but what was much harder to grasp was their relative importance. Where should we prioritise our investment in order to have the biggest and most cost-effective impact?”

How did Trinity Horne help?

With this in mind, Cheshire and his colleagues approached Tony Farnfield at Trinity Horne. Tony then asked Donal O’Hehir, who had worked successfully with eircom on several previous analytical projects, to lead the Trinity Horne team assembled for this initiative.

O’Hehir picks up the story: “We first conducted a short exploratory investigation to establish the context and bounds of the analysis, before embarking on the formal 12-week analysis programme.” Cheshire provided a core group of eircom subject matter experts to work with the Trinity Horne team throughout the project, and then O’Hehir led a series of brainstorming sessions in order to identify the key questions that needed to be answered. To what degree did weather conditions matter? What impact did the type of technology have on a line’s fault profile? How useful are line test results in predicting future faults?

The ultimate benefit will be a more resilient network. The investment programme will continue for many years and many projects take months to complete. However eircom has started to see improvements in network performance. Cheshire is in no doubt what impact the model and analysis will have. “The actions we take will have an impact for many years to come. We need to have faith in the measures we implement and Trinity Horne’s analysis has given us the confidence that we’re addressing the critical issues. That is good for our customers, our network engineers and our investors”.

Challenges and critical success factors

There were two key challenges to this project:

- **Bringing Experienced Network Managers on the journey:** The first issue was persuading people at eircom – many of whom have 20-30 years of actual network experience – that this approach would yield reliable and actionable results. The quality of the data was critical and the core team from eircom who worked with Trinity Horne had to put huge amounts of effort into finding the information, checking it and in some cases correcting it. “Objective evidence, arising from robust analysis and presented openly and clearly, enabled key stakeholders to come to the right conclusions quickly” says O’Hehir. But data and analysis were not enough by themselves: the results needed to be interpreted. “Trinity Horne can take a lot of credit for doing this so well,” says Cheshire. “Their skills lay as much in being able to explain the results in plain English as it did in carrying out the analysis in the first place.”
- **Providing a sustainable solution:** Data is dynamic, so it was important for Cheshire that he and his team should be able to build on the work Trinity Horne had done, adding new data into the model over time, and testing and refining its assumptions. At the same time, the model was also far more complicated than anything they could have built themselves. “It was essential that the model wasn’t just a big black hole of data,” says Cheshire, “but that it gave us a better understanding of the issues involved which we can use in the future. Because we worked closely with Trinity Horne and because they were eager and able to explain what they were doing, we can now quantify the network response to adverse weather conditions and compare it with that of the past. This allows us to measure the real improvements we are making. It’s a practical tool, not a theoretical exercise.”

The client/consultant relationship

Key to meeting both of these challenges was the way in which Trinity Horne worked. A lesser firm might have used the complexity of the analytical process to blind its clients with science, but Trinity Horne set great store by being as transparent as possible. They worked side by side with a small team from eircom for the duration of the project, jointly resolving the inevitable issues with the data and sense-checking the results. “We built up a very strong relationship,” says O’Hehir. “Our aim was to help the people at eircom see their business in a way they were unfamiliar with. While they often had views about the causes of line faults, we let the data speak for itself. We were the agnostic outsiders, challenging some assumptions and it’s a testimony to the success of the project that the results have been taken up and acted upon.”

“The working relationship was a huge strength,” agrees Cheshire. “Trinity Horne was able to take all this complex analysis and play it back to us clearly. There were many occasions where they assisted us in explaining the findings to our key stakeholders”. But that has not translated into dependence. “We don’t let consultants off lightly,” laughs Cheshire, “and are acutely aware that there will be a day in any project where we have to say goodbye to them, so it’s crucial that we build up an in-house ability to analyse this data. Trinity Horne has left us with a model that helps us do this but, crucially, they ensured that we were with them every step of the way and we’re now in a position where we can interpret the results.”

“This was the most comprehensive analysis of our network ever undertaken,” Cheshire sums up. “We simply didn’t have the expertise to analyse all the factors affecting line faults and in particular the magnitude of each and the interdependence between them.”

Pat Cheshire, Capital Programme Manager, eircom