

Case Study: Dexter Dispatch Support Center Work Manager

Dexter Systems develops workflow systems that automate business processes. In the telecommunications vertical, automation enables telecom service providers to lower operational expenses (labor costs, productivity, and vehicle expenses), improve process consistency and quality, and ultimately improve customer satisfaction.

This case study highlights a situation in which Dexter Systems was able to develop a system that automated many aspects of a back office work center as they were ramping up the deployment of new services. The system provided a significant return on investment and a payback period in months.

Background

Dexter got started in the telecom vertical in the late 1980s. In 2005, one of our clients was in the early stages of rolling out services on a fiber based infrastructure. Whereas the business processes for copper based voice telephony were very mature (refined over 100 years), the processes for delivering different combinations of voice, data, and video (on a new technology platform) were still being worked out.

At that time, some of the issues were:

- Multiple technicians were being dispatched to support a single installation. This was traceable to a legacy service order process that treated voice, video, and data orders as individual components. As these orders flowed downstream to the dispatch systems, it sometimes resulted in multiple technicians being dispatched to support the same installation.
- There were a significant number of unnecessary dispatches. This was traceable to inconsistencies in data elements (due dates, appointment windows) between the legacy service order and dispatch systems, and the newer fiber provisioning systems.
- Management often lacked the visibility to the volume and nature of work. This was traceable to the fact that legacy reporting systems were failing to keep up with the new processes.
- Field technicians were often calling into the back office for supporting information. This was traceable to the fact that the fiber network was more complicated, and the technicians were dispatched with insufficient information.

Innovation can be a messy business. To their credit, our client recognized these issues early on. While they were working on their processes, they filled in the gaps with extra staff, and operated in a way such that the above issues rarely impacted customer service. The issues were really about efficiency and profitability.

Challenge

In many cases it was a department called the Dispatch Support Center (DSC) that had to face and manage the issues. The DSC is an internal back office group that supports the field technicians who drive around visiting customers and installing new service. Whenever field technicians are working on a job and need help, they call the DSC. Calls might be customer related (customer is changing their mind, or isn't home), network issues (fiber not lit or no dial tone), or coordination issues (need access to a building's telecom closet).

Generally there is some ratio of field based technicians to back office support staff. Ideally the ratio would be very high – say 40 or 50 field techs to 1 support person. If the field technicians are well-trained and self-sufficient, and the back office systems are mature and highly automated, companies can in fact achieve a very high ratio.

When rolling out a new service, however, it is acceptable (and even preferable) to have a lower ratio. During the rollout phase fields technicians will have more questions, will encounter new types of problems, and will be making more calls. If there is a larger support staff to handle the increased call volume, the questions and problems will be resolved in a timely manner and the customer will not be affected.

The idea is that, over time, an organization will climb the learning curve, identify the best practices, and enhance the automated systems.

The challenge for our client was how to get there.

Solution

By virtue of having many years of telecom experience, Dexter was in a position to quickly understand the issues. Our client tasked Dexter with developing a system for the DSC that would help them manage the work and address the issues. Our solution included:

- Establishing automated data collection processes from the legacy service order and dispatch systems, and also from the newer fiber provisioning and engineering systems. The auto-collected data significantly reduced the number of legacy system queries by the DSC staff.
- Establishing a data model that linked the various components of new service (voice, data, and video), classified the various combinations (single, double, and triple play), and arranged the work into a geographic garage hierarchy. The data model essentially eliminated the problem of dispatching multiple technicians on the same job.
- Establishing automated data comparison and scrubber processes to identify cases of data inconsistency.
- Providing a browser based UI so that all levels of management and staff could quickly see, sort, and filter the work. They could easily export the data to Excel for ad-hoc analysis.

- Establishing an alerting system where data inconsistencies or special jobs requirements (bucket truck, buried service) were brought to the attention of support staff prior to dispatch.
- Establishing a comprehensive reporting system in which one-off management reports were put into a report library for reuse. Ultimately over 300 reports were added to the library.
- Establishing a field technician morning report: a daily Microsoft Word doc for each technician containing an unprecedented level of job specific information, and enabling technicians to be more self-sufficient.
- Establishing an advanced customer appointment verification system, including confirmation by email. This feature was effective in significantly reducing the number of no-access dispatches.

Over a period of several years the system, known as the DSC Work Manager, was instrumental in helping our client work through the issues of rolling out the new services. From a support staff perspective, they were able to achieve efficiencies on the fiber network that approached that of the much more mature copper network. Originally developed as a regional tool, the system was designated as best-in-class and adopted as a corporate standard.

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