



Client Success Story:

How Pinnacle Health Informatics
Increased One Organizations Clinical
Productivity by +50% Through Analytics

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PROBLEM: A LARGE BEHAVIORAL HEALTH AGENCY IN THE MIDWEST APPROACHED US WITH AN ISSUE THEY WERE SEEING WITHIN THEIR ORGANIZATION: **LOW PRODUCTIVITY**

IDENTIFYING THE PROBLEM

A large behavioral health agency approached us with an issue: they were seeing low productivity within their organization. They had tried to create a good productivity plan but found themselves running into the usual roadblocks: data was in a complex format, it required unfamiliar tools to be fully utilized, and it required multiple data sources to be combined in order to gain the necessary insight.



OUR CLIENT NEEDED OUR HELP BUILDING A DASHBOARD THAT TRACKED PRODUCTIVITY WHILE TAKING INTO ACCOUNT THEIR REQUIREMENTS AND NEEDS.



Before one line of code was written, or a compelling visualization was designed, we sat down with our clients and discovered what their goals and objectives were regarding productivity.

BUILDING THE DASHBOARD:

Our client needed a dashboard that would....

Render quickly as well as be promptly understood by providers and clinicians when viewed for the first time to decrease or eliminate training time.

Be optimized for quick delivery and heavy demand in order to serve thousands of requests per day

For clinicians utilizing the Electronic Health Record, the dashboard needed to be quickly accessible from the EMR software, securely based on user credentials.

Be accessible through a web application on the desktop and on a mobile device, also with secure accessibility.



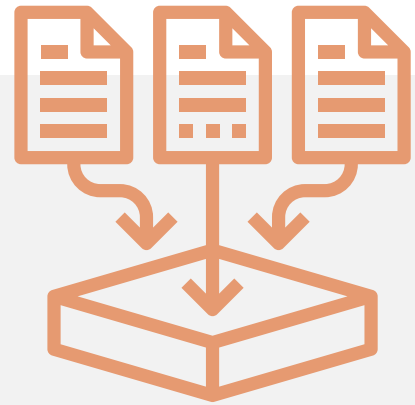
The dashboard needed to show and compare values based on a selected time frame or Year-To-Date, and address the following:

- Time spent by the clinician in productive activities
- The 'clocked-in' clinicians availability to perform work
- A clearly-stated productivity expectation
- Year-to-date status toward the productivity goals
- Total yearly expectation of time at work
- The trend of productivity values over time to see progress
- Ability to see values within the agency management hierarchy
- Rapid execution and support of a 500-clinician user base

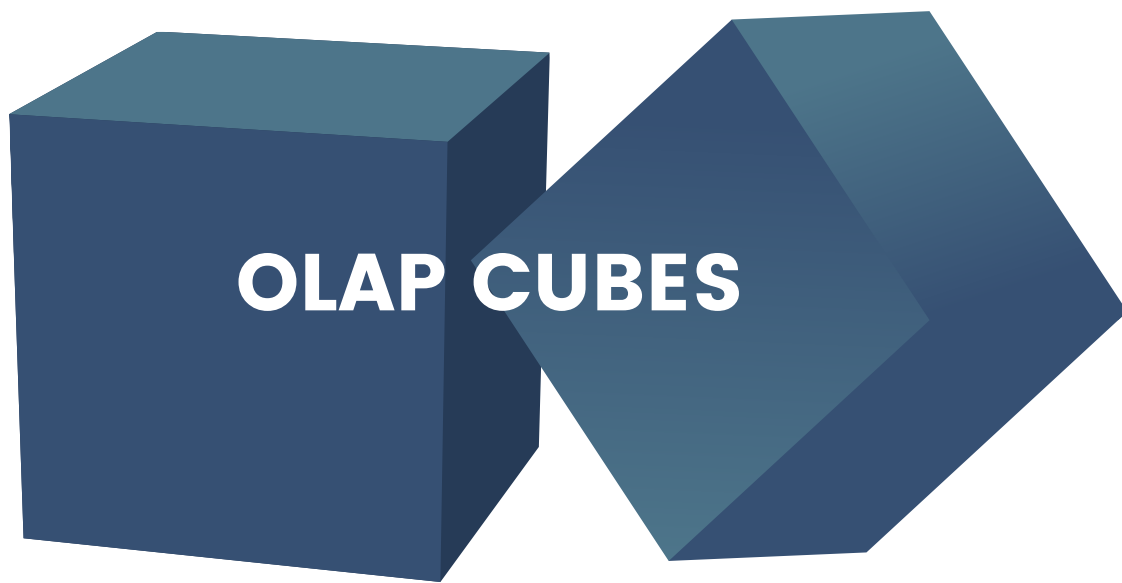
BUILDING THE DASHBOARD:

In addition, we also had to collect data from multiple sources including:

- The Electronic Medical Record (EMR)
- Time and attendance system
- Human Resource system
- Position control system



To service the thousands of requests per day, the data sources needed to be optimized for quick delivery and heavy demand.

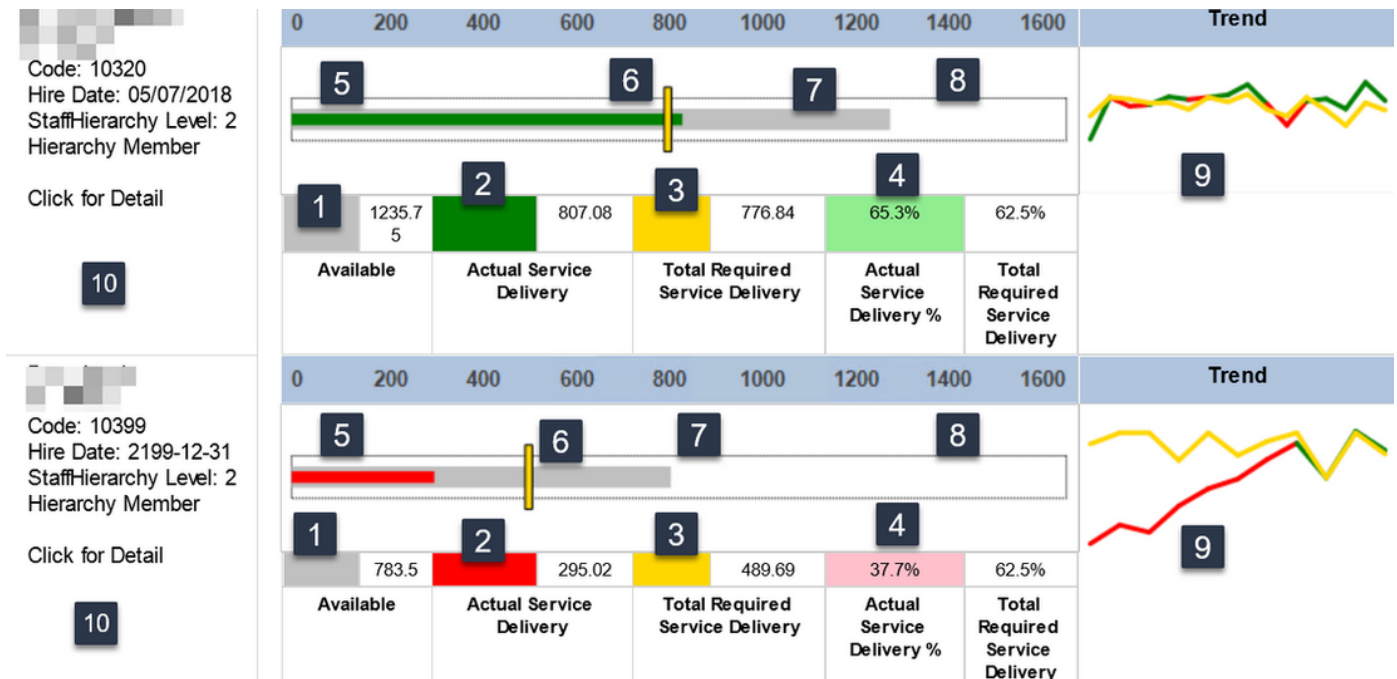


To accomplish this, the data was transformed and introduced into a star-schema data warehouse and then further processed into query-optimized Online Analytical Processing (OLAP) data structures, also known as OLAP Cubes.

We analyzed the goals, requirements, and needs of our clients, and used our two decades of experience in the field to develop a dashboard that would meet their specific needs.

THE DASHBOARD

THE FOLLOWING ILLUSTRATION SHOWS A SCREENSHOT OF A WORKING EXAMPLE OF THE DASHBOARD.



VISUALIZATION DETAIL EXPLANATION(FOR ABOVE GRAPHIC)

1-TIME PHYSICALLY AT WORK. CLOCKED-IN AND AVAILABLE TO PERFORM CLINICAL SERVICE.
DATA SOURCE: TIME CLOCK SYSTEM SUCH AS PAYLOCITY, ADI, DYNAMICS GL, ETC.

2-PRODUCTIVE TIME AT WORK. SHOWS PRODUCTIVE TIME IN HOURS.
DATA SOURCE: ELECTRONIC MEDICAL RECORD SOFTWARE, I.E., CREDIBLE, NETSMART, NEXTGEN, ATHENA

3-TOTAL REQUIRED SERVICE DELIVERY GOAL. A GOAL SET AT A YEARLY EMPLOYEE EVALUATION FOR PRODUCTIVITY.IN THIS VISUALIZATION IT SHOWS 62.5% OF 1235.75 HOURS SPENT PHYSICALLY AT WORK.
DATA SOURCE: HUMAN RESOURCE SYSTEM

4-ACTUAL SERVICE DELIVERY PERCENT. PERCENT CALCULATION OF THE ACTUAL PERCENTAGE OF TIME AT WORK SPENT IN PRODUCTIVE CLINICAL SERVICE.
DATA SOURCE: DYNAMIC CALCULATION

5-PRODUCTIVITY BAR. COLOR IS DYNAMIC BASED ON IF THE GOAL FROM ITEM 3, ABOVE IS MET.

6-VERTICAL TOTAL REQUIRED SERVICE DELIVERY GOAL BAR. CORRESPONDS TO THE TOTAL REQUIRED SERVICE DELIVERY GOAL FROM ITEM 3.
DATA SOURCE: DYNAMIC CALCULATION

7-TIME PHYSICALLY AT WORK BAR. REPRESENTS THE YEAR-TO-DATE TIME PHYSICALLY PRESENT AT WORK. SHOWN IN GREY IN ILLUSTRATION.
DATA SOURCE: TIME CLOCK OR TIME AND ATTENDANCE SYSTEM

8-DOTTED OUTLINE TOTAL YEARLY WORK HOUR EXPECTATION. RANGE INDICATOR OF THE EMPLOYEES' TOTAL YEARLY HOURLY EXPECTATION OF AROUND 2000 HOURS. GIVES A PERSPECTIVE OF HOW MANY POTENTIAL WORKING HOURS REMAIN IN THE FISCAL YEAR.
DATA SOURCE: HUMAN RESOURCE SYSTEM

9-TREND SPARKLINES. REPRESENT THE TREND YEAR TO DATE OF THE VALUES SHOWN IN ITEMS 2 AND 3. THESE LINES INDICATE BY COLOR IF PRODUCTIVITY GOALS WERE MET. THIS GIVES A MORE COMPLETE PICTURE OF HOW EMPLOYEE PRODUCTIVITY IS CHANGING OVER TIME. NOTICE HOW IN THE SECOND BULLET CHART, PRODUCTIVITY GOALS ARE NOT BEING MET OVERALL, BUT THE TREND OVER TIME IS POSITIVE AND THE GREEN SEGMENTS OF THE BAR INDICATE THAT RECENT PAY PERIODS HAVE MET PRODUCTIVITY GOALS. VERY IMPORTANT DATA FOR A SUPERVISOR.
DATA SOURCE: ALL AND DYNAMIC CALCULATIONS

10-HIERARCHY INFORMATION AREA AND CLICK TO DETAIL AREA. THE REPORT RUNS BASED ON A DYNAMIC HIERARCHY FROM THE AGENCY POSITION CONTROL SYSTEM. ALSO SHOWS PERTINENT EMPLOYEE INFORMATION AND HIERARCHY LEVEL. THIS AREA CAN BE CLICKED TO DRILL DOWN TO ADDITIONAL DETAIL.
DATA SOURCE: POSITION CONTROL SYSTEM

THE RESULTS

an immediate 10% improvement in productivity and a **60% improvement** within the next 18 months.

After nearly 5 years in production the dashboard is a **top destination** of the agencies' 500 providers.

It has increased productivity by **over 30+%**, creating a real and demonstrable **return on investment**



The immediate improvement was a result of simply beginning to monitor productivity and giving employees an easy to use dashboard that could be run on demand.



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